Attachment I

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Final Staff Report
Proposed Rule 2305 – Warehouse Indirect Source Rule - Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program and Proposed Rule 316 – Fees for Rule 2305

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Deputy Executive Officer
Planning, Rule Development, and Area Sources
Sarah L. Rees, Ph.D.

Assistant Deputy Executive Officer
Planning, Rule Development, and Area Sources
Ian MacMillan

AUTHORS:	Victor Juan	Program Supervisor
	Farimah Shirmohammadi, Ph.D.	Air Quality Specialist
	Caitlin Dawson	Air Quality Specialist
	Priscilla Yuen	Assistant Air Quality Specialist
	Ryan Finseth, Ph.D.	Air Quality Specialist
	Paul Stroik, Ph.D.	Air Quality Specialist
CONTRIBUTORS:	Jillian Wong, Ph.D.	Planning and Rules Manager
	Daniel Garcia	Planning and Rules Manager
	Elaine Shen, Ph.D.	Program Supervisor
	Michael Laybourn	Program Supervisor
	Shah Dabirian, Ph.D.	Program Supervisor
	Barbara Radlein	Program Supervisor
	Maryam Hajbabaei, Ph.D.	Air Quality Specialist
	Ryan Bañuelos	Air Quality Specialist
REVIEWED BY:	Barbara Baird	Chief Deputy Counsel
	Veera Tyagi	Principal Deputy District Counsel

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WAYNE NASTRI

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CHAPTER 1: BACKGROUND

INTRODUCTION

AIR QUALITY MANAGEMENT PLAN

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EMISSIONS INVENTORY OF PR 2305 WAREHOUSES

AIR QUALITY NEED

LEGAL AUTHORITY

INTRODUCTION

Proposed Rule (PR) 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program and PR 316 – Fees for Rule 2305 would apply to operators and owners of existing and new warehouses with floor space greater than or equal to 100,000 square feet within a single building. These warehouses are used to receive, store, and serve as a distribution point for goods. The majority of emissions associated with warehouses are from on-road vehicles such as trucks that deliver goods, and off-road vehicles such as cargo handling equipment. PR 2305 would require warehouses subject to the rule to annually take actions that either reduce emissions regionally and locally or that facilitate emission reductions.

More specifically, PR 2305 requires warehouse operators of warehouses subject to PR 2305 to earn a certain number of points each year from emission-reducing activities or payment of a mitigation fee. This program would work similarly to the LEED system by the United States Green Building Council in that actions are assigned a specified level of points based on a menu.[1] For PR 2305, the amount of points every warehouse operator must earn annually depends upon the number of truck trips to their warehouse.[2] Second, an operator may choose to apply to implement a site-specific custom plan that incorporates actions that are not on the menu, plan approval is required prior to being able to earn points. Custom plans could include onsite and offsite measures within the control of the operator that can be demonstrated to reduce emissions of NOx and/or diesel PM. Third, an operator may choose to pay a mitigation fee to South Coast AQMD. The funds generated from the mitigation fee will be used to provide financial incentives for truck owners to purchase NZE or ZE trucks, or for the installation of fueling and charging infrastructure, with priority given for projects in the communities near warehouses that paid the fee. In addition, warehouse operators and owners would also have reporting and recordkeeping requirements. Finally, warehouse operators would pay fees as established by PR 316 to reimburse South Coast AQMD for administrative costs associated with ensuring compliance with PR 2305.

There are many factors that go into determining the stringency of proposed rules. For PR 2305, the draft stringency recommended here considered the following points: the need for emission reductions, the significance of emissions associated with the warehousing industry, the potential emissions reductions from PR 2305 when considering other measures, and the impact to industry. The analysis included in this Draft Staff Report and in the accompanying Draft Environmental Assessment (CEQA analysis) and Draft Socioeconomic Impact Assessment describe the information used to develop the proposed rule approach.

AIR QUALITY MANAGEMENT PLAN

The South Coast Air Quality Management District (South Coast AQMD) is the regional air quality regulatory agency for all of Orange County, and large portions of Los Angeles, Riverside, and San Bernardino counties. It is responsible for developing and enforcing air pollution control rules and regulations and implementing strategies to meet attainment standards for the South Coast Air Basin (SCAB) and the Riverside County portions of both the Salton Sea Air Basin (SSAB) and the

[1] There are two important distinctions between LEED and PR 2305. First, the point values between the two systems are completely separate and do not relate to each other. Second, PR 2305 requires annual compliance whereas LEED typically is accomplished on a one-time basis during building construction/design or during renovation.

[2] Point values consider regional and local emission reductions and cost, but warehouse operators do not need to calculate these values. See Chapter 2 for additional detail.

Mojave Desert Air Basin (MDAB). The federal Clean Air Act (CAA) requires the submission of State Implementation Plans (SIP) for nonattainment areas that do not meet the federal National Ambient Air Quality Standards (NAAQS). Additionally, the California Clean Air Act (CCAA) imposes further requirements on meeting state ambient air quality standards for criteria pollutants. South Coast AQMD's jurisdiction is currently classified as being in extreme nonattainment status for the federal NAAQS ozone standards, and serious nonattainment for the federal fine Particulate Matter (PM 2.5) standards.

Per the California Health and Safety Code, the South Coast AQMD is required to adopt an Air Quality Management Plan (AQMP) to demonstrate compliance with both federal and state ambient air quality standards for South Coast AQMD's jurisdiction.[3] The AQMP is a blueprint for meeting federal and state air quality standards, which include the NAAQS for the South Coast AQMD jurisdiction. On March 3, 2017, South Coast AQMD's Governing Board adopted the 2016 AQMP.[4] Based on analysis in the 2016 AQMP, in order to attain the 8-hour ozone standards by the NAAQS deadlines, the total SCAB emissions of NOx must be reduced to approximately 141 tons per day in 2023 and 96 tons per day in 2031. This represents an additional 45% reduction in NOx beyond baseline 2023 levels, and an additional 55% NOx reduction beyond baseline 2031 levels. As seen in Figure 1, approximately 80% of NOx emissions in 2023 and 2031 will be from mobile sources. The control strategy in the 2016 AQMP includes many stationary and mobile source measures that will be carried out by the South Coast AQMD and the California Air Resources Board (CARB) (Figure 2). To attain the federal ozone and PM 2.5 NAAQS, the 2016 AQMP relies on reducing regional NOx emissions as a primary strategy (NOx is a precursor to the formation of both ozone and PM 2.5), but also includes measures to reduce directly emitted PM 2.5.

CARB is committed to achieving emission reductions with its state Mobile Source Strategy (MSS) in the State Implementation Plan (SIP). However, the majority of these emission reductions come from measures titled as "Further Deployment of Cleaner Technologies" (Further Deployment Measures), which were not fully defined. The Further Deployment Measures are expected to reduce 108 tons per day of NOx emissions beyond baseline by 2023 and 88 tons per day beyond baseline by 2031.

[3] Health and Safety Code Section 40460(a)

[4] South Coast AQMD, Final 2016 Air Quality Management Plan, March 2017. https://www.aqmd.gov/home/air-quality/clean-air- plans/air-quality-mgt-plan/final-2016-aqmp

Figure 1: South Coast Air Basin Baseline NOx Emissions and Reductions Needed to Achieve Federal 8-Hour Ozone NAAQS

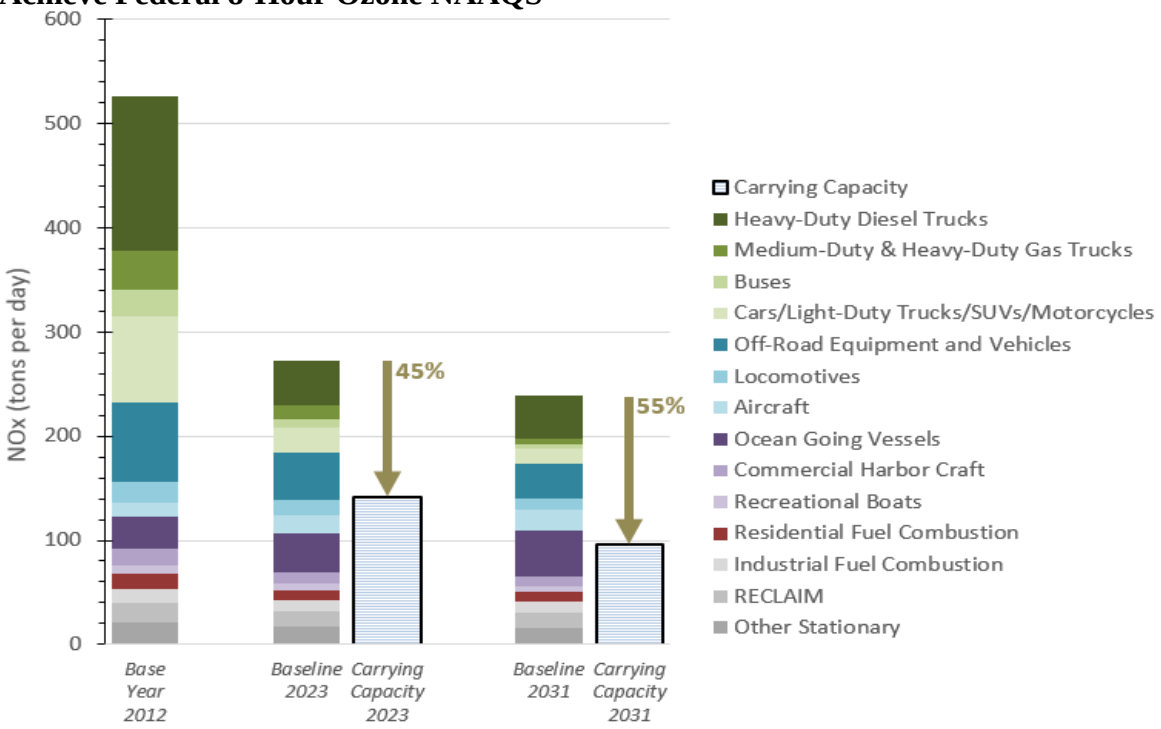
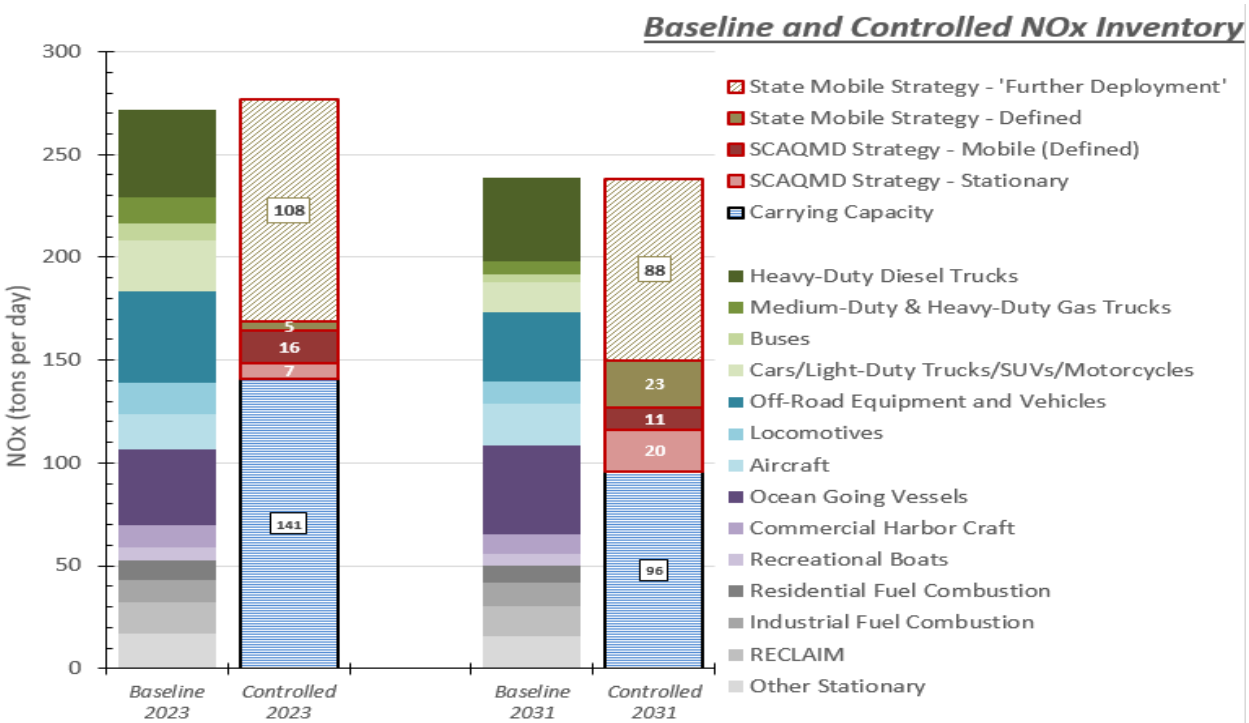


Figure 2: NOx Control Strategy in the 2016 AQMP



RULEMAKING BACKGROUND

Implementation of the Further Deployment Measures described above is based on a combination of incentive funding and development of new regulations. In the 2016 AQMP, the South Coast AQMD committed to assist CARB and U.S. EPA in developing the Further Deployment Measures, including through the development of local Facility Based Mobile Source Measures (FBMSMs). One of the FBMSMs includes MOB-03 – Emissions Reductions at Warehouse Distribution Centers.

The 2016 AQMP described a year-long process for staff to evaluate potential emissions reduction strategies for the FBMSMs and report back to the Governing Board on the most promising approach. South Coast AQMD staff convened a working group to explore potential voluntary and regulatory approaches for warehouses,[5] consistent with what was outlined in the 2016 AQMP for control measure MOB-03. After considering the results of that year-long process, in May 2018, the Governing Board directed staff to initiate rulemaking for a warehouse Indirect Source Rule (ISR),[6] namely Proposed Rule (PR) 2305 and PR 316.

Other South Coast AQMD Air Quality Plans

The South Coast AQMD Governing Board has approved several other plans since adoption of the AQMP that would also benefit from adoption of PR 2305 and PR 316. These include the Contingency Measure Plan for the 1997 8-hour Ozone Standard[7], and multiple Community Emission Reduction Plans (CERPs) prepared pursuant to Assembly Bill (AB) 617.

The Contingency Measure Plan describes the measures that must be implemented to meet the 2023 attainment deadline for the federal ozone standard. This plan lays out in greater detail many of the strategies included in the 2016 AQMP, in particular for the Further Deployment Measures. With the approval of this plan, the South Coast AQMD Governing Board committed to achieving between 14.4 and 16.4 tons per day of NOx reductions by 2023.[8]

Assembly Bill (AB) 617 is a program established to address the disproportionate burden of air pollution on environmental justice communities, by providing funding and enabling selected communities to shape the actions to reduce emissions. In December 2018, CARB approved the South Coast AQMD Year 1 admission of the communities of San Bernardino/Muscoy, East Los Angeles/Boyle Heights/West Commerce, and Wilmington/Carson/West Long Beach into the AB 617 Program. These AB 617 Year 1 communities established Community Steering Committees (CSCs) to work on the development of CERPs to serve as a road map on how to address each respective community's air quality concerns, and in September 2019, the South Coast AQMD Governing Board adopted the AB 617 CERPs. All three of the South Coast AQMD Year 1 AB 617 communities requested that a warehouse ISR be developed due to their concerns regarding air

[5] Presentation materials from this process are available here: http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/facility-based-mobile-source-measures/fbmsm-mtngs

[6] http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2018/2018-may4-032.pdf http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2018/2018-jun1-001.pdf

[7] http://www.aqmd.gov/docs/default-source/planning/1997-ozone-contingency-measure-plan/1997-8-hour-ozone-draft-contingency-measure-plan---120619.pdf

[8] http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2019/2019-dec6-028.pdf

pollution impacts from trucks and diesel PM.[9] Similar to the Year 1 AB 617 communities, the Year 2 AB 617 community of South East Los Angeles also included in their CERP a request for continued development of the warehouse ISR to reduce emissions in their community.[10]

State Goals

Several state goals have focused on the need to accelerate the adoption of lower emission technologies, in particular Zero Emissions (ZE) vehicles. Two notable examples include CARB's Draft Mobile Source Strategy (MSS)[11] and a recent executive order from the governor.[12]

CARB's Draft MSS is an integrated planning effort designed to meet state goals for criteria pollutants, greenhouse gases, and toxics. One of the key conclusions from this analysis is that a significant portion of the existing mobile source fleet (trucks, cars, off-road equipment, etc.) will need to convert to ZE technologies quickly to meet multiple state goals, including attainment of federal air quality standards. While some strategies like the recently adopted Advanced Clean Trucks (ACT) regulation[13] have been more clearly defined in the Draft MSS and through CARB rulemaking efforts, other strategies are still undefined and rely on unspecified "accelerated turnover" to ZE technologies, including for emissions sources associated with warehouses, such as trucks and cargo handling equipment. Further, in September 2020, the governor of California signed an executive order directing state agencies to pursue ZE goals for mobile sources. This includes a goal of a 100% ZE truck fleet by 2045, a 100% ZE drayage truck fleet (trucks that visit ports and railyards) by 2035, and 100% ZE off-road equipment operations by 2035. Although this goal sets out potential targets, it does not include any enforceable mechanism and funding programs and regulations (such as PR 2305) that are needed to achieve the targets.

Public Process

Since the South Coast AQMD Governing Board voted to initiate rulemaking in May 2018, staff has held 12 working group meetings, presented five updates to the Mobile Source Committee and two updates to the full South Coast AQMD Governing Board. Written materials include the Preliminary Draft Staff Report, this Draft Staff Report, three drafts of PR 2305 and two drafts of PR 316, and three draft technical reports on the WAIRE Menu. Dates for each of these activities is listed in Table 1.

[9] http://www.aqmd.gov/docs/default-source/ab-617-ab-134/steering-committees/san-bernardino/cerp/carb-submittal/final-cerp.pdf
http://www.aqmd.gov/docs/default-source/ab-617-ab-134/steering-committees/east-la/cerp/carb-submittal/final-cerp.pdf
http://www.aqmd.gov/docs/default-source/ab-617-ab-134/steering-committees/wilmington/cerp/final-cerp-wcwlb.pdf

[10] http://www.aqmd.gov/docs/default-source/ab-617-ab-134/steering-committees/southeast-los-angeles/draft-cerp-5b-trucks.pdf

[11] https://ww2.arb.ca.gov/resources/documents/2020-mobile-source-strategy

[12] https://www.gov.ca.gov/wp-content/uploads/2020/09/9.23.20-EO-N-79-20-text.pdf

[13] https://ww2.arb.ca.gov/our-work/programs/advanced-clean-trucks

Table 1: Dates of Key Public Process Activities Prior to Release of Draft Staff Report

Activity	Dates
Working Group Meetings	Aug. 1, 2018; Aug. 23, 2018; Oct. 24, 2018; Mar. 22, 2019; Aug. 23, 2019; Sept. 19, 2019; Nov. 13, 2019; Dec. 10, 2019; Mar. 3, 2020; Oct. 9, 2020; Oct. 30, 2020; Dec. 17, 2020
Public Workshop & Community Meeting	Feb. 16, 2021, Feb. 17, 2021
Mobile Source Committee Updates	Nov. 16, 2018; Feb. 15, 2019; Sept. 20, 2019; Jan. 24, 2020; Feb. 19, 2021; Mar. 19, 2021; Apr. 16, 2021
Governing Board Updates	Sept. 7, 2018; Mar. 1, 2019
Draft WAIRE Menu Technical Document and Calculator	Mar. 3, 2020 ; Jan. 15, 2021
Draft Rule Language	Nov. 10, 2019; Oct. 9 2020; Jan. 15, 2021
CEQA Notice of Preparation	Nov. 13, 2020
CEQA Draft Environmental Assessment	Jan. 20, 2021

The following potential options for reducing emissions from warehouses were discussed in the Warehouse ISR Working Group:

- Facility Caps: Allow emissions at each warehouse distribution center to be capped so each warehouse distribution center would have the flexibility to individually determine how to reduce emissions.
- Local Government Measures: Local governments may decide to tailor emission reduction strategies to address local needs (e.g., through their land use authority).
- Clean Fleets Crediting/Banking Program: Allow clean fleets to generate credits that would be managed through a bank while requiring ISR facilities to regularly purchase and apply the credits to offset emissions from individual warehouse distribution centers.
- Voluntary Fleet Certification Program: Allow fleet owners to certify their fleets are cleaner than what would otherwise be required by CARB regulations while requiring facilities to use a prescribed amount of certified fleets.
- Best Management Practices (BMPs): Allow facilities to choose from an assortment of BMPs such as utilizing ZE or NZE equipment on site, and/or installing ZE/NZE fueling and charging infrastructure, or solar energy storage.
- Mitigation Fees: Allow facilities to pay mitigation fees if other options are not chosen and apply collected funds to subsidize the purchase and use of ZE/NZE equipment or the installation of fueling/charging infrastructure.

Of these options, only the Best Management Practices (now the WAIRE Menu and Custom WAIRE Plan option) and the Mitigation Fee options have been carried forward to PR 2305. These options were found to be the least administratively burdensome for facilities and South Coast AQMD compliance staff and ensured that emission reductions would be focused in the communities near warehouses. The menu-based approach is similar to other rules that allow multiple options of compliance, such as South Coast AQMD Rule 2202 - On-Road Motor Vehicle

Mitigation Options[14] that focuses on reducing emissions from employee commutes, Rule 403 – Fugitive Dust[15] that focuses on reducing particulate matter emissions from activities like earth moving. Both rules allow multiple options to comply with overall requirements in each rule. PR 2305 will also include a points-based system that is similar to programs widely used in South Coast AQMD's jurisdiction for development projects including LEED for green building design,[16] and San Bernardino's Greenhouse Gas Reduction Plan[17]. Both programs assign points based on actions taken from a menu, and assign a rating based on the total number of points earned. PR 2305 will take a similar approach to these successful programs (and additionally includes many menu items that can be used in LEED and San Bernardino's GHG Reduction Plan). PR 2305 and PR 316 are described in greater detail in Chapter 2.

EMISSIONS INVENTORY OF PR 2305 WAREHOUSES

The sources of emissions associated with warehouses include the trucks that deliver goods to and from the facilities, yard trucks located at warehouses that move trailers, transport refrigeration units (TRUs) located on trucks and trailers that keep cargo, like food, cold, and the passenger vehicles for warehouse employees. Additional emissions sources can include onsite stationary equipment (e.g., diesel backup generators or manufacturing equipment), and emissions from power plants that provide electricity for the warehouse – though these sources have not been included in the baseline emissions inventory. Most of these vehicles are diesel powered, except for passenger vehicles which are typically gasoline powered.

The emissions inventory established in the 2016 AQMP provides a platform from which to develop a baseline inventory for the universe of warehouses that would be subject to PR 2305 and PR 316. However, there are several developments that have occurred since the approval of the 2016 AQMP. First, the on-road mobile emissions inventory developed by CARB that was used in the 2016 AQMP is EMFAC 2014. However, a newer version of that model has since been approved by U.S. EPA (EMFAC 2017) with updated emission rates. Second, the CARB Board has approved two key regulations that will affect trucks that travel to warehouses called the Advanced Clean Trucks regulation[18] and the Low NOx Omnibus regulation.[19] Finally, CARB and U.S. EPA are continuing to develop additional regulations, but many are too speculative to consider at their current level of development. One future regulation, the Heavy-Duty Inspection and Maintenance (I/M) regulation,[20] is considered here as there is statutory direction for CARB to develop and adopt it[21] and the regulation has been developed sufficiently to provide a preliminary quantification of the impact. The emissions data from these more recent regulations are included either in the META tool that CARB developed to support their Draft Mobile Source Strategy, and/or within the documentation that CARB has prepared for each regulation. The key data parameters and the associated data sources are listed in Table 2 below.

[14] http://www.aqmd.gov/docs/default-source/rule-book/reg-xxii/rule-2202.pdf
[15] http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403.pdf
[16] https://www.usgbc.org/leed
[17] http://www.sbcounty.gov/Uploads/lus/GreenhouseGas/FinalGHGUpdate.pdf
[18] Ibid.
[19] https://ww2.arb.ca.gov/our-work/programs/heavy-duty-low-nox
[20] https://ww2.arb.ca.gov/our-work/programs/heavy-duty-inspection-and-maintenance-program
[21] Senate Bill 210, http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200SB210

Table 2: Key Data Sources Used for PR 2305 Emissions Inventory

Parameter	Data Sources	Data Availability
Warehouse Populations and Square Footage[22]	CoStar, Dun & Bradstreet, InfoUSA, Leonard's Guide, Google Earth	www.costar.com www.dnb.com, www.dataaxleusa.com, www.leonardsguide.com, www.google.com/earth
Truck Emission Rates	EMFAC 2017, CARB META Tool	https://arb.ca.gov/emfac/2017/, ww2.arb.ca.gov/resources/documents/2020-mobile-source-strategy
Truck and Car Trip Rates	Institute of Transportation Engineers, 2016. *High-Cube Warehouse Vehicle Trip Generation Analysis*	www.ite.org/pub/?id=a3e6679a%2De3a8%2Dbf38%2D7f29%2D2961becdd498
Truck and Car Trip Lengths	SCAG 2016 Regional Transportation Plan	https://scag.ca.gov/resources-prior-plans
TRU Populations and Emissions Rates	CARB TRU rulemaking analysis	https://ww2.arb.ca.gov/our-work/programs/transport-refrigeration-unit/tru-meetings-workshops
Yard Truck Populations	Power Systems Research	www.powersys.com
Yard Truck Emission Rates	CARB Carl Moyer Guidelines, CARB Low NOx Omnibus rulemaking analysis	https://ww2.arb.ca.gov/guidelines-carl-moyer, https://ww2.arb.ca.gov/rulemaking/2020/hdomnibuslownox

The NOx and diesel PM baseline emissions in the South Coast AQMD associated with warehouses in key milestone years is shown in Table 3 below. As seen in this table, heavy duty trucks are the largest source of emissions, comprising more than 90% of the total PR 2305 inventory.

Table 3: PR 2305 Warehouse NOx and Diesel PM Emissions[23] (tons per day)

Emission Source	2019		2023		2031	
	NOx	*DPM*	*NOx*	*DPM*	*NOx*	*DPM*
Heavy Duty Trucks	41.67	0.67	20.20	0.14	16.81	0.12
Passenger Vehicles	1.14	0.02	0.70	0.02	0.39	0.01
TRUs	1.82	0.08	1.64	0.07	1.61	0.06
Yard Trucks	0.09	0.003	0.09	0.003	0.08	0.003
Total	*44.72*	*0.774*	*22.61*	*0.23*	*18.89*	*0.192*

AIR QUALITY NEED

There are six key reasons why PR 2305 and PR 316 are needed. First and foremost, the SCAB region continues to experience ozone and fine particulate matter levels that exceed federal air

[22] Additional details regarding the universe of PR 2305 warehouses is described in Chapter 3 and Appendix A.
[23] Baseline emissions estimates for 2023 and 2031 are lower than previous estimates. The primary difference here is how CARB's Heavy Duty I&M regulations is included. Previous drafts included Heavy Duty I&M in the emission reductions, but not in the baseline inventory.

quality standards. This poor air quality is among the worst, if not the worst in the nation.[24] Attaining the air quality standards yields monetized health benefits that are estimated to be about $173 billion.[25] NOx is the primary pollutant that needs to be reduced to meet federal air quality standards, and mobile sources associated with goods movement make up about 52% of all NOx emissions in the SCAB.[26] Trucks are the largest source of NOx emissions in the air basin and also for the emissions associated with warehouses. Any diesel PM reductions brought about by PR 2305 and PR 316 will also help meet federal air quality standards for fine PM. PR 2305 and PR 316 would reduce emissions from the goods movement sector by requiring warehouse operators to take actions to reduce emissions directly or through facilitating emissions reductions.

Second, existing regulations are not sufficient to meet either the 2023 or 2031 attainment dates. Even newly proposed regulations from CARB and U.S. EPA (as shown in CARB's Draft MSS) will not be able to meet these air quality standards on their own, and additional actions are needed. No single regulation could achieve federal air quality standards on its own, including PR 2305 and PR 316. However, these proposed rules are designed to contribute their own additional emissions reductions and enhance emission reductions from other programs, and are part of the collection of actions needed to meet air quality standards.

Third, the 2016 AQMP estimated that at least $1 billion per year in incentive funding to clean up vehicle and engine fleets would be needed – absent any further regulations – to meet the 2023 and 2031 attainment dates. Although incentive funding has increased, reaching between about $100 to $200 million per year over the past few years,[27] it has not reached a level sufficient to turn over enough vehicles to meet air quality standards. Many incentive programs are oversubscribed,[28] with demand far exceeding funding availability. However, some programs are undersubscribed.[29] PR 2305 and PR 316 are designed to work with existing and future incentive programs, and can help encourage greater levels of incentive funding and encourage applicants to apply for funding. The regulatory requirements in PR 2305 and PR 316 are expected to increase industry's interest in incentive programs in order to reduce the cost of compliance. This can help ensure that all incentive funds are spent and can potentially spread incentives to a broader segment of industry if more recipients sign up for funding. Finally, much of the incentive funding that South Coast AQMD distributes is allocated annually as part of the state legislature's budgetary process. A regulatory requirement may increase the request for funding from the legislature by many stakeholders, which has the potential to further increase the amount of funding available and reducing the cost of compliance to industry.

A fourth air quality need for PR 2305 and PR 316 is to support statewide efforts to increase the number of ZE vehicles. There are many actions occurring across state government to increase the use of ZE vehicles to satisfy many goals, including meeting federal and state air quality standards, reducing toxics and greenhouse gas emissions, encouraging manufacturing of ZE vehicles in the

[24] https://www.stateoftheair.org/assets/SOTA-2020.pdf
[25] http://www.aqmd.gov/docs/default-source/clean-air-plans/socioeconomic-analysis/final/sociofinal_030817.pdf
[26] https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal_goods-movement.pdf?1606001690
[27] http://www.aqmd.gov/docs/default-source/planning/1997-ozone-contingency-measure-plan/1997-8-hour-ozone-draft-contingency-measure-plan---120619.pdf
[28] http://www.aqmd.gov/docs/default-source/Agendas/Technology/technology-committee-agenda-12-18-20.pdf#page=6
[29] http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2020/2020-dec4-005.pdf

state, reducing the dependence on fossil fuels and the related impacts from extracting and producing these fuels, etc.[30] The South Coast AQMD is uniquely positioned to contribute to this effort with its authority to regulate indirect sources. PR 2305 and PR 316 provide a mechanism to require warehouse operators to encourage ZE vehicle use at their facilities as one of many options of compliance.

A fifth air quality need is to ensure that state actions to require cleaner vehicles actually occur in the South Coast AQMD region. The recent ACT and Low NOx Omnibus regulations assume a certain amount of new truck sales every year, and also assume that the activity of those newer, cleaner trucks will occur consistent with past behavior as demonstrated in EMFAC. However, the nature of those two regulations ensures that lower emissions occur only *if* trucks are sold. It does not require any certain number of trucks to be sold, or to operate within the South Coast AQMD.[31] Similarly, the upcoming TRU regulation is expected to have requirements for newly manufactured trailer TRUs to meet lower PM standards, yet will not mandate that fleets purchase them, nor will it direct sales in certain parts of the state.[32]

For comparison, CARB mandates a certain percentage of light duty vehicle sales to be zero emission vehicles (ZEVs) or plug-in hybrid electric vehicles (PHEVs)[33] as part of its Advanced Clean Cars (ACC) regulation.[34] CARB has reported that all vehicle manufacturers subject to ACC are in compliance as of 2019.[35] However, the distribution of ZEVs and PHEVs throughout the state does not coincide with the areas with highest air pollution. Figure 3 shows county-level median Air Quality Index (AQI)[36] compared with the percent of the light duty vehicle population that is ZEV or PHEV[37]. This figure shows that three of the four counties in the South Coast AQMD jurisdiction have the highest AQI in the state, and that ZEVs and PHEVs are not preferentially located in areas with higher AQI.[38] PR 2305 and PR 316 would place requirements on warehouse operators in South Coast AQMD that will encourage them to ensure that the potential benefits from statewide regulations occur here.

[30] https://static.business.ca.gov/wp-content/uploads/2019/12/2018-ZEV-Action-Plan-Priorities-Update.pdf, https://www.gov.ca.gov/wp-content/uploads/2020/09/9.23.20-EO-N-79-20-text.pdf, https://www.ca.gov/archive/gov39/2012/03/23/news17472/index.html, https://www.ca.gov/archive/gov39/2018/01/26/governor-brown-takes-action-to-increase-zero-emission-vehicles-fund-new-climate-investments/index.html, https://www.ca.gov/archive/gov39/wp-content/uploads/2018/09/9.10.18-Executive-Order.pdf

[31] Neither of these regulations impose any requirements on trucks registered out of state. Warehouse operators would have the choice to use ZE or NZE technologies for out of state trucks too.

[32] https://ww2.arb.ca.gov/our-work/programs/transport-refrigeration-unit/new-transport-refrigeration-unit-regulation

[33] ZEVs and PHEVs have lower tailpipe emissions than their conventional gasoline or diesel counterparts as they can run wholly or at least partially without using an internal combustion engine.

[34] https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program

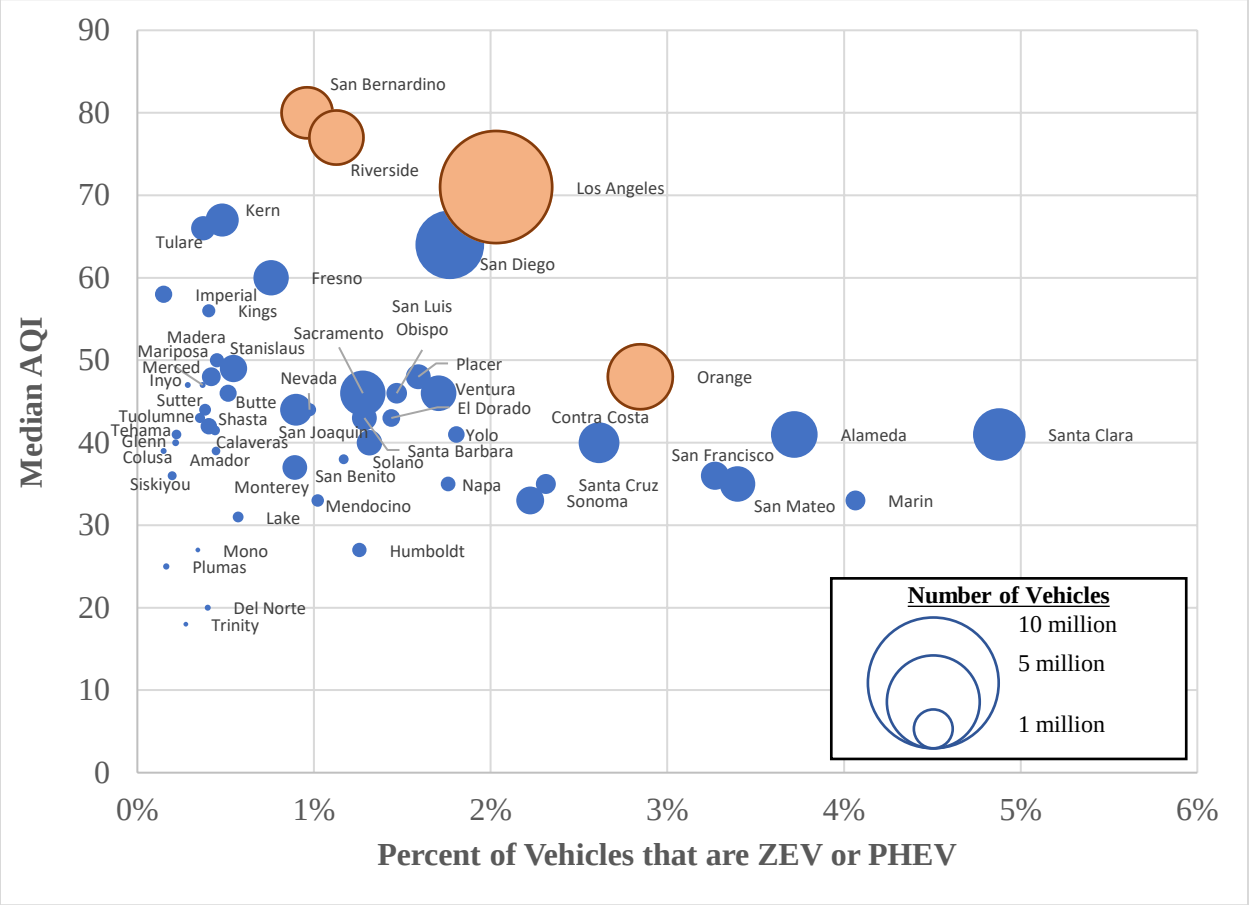
[35] https://ww2.arb.ca.gov/sites/default/files/2020-10/2019_zev_credit_annual_disclosure.pdf

[36] Air Quality Index is an indicator of overall air quality and considers all criteria air pollutants measured within a geographic area. Higher values indicate worse air quality. https://www.epa.gov/outdoor-air-quality-data/air-quality-index-report

[37] https://www.energy.ca.gov/files/zev-and-infrastructure-stats-data

[38] Of the 59 counties in California, Orange County ranks 6th in ZEV and PHEV share, Los Angeles County ranks 10th, Riverside County ranks 23rd, and San Bernardino County ranks 26th.

Figure 3: County-Level Median Air Quality Index vs. ZEV & PHEV Percent of Light-Duty Vehicle Population in 2019

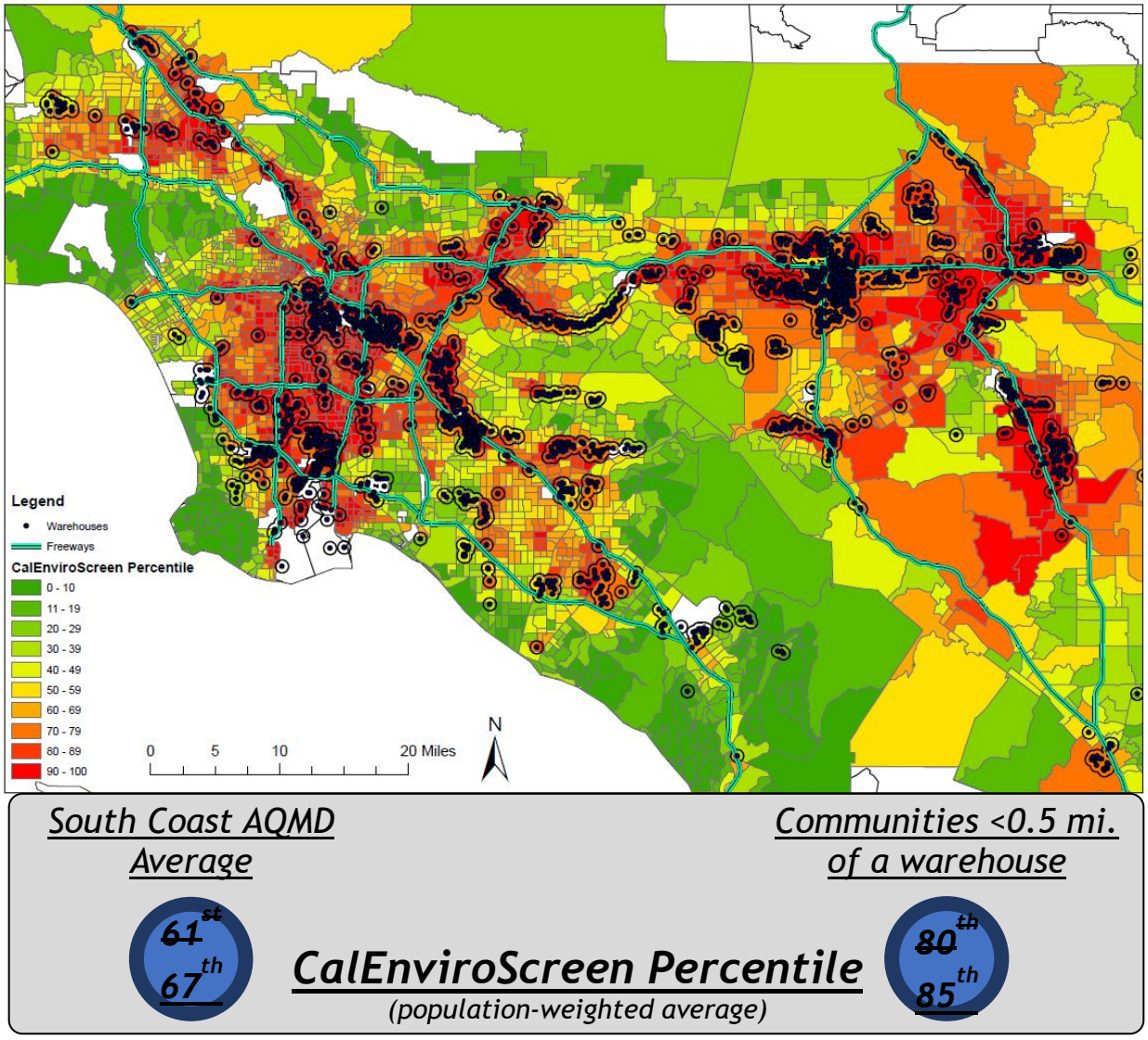


Finally, in addition to contributing to regional pollution that exceeds federal and state air quality standards, warehouses are also associated with important localized health effects from air pollution. Communities have repeatedly expressed concern about these impacts, including through the AB 617 process. In particular, diesel fueled vehicles and equipment like on-road trucks, off-road yard trucks, and TRUs emit diesel PM, a pollutant designated as a carcinogen by the state of California.[39] Diesel PM contains many pollutants (e.g., benzene, acetaldehyde, etc.) which are also recognized federally as hazardous air pollutants.[40] As seen in Figure 4 below, an analysis of communities in South Coast AQMD shows that those living within 0.5 miles of a PR 2305 warehouse rank in the ~~80th~~ 85th percentile according to CalEnviroScreen[41], whereas the average community in South Coast AQMD has much less burden ranking in the ~~61st~~ 67th percentile. PR

[39] https://ww2.arb.ca.gov/sites/default/files/classic/toxics/dieseltac/finexsum.pdf
[40] https://www.epa.gov/haps/initial-list-hazardous-air-pollutants-modifications
[41] The state Office of Environmental Health Hazard Assessment (OEHHA) has developed a tool to evaluate the environmental burden on communities throughout the state called CalEnviroScreen (https://oehha.ca.gov/calenviroscreen). This tool ranks communities based on their pollution burden (e.g., air pollution levels), as well as community characteristics that can make them more susceptible to impacts from pollution (e.g., socioeconomic status). Communities are given a percentile score (out of 100%) to show how they compare with the rest of the state – higher scores mean they experience higher burden.

2305 and PR 316 would reduce this local pollution burden by requiring warehouse operators to take actions to reduce emissions and exposures from trucks and other emission sources associated with their facility (e.g., through NZE/ZE truck use, filters, etc.), as well as take actions to facilitate (e.g., ZE infrastructure) and enhance emission reductions from other programs (e.g., incentive programs, CARB regulations, etc.).

Figure 4: Environmental Burden on Communities Near PR 2305 Warehouses as Demonstrated by CalEnviroScreen



LEGAL AUTHORITY

The South Coast AQMD may adopt PR 2305 and PR 316 through the authority to "adopt and enforce rules and regulations to achieve the state and federal ambient air quality standards in all areas affected by emission sources under their jurisdiction…" (Health and Safety Code section

40001; *see also* section 40702.) Generally, CARB has primary authority over emissions from motor vehicles and the South Coast AQMD has primary authority over all sources in the basin, except motor vehicles. (Health and Safety Code section 40000.) However, Health and Safety Code section 40716 recognizes air districts may adopt and implement regulations that control emissions from indirect and areawide sources in order to meet state ambient air quality standards.

The key pollutants of interest for PR 2305 include nitrogen oxides (NOx, a key precursor pollutant for ozone and fine PM) and diesel PM (a component of fine PM, and a toxic air contaminant). The South Coast AQMD is in nonattainment of the California Ambient Air Quality Standards (CAAQS) for both ozone and fine PM, referred to as PM 2.5. Notably, for ozone, the current 8-Hour CAAQS and the 2015 8-hour NAAQS are at an equivalent level and for PM 2.5, the current annual CAAQS and the 2012 annual NAAQS are also at an equivalent level. As a result, the South Coast AQMD relies on the same measures to meet both federal and state ozone and PM 2.5 standards.

In addition, the Clean Air Act allows a state to include "…as part of an applicable [state] implementation plan, an indirect source review program which the State chooses to adopt and submit as part of its plan." (Clean Air Act section 110(a)(5)(A)(i); 42 U.S.C. §7410(a)(5)(A)(i).) An indirect source is defined as "…a facility, building, structure, installation, real property, road, or highway which attracts, or may attract, mobile sources of pollution." (Clean Air Act section 110(a)(5)(C); 42 U.S.C. §7410(a)(5)(C).) Also, the Clean Air Act acknowledges that states and their subdivisions have the right to "adopt or enforce any standard or limitation respecting emissions of air pollutants" and also "any requirement respecting control or abatement of air pollution" so long as it is not less stringent than a federal requirement. (Clean Air Act section 116; 42 U.S.C. § 7416.)

The South Coast AQMD Governing Board approved the 2016 Air Quality Management Plan (2016 AQMP) in March of 2017. The 2016 AQMP was subsequently approved by CARB, included into the State Implementation Plan (SIP), and approved by U.S. EPA in 2019. The 2016 AQMP included MOB-03, a facility-based mobile source control measure to reduce mobile source emissions associated with warehouse distribution centers, which has resulted in PR 2305 and PR 316.

By approving MOB-03 into the 2016 AQMP, the South Coast AQMD and CARB have committed to, and the U.S. EPA has authorized, the development of an indirect source rule to achieve emission reductions from mobile sources attributed to warehouse activities, in order to assist attaining the federal ozone NAAQS in 2023 and 2031. While MOB-03 was adopted as part of the NOx emissions reduction strategy for ozone, the 2016 AQMP also recognized that the "NOx strategy will assist in meeting the annual PM 2.5 as "expeditiously as practicable" earlier than the attainment year of 2025." (2016 AQMP, pg. 4-52.)

Initially, the South Coast AQMD Governing Board authorized a one-year public process to identify if MOB-03 could be achieved through voluntary or regulatory measures, and then ultimately determined, in May of 2018, that staff should pursue a regulatory approach.

> A California Attorney General Opinion from 1993 determined that a district could adopt a regulation to,
>
> "…require the developer of an indirect source to submit the plans to the district for review and comment prior to the issuance of a permit for construction by a city or county. A district may also require the owner of an indirect source to adopt reasonable post-construction measures to mitigate particular indirect effects of the facility's operation."

The opinion acknowledged a district may adopt a regulation requiring new and existing indirect sources to submit plans to the district to mitigate mobile indirect source emissions from both construction and operations that are attributed to the source. The Clean Air Act does not contain any prohibition on the scope of an Indirect Source Rule adopted by a state, as confirmed by the opinion and Health and Safety Code section 40716, and a state indirect source rule may include reasonable post-construction measures. The opinion further acknowledged that under Health and Safety Code section 42311, the district could adopt a regulation to collect fees to recover the costs associated with the indirect source review program. A similarly worded section, Health and Safety Code section 40522.5, specifically authorizes the South Coast AQMD to collect fees to recover costs associated with regulatory programs for areawide or indirect sources. These are the types of fees contemplated by PR 316.

Implementation of PR 2305 and PR 316 will also meet the requirement for districts in extreme nonattainment to consider all feasible measures that have been implemented in other areas in order to meet state standards. (Health and Safety Code section 40920.5(c).) While the term "feasible" is not defined in the Health and Safety Code, it is defined in another state regulation as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors." (14 California Code of Regulations section 15364.)

There are several examples of indirect source rules that have already been adopted in California. For example, the San Joaquin Valley Unified Air Pollution Control District adopted Rule 9510, which requires new development projects that meet certain specifications to reduce emissions of PM 10 and NOx. In addition, indirect source programs have been implemented by Mendocino County AQMD, Great Basin Unified APCD, Colusa County APCD, Placer Court APCD, Imperial County APCD, and Shasta County AQMD. As several California air districts have already adopted and implemented indirect source rules, policies, and/or the collection of reduction fees, this type of measure has been shown in a variety of areas to be "feasible." Furthermore, the authority for air districts to set emission reduction targets from indirect sources was confirmed by the court in *NAHB v. San Joaquin Valley UAPCD* (9th Cir. 2010) 627 F.3d 730.

Health and Safety Code section 40717 further requires districts to "adopt, implement, and enforce transportation control measures for the attainment of state or federal ambient air quality standards…." The section defines transportation control measures as "any strategy to reduce vehicle trips, vehicle use, vehicle miles traveled, vehicle idling, or traffic congestion for the purpose of reducing motor vehicle emissions." (Health and Safety Code section 40717 (g).) PR 2305 will encourage facilities to reduce motor vehicle emissions by requiring fewer points

from facilities that are able to employ certain transportation control measures, such as fewer truck trips (with additional subsequent reduced vehicle idling).

In addition to the above provisions, the South Coast AQMD may adopt rules or regulations that require "the owner or the operator of any air pollution emission source to take such action as the state board or the district may determine to be reasonable for the determination of the amount of such emission from such source." (Health and Safety Code section 41511.) Even more specifically, under Health and Safety Code section 40701(g), the South Coast AQMD is authorized to collect information regarding a source, "...except a noncommercial vehicular source, to provide (1) a description of the source, and (2) disclosure of the data necessary to estimate the emissions of pollutants for which ambient air quality standards have been adopted, or their precursor pollutants…." These sections of the Health and Safety Code therefore authorize the South Coast AQMD to require owners and operators of warehouses to provide information that may be used to quantify emissions based on warehouse activity.

Programs reducing emissions of precursors to ozone and PM 2.5 for purposes of achieving and maintaining the NAAQS or CAAQS may also have concurrent benefits in reducing emissions of air toxics. The district may adopt rules to reduce emissions from sources that may affect public health. One of the duties imposed upon the district is the duty to enforce Health and Safety Code section 41700. That section provides:

> "Except as otherwise provided in section 41705, no person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property."

Accordingly, the South Coast AQMD may adopt regulations to prevent the potential health impacts from toxic air contaminants, including diesel PM, as well as to reduce the emissions of criteria air pollutants. The California Supreme Court has upheld the districts' authority to regulate air toxic emissions from sources within their jurisdiction. (*Western Oil & Gas Assoc. v. Monterey Bay Unified Air Pollution Control Dist.* (1989) 49 Cal.3d 408.)

CHAPTER 2: SUMMARY OF PROPOSAL

INTRODUCTION

PROPOSED RULE 2305

PROPOSED RULE 316

WAIRE MITIGATION PROGRAM

INTRODUCTION

Proposed Rule (PR) 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program includes the requirements that regulated warehouse owners and operators must follow. These requirements include an obligation for applicable warehouse operators to earn a specified number of WAIRE Points every year using either a menu of options, developing and implementing a custom plan, or paying a mitigation fee. Warehouse operators that over-comply may transfer excess WAIRE Points earned in one year to a subsequent year or may transfer WAIRE Points to another site within their control. If they so choose, warehouse owners may also opt in and earn WAIRE Points and transfer them to an operator at that site. PR 2305 also requires reporting information about facility operations and recordkeeping. PR 316 is the companion rule to PR 2305 and establishes the administrative fees that PR 2305 warehouse owners and operators must pay to support South Coast AQMD compliance activities.

PROPOSED RULE 2305

Purpose – Subdivision (a)

The purpose of the proposed rule is to reduce local and regional emissions of NOx and PM associated with warehouses in order to assist in meeting state and federal air quality standards. Actions required by PR 2305 can also work together with other regulations, incentive programs, and state policies to enhance their effect (e.g., clean air goals and zero emission vehicle goals). PR 2305 therefore also acts as a facilitating measure to achieve emission reductions from these other efforts. Reductions in NOx and PM regionally will assist in meeting federal and state air quality standards, and concurrent reductions in diesel PM will also reduce air quality impacts to communities living near warehouses.

The proposed purpose is as follows:

> *The purpose of this rule is to reduce local and regional emissions of nitrogen oxides and particulate matter, and to facilitate local and regional emission reductions associated with warehouses, in order to assist in meeting state and federal air quality standards for ozone and fine particulate matter.*

Applicability- Subdivision (b)

In 2014, there were approximately 32,000 industrial warehouse buildings of any size in the counties of Los Angeles, Orange, Riverside, and San Bernardino counties. PR 2305 will apply only to the largest facilities in South Coast AQMD that have more than 100,000 square feet of indoor space in a single building. Warehouse owners often do not conduct day-to-day operations, and thus PR 2305 applies to both operators and owners of these facilities, however most requirements do not apply to owners unless they opt in (see Requirements discussion below). Some large industrial properties may also have buildings that exceed the 100,000 square foot threshold, but do not conduct any warehousing activities (e.g., they may conduct manufacturing instead). Finally, some facilities may have tenants that change through time. One year may include a tenant operating a facility as a church, and the next year a new tenant may change to a warehouse operator. The applicability of the rule is therefore tied to buildings that *may* be used for warehousing activities, however only limited reporting is required by PR 2305 if warehousing activities are not actually occurring.

The proposed applicability is as follows:
This rule applies to owners and operators of warehouses located in the South Coast Air Quality Management District (South Coast AQMD) jurisdiction with greater than or equal to 100,000 square feet of indoor floor space in a single building.

Definitions – Subdivision (c)

PR 2305 includes definitions of specific terms related to the warehousing industry and mobile source technology. Some definitions are based on existing South Coast AQMD rules and regulations. There are technology terms such as electric charger levels or technology type that have range differences in the industry, but at time of inclusion were based on an existing source. Please refer to PR 2305 subdivision (c) for each specific definition.

Proposed Definitions:

Alternative Energy Generation Equipment
Alternative-Fueled Vehicle
Alternative Fueling Station
Class 2B Truck
Class 3 Truck
Class 4 Truck
Class 5 Truck
Class 6 Truck
Class 7 Truck
Class 8 Truck
Cold Storage Warehouse
Compliance Period
Diesel Particulate Matter (DPM)
Dwell Time
Electric Charger
Fuel Type
MERV 16
Near-Zero Emission (NZE) Trucks
Nitrogen Oxides (NOx)
Parent Company
Straight Truck
Tractor
Transport Refrigeration Unit
Truck Class
Truck Trip
Vehicle Miles Traveled (VMT)
Warehouse
Warehouse Facility
Warehouse Operator
Warehouse Facility Owner
Warehouse Land Owner
Warehouse Size
Warehouse Activities
Yard Truck
Zero-Emission (ZE) Truck

Alternative Energy Generation Equipment: Some warehouses already operate solar panels that generate electricity. This is expected to be the dominant technology for alternative energy generation equipment at a PR 2305 warehouses. However, other onsite forms of energy generation may be possible (e.g., windmills). This definition only applies to reporting requirements, and warehouse operators will be required to specify which type of technology they operate onsite.

Alternative fueled-vehicles and fueling stations: Alternative fuels means fuels for vehicles besides diesel and gasoline. This is expected to be dominantly natural gas, electricity, and potentially other fuels like hydrogen or propane. Traditionally alternative-fueled vehicles have lower emissions than their gasoline and diesel counterparts. However, any requirements in the rule related to vehicle emissions refer to near-zero emissions or zero-emissions vehicles. These alternative-fuel definitions only apply to reporting requirements for alternative-fueling stations.

Class 2b to 8 trucks: These definitions use common classifications for trucks based on their gross vehicle weight rating.[42] *Truck class* refers to these classes.

Cold storage warehouse: These warehouses store perishable goods (e.g., food) and typically have higher energy use due to onsite refrigeration, higher daily truck trip generation rates due to the need to move perishable goods quickly, including from trucks that have a transport refrigeration unit.

Compliance period: This is the 12-month period during which warehouse operators (and warehouse facility or land owners who opt in) need to earn WAIRE Points. These WAIRE Points are documented in the Annual WAIRE Report filed within 30 days after the compliance period ends.

Diesel Particulate Matter (DPM): DPM is the particulate matter that is emitted from diesel fueled engines that power trucks and equipment. It a component of fine PM, and also a toxic air contaminant and carcinogen.

Dwell time: This is the period of time that trucks stay parked at a warehouse.

Electric charger: This definition varies in different applications outside PR 2305. For the purposes of PR 2305, an electric charger is a plug that can be used to charge a vehicle independent of whether other plugs are operating, and that can operate at 208 Volts or greater. Some electric charging stations are designed with more than one plug, which can be concurrently attached to vehicles, however they cannot charge vehicles simultaneously. For example, high powered charging stations may not be able to deliver multiple high charges at the same time, but a station operator may not want to dedicate personnel to wait for one plug to finish before plugging in the next vehicle to charge, so multiple plugs may be plugged into vehicles, and sit idle. The station would then automatically cycle to the next plug when the first vehicle finishes charging. For purposes of PR 2305, this station would count as a single electric charger. Alternatively, if multiple plugs were able to operate simultaneously, then each plug would count as an individual electric charger.

[42] https://afdc.energy.gov/data/10380

Fuel type: This refers to the different types of fuels used in vehicles and equipment.

MERV 16: This is equal to a 95% particulate matter efficiency rating for filters used in building heating, ventilation, and air conditioning systems as defined in Standard 52.2 from the American Society of Heating, Refrigerating and Air-Conditioning Engineers. WAIRE Points earned from the WAIRE Menu for filter system installations or filter replacements in residences, schools, daycares, hospitals, or community centers must meet this minimum efficiency level. Filters can reduce indoor exposure to particulate matter.

Near-zero emissions (NZE) trucks: This definition refers to the lowest optional low NOx standard for truck engines in Title 13, Section 1956.8 of the California Code of Regulations. This level is currently set at 0.02 gram/brake horsepower-hour. CARB is proposing to change this standard to include new test cycles starting in 2024, and additionally lowering the level to as low as 0.01 g/bhp-hr in 2027 as part of its recent Low NOx Omnibus rulemaking. The PR 2305 definition uses the Section 1956.8 definition, but slightly refines it by pointing to the "lowest non-zero optional NOx standard applicable at the time of manufacture. This refinement is made to ensure that future lower standards are not applied to existing trucks who qualified for the near-zero definition at the time of manufacture.

Nitrogen oxides (NOx): The definition in PR 2305 is the same definition that is used in South Coast AQMD Rule 2000.

Parent company: This term refers to the company or entity that owns another company either directly, or through a subsidiary.

Straight truck: This refers to smaller trucks that carry goods on the same chassis as the cab and engine. Typical examples include a box truck or a package delivery truck.

Tractor: This refers to larger Class 7 and 8 trucks that pull a trailer, often called "semis."

Transport Refrigeration Unit (TRU): TRUs are typically diesel-powered refrigeration units commonly mounted on the front of a trailer near the tractor cab, or on the front of a straight truck just above the cab. The diesel engine providing power for the TRU is smaller than a truck engine, but TRUs commonly idle for long periods at a warehouse in order to keep the goods inside the straight truck or trailer at appropriate temperatures.

Truck trip: A one-way trip from a truck or tractor either from or to a warehouse. A truck entering a warehouse site, and then later leaving would count as two truck trips, and one truck visit.

Vehicle Miles Travelled (VMT): For PR 2305, this term refers to the total annual miles of travel made by trucks or tractors. VMT does not need to be tracked to earn any WAIRE Points from the WAIRE Menu. VMT only needs to be reported by warehouse operators in an Initial Site Information Report if they own a fleet that serves that warehouse.

Warehouse and Warehouse Facility: A warehouse refers to the building used to store goods, while a warehouse facility refers to the entire property that includes a warehouse, as well as the accessory uses such as the truck yard, parking, maintenance facilities, etc.

Warehouse Facility Owner and Warehouse Land Owner: These terms are separately defined because there are rare instances where the owner of the land beneath a warehouse facility is not the same as the owner of the warehouse building. Most parts of PR 2305 do not require anything of warehouse facility or land owners. However, they can opt in to certain parts of the proposed rule (e.g., they can opt in to earn WAIRE Points, and then transfer those to a warehouse operator at that site). In one instance, the Warehouse Operations Notification [see paragraph (d)(7)], there is a requirement of the warehouse facility owner that is not applicable to the warehouse land owner.

Warehouse Operator: Most of PR 2305 is applicable to the warehouse operator. The operator is the entity that has control of day-to-day operations at the site. Some operators will hire companies to take care of day-to-day operations for portions of the site, such as yard operations, or temporary laborers to load or unload trucks and trailers. In this instance, the warehouse operator is the entity that hires these companies or temporary laborers.

Warehouse Size: This term refers to the indoor floor space of a warehouse. A warehouse may have multiple floors, as well as mezzanine areas, used for warehousing activities. For example, a warehouse building may take up 100,000 square feet of ground area, and have 100,000 square feet of floor space on the first floor used for warehousing activity, and 50,000 square feet of floor space on a mezzanine, with 20,000 square feet of the mezzanine used for office space and the remainder used for warehousing activity. The warehouse size in this case would be 130,000 square feet.

Warehousing Activity: Warehousing activity refers to the activities related to the storage and distribution of goods. This can include many activities including sorting, labeling, repackaging, palletizing, applying SKUs, racking, various levels of automation, and other similar activities. There are also many different activities that can occur within the same building that would not be considered warehousing activities, including supporting office administration, manufacturing, vehicle maintenance, or 'factory' retail stores that are open to the general public. Standalone retail stores that are open to the general public are also not covered by PR 2305. These non-warehousing activities are not considered warehousing activity.

Yard truck: These trucks can be off-road or on-road vehicles and are used to transport trailers short distances around a warehouse facility, for example from a dock door to parking area. Some yard trucks also shuttle trailers short distances on roads to nearby warehouses.

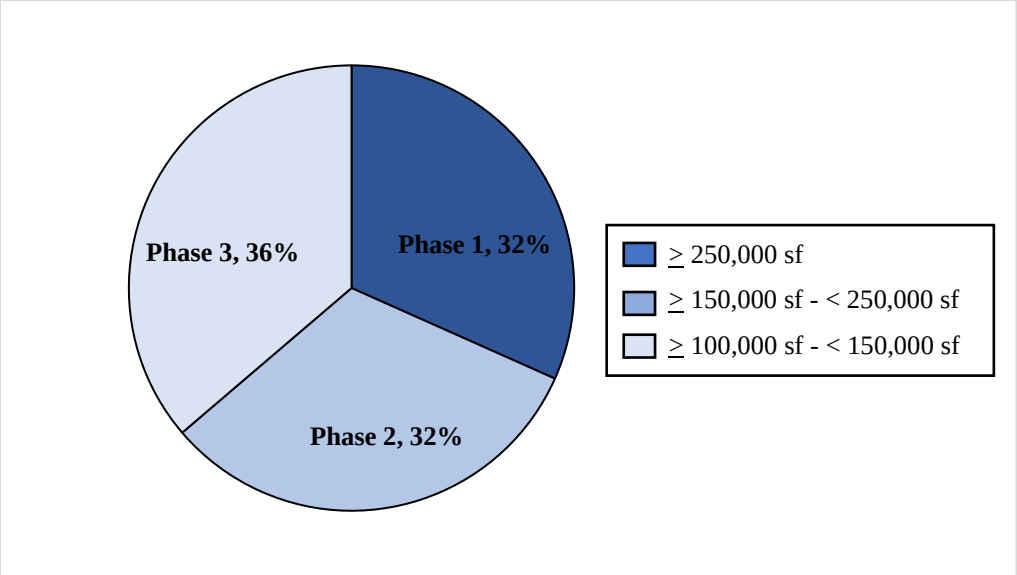
Zero Emissions (ZE) truck: This term refers to the definition developed by CARB in its recent Advanced Clean Trucks regulation.

Requirements – Subdivision (d)

Subdivision (d) establishes the key requirements of the Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program. This includes establishing the WAIRE Points system, describing how Points can be earned or transferred, and laying out when specific reports are due.

Paragraph (d)(1)
This paragraph establishes a WAIRE Points Compliance Obligation (WPCO) for warehouse operators. Warehouse operators must earn WAIRE Points to comply with their WPCO by the initial reporting date in Table 1 of PR 2305.[43] Table 1 splits the universe of PR 2305 warehouses that are anticipated to earn Points into three phases, approximately one third each as shown in Figure 5 below.

Figure 5: Number of PR 2305 Warehouses Anticipated to Earn Points by Phase



Paragraph (d)(1) also describes a two-step test to determine if an operator needs to earn Points. First, operators in warehouses with greater than or equal to 100,000 sq. ft. of space that may be used for warehousing activities and who use at least 100,000 sq. ft. for warehousing activities are required to earn Points. Second, if an operator only uses a part of the warehouse, they are only required to earn Points if they operate at least 50,000 sq. ft. of that space for warehousing activities.

Paragraph (d)(1) also provides the fundamental calculations to determining the WPCO for each warehouse operator, including Equation 1 below.

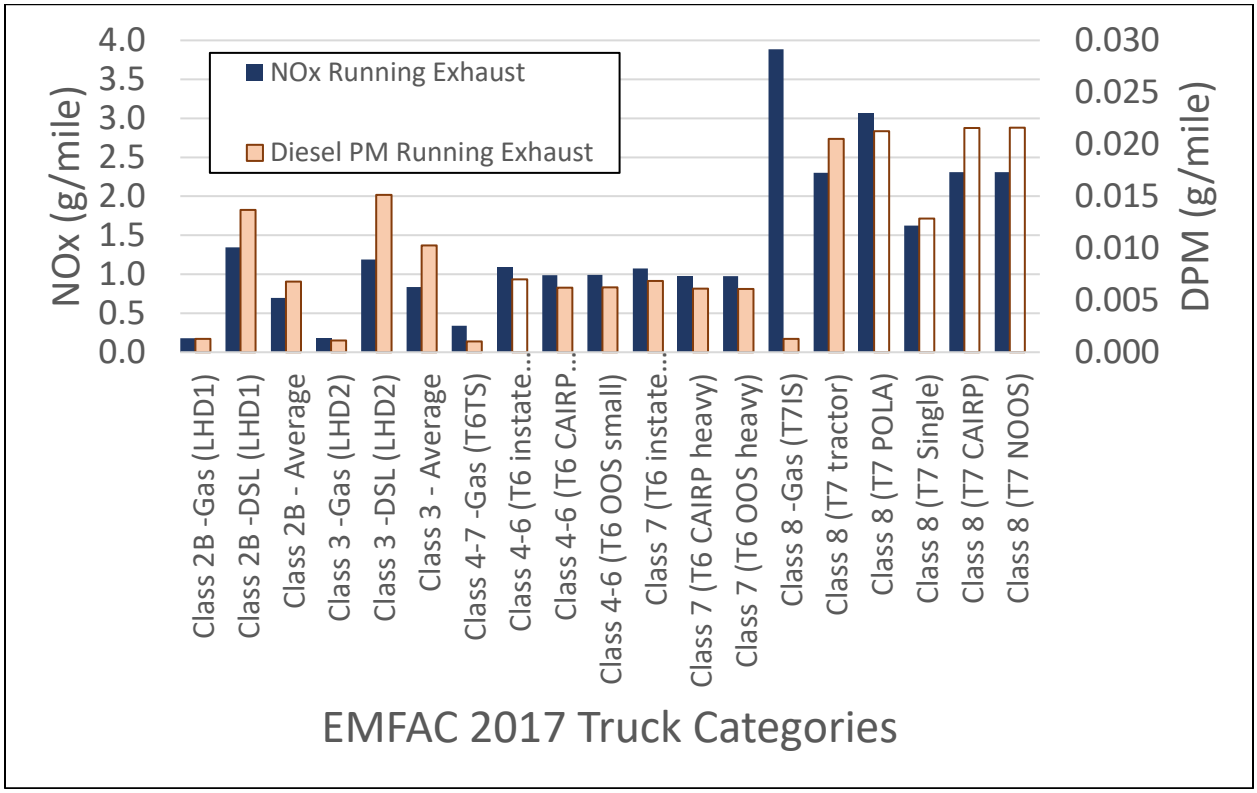
Equation 1: $WPCO = WATTs \times Stringency \times \left(\frac{Annual}{Variable}\right)$

The WATTs parameter (Weighted Annual Truck Trips)[44] in Equation 1 presents the number of truck trips by truck class associated with a warehouse, and serves as a proxy for overall warehouse activity and emissions. Larger Class 8 trucks carry more goods and have higher emissions and are

[43] The most recent draft PR 2305 updates the compliance period to match the calendar year from January 1 through December 31. If PR 2305 is approved in May 2021, then Phase 1 warehouse operators would have more than seven months to prepare for their first compliance period.
[44] A parameter like emissions or vehicle miles travelled is not used to determine the WPCO in order to reduce the administrative burden on warehouse operators and South Coast AQMD compliance staff. Motor carriers have also expressed concern that they do not want to reveal where or how far they travel to warehouse operators or South Coast AQMD in order to keep their clients private.

thus weighted more heavily than smaller Class 2B to 7 trucks. The value of 2.5 was calculated by comparing the running exhaust emission rates of different truck classes in EMFAC that typically visit warehouses (Figure 6 below) for calendar year 2023 (after CARB's Truck and Bus rule is fully phased in). The ratio between individual truck classes varies but is approximately 2.5 overall when comparing Class 8 to Class 2B to 7.

Figure 6: NOx and Diesel PM Emission Rates in 2023 for Different Truck Classes



Warehouse operators are required to submit actual truck trip data that is verifiable and representative of their operations to account for the amount of warehouse activity during the compliance period. Truck trip counts can be determined and accounted for by various methods such as warehouse personnel logging truck trips based on once-per month 24-hr long video surveys (one weekday and one weekend day), automated camera systems with recognition software, truck driver surveys, contractual records that provide sufficient details for truck activity, telematics systems, etc. Absent specific information about truck class, operators may simplify the analysis by just tracking straight trucks (as a proxy for Class 2b to 7) and tractors (as a proxy for Class 8). Truck trip data must be recorded and maintained, and the records and methods used to collect the truck trip data must be verifiable by South Coast AQMD compliance staff.

In the very rare case where an operator has lost their truck trip activity records due to a force majeure event (such as a fire), default truck trip rates based on truck trip generation rates from the Institute of Transportation Engineers and the Fontana Truck Trip study are also available.[45] These

[45] http://library.ite.org/pub/a3e6679a-e3a8-bf38-7f29-2961becdd498
https://tampabayfreight.com/pdfs/Freight%20Library/Fontana%20Truck%20Generation%20Study.pdf

default Weighted Truck Trip Rates (WTTR) are shown in Table 4 below. Only those trucks that use a warehouse's truck driveway must be included. Trucks that utilize the employee parking driveway for building servicing activities like mail delivery or trash pickup do not need to be included. Additional discussion of methods to record actual truck trips are provided in the WAIRE Program Implementation Guidelines (Appendix A).

Table 4: Truck Trip Generation Rates Used for Default WTTR in Case of Loss of Records due to Force Majeure

Warehouse Type	**Class 8 / Tractor-Trailer / 4+ Axle** (Average daily trips per 1,000 sq. ft. of warehouse building area)^	**Class 2B-7 / 'Straight' Trucks / 2- and 3-Axle** (Average daily trips per 1,000 sq. ft. of warehouse building area)^	**Weighted Truck Trip Rate (WTTR)** (2.5 × Class 8 + Class 4-7)
High Cube Transload & Short Term Storage (≥200k sf)	0.33	0.12	0.95
Warehouse (100k – 200k sf)	0.21	0.14	0.67
Cold Storage (>100k sf)	0.75	0.29	2.17

The proposed stringency of PR 2305 in Equation 1 is 0.0025 WAIRE Points per WATT. The proposed stringency was developed by evaluating 18 different scenarios of potential PR 2305 compliance, described further in Chapter 3. The potential emissions benefits from this scenario analysis were evaluated alongside the potential costs and impact to industry.

The annual variable in Equation 1 is the ramp up schedule for the PR 2305 stringency. As proposed, the full stringency of 0.0025 would not be achieved until the third compliance period for each warehouse. The annual variable in Table 2 of PR 2305 is layered in with the warehouse Phases. All three Phases will be at full stringency in the fifth compliance period. New warehouses that are built after PR 2305 would be placed into the appropriate Phase based on warehouse size. The annual variable is established relative to when PR 2305 is adopted, and does not 'reset' for a new warehouse that is built after rule adoption. For example, a new warehouse built in September 2025 that is 125,000 sf with at least 100,000 sf usable for warehousing activities would need to submit its first Annual WAIRE Report 30 days after January 1, 2026. Their annual variable for their first compliance period would be 1.0.

Paragraph (d)(2)

Paragraph (d)(2) provides the three primary options available to earn WAIRE Points. This includes completing actions from the WAIRE Menu in paragraph (d)(3), completing actions from an approved Custom WAIRE Plan in paragraph (d)(4), or paying a mitigation fee from paragraph (d)(5). Points can be earned from any combination of these three options in any compliance period.

Paragraph (d)(3)

Paragraph (d)(3) and Table 3 include the WAIRE Menu option. The WAIRE Menu itself has 32 different actions or investments that can be completed. Points can be earned from any combination of Menu actions, at any level of implementation. Points can be earned only if they go beyond requirements in other U.S. EPA, CARB, or South Coast AQMD regulations in effect during that compliance period.[46] When determining if an action goes beyond requirements from another regulation, a comparison is made between the regulatory requirement on the entity itself earning Points (typically the warehouse operator), rather than requirements on a non-PR 2305 entity. For example, CARB's ACT regulation requires truck manufacturers to sell a certain fraction of ZE trucks beginning in 2024. ACT does not apply to any regulated entity covered by PR 2305. Therefore, a warehouse operator (or warehouse facility or land owner if they opt in) may earn Points for purchasing a ZE truck, regardless of any requirements in ACT. At this time, there are no regulations in place that limit what a warehouse operator or owner could implement from the WAIRE Menu. There is the potential that CARB's upcoming TRU regulation, its Advanced Clean Fleets (ACF) regulation, or potentially other regulations could impose requirements on warehouse operators or owners. Even if a new regulation comes into place that imposes requirements directly on a warehouse operator or owner, if the action is completed prior to the other regulation's mandated timeline, then Points could still be earned under PR 2305. For example, hypothetically if ACF requires a warehouse operator who owns a fleet to purchase ZE trucks by 2030, but the operator purchases ZE trucks early in 2029, then they would be able to earn WAIRE Points for that action in 2029.

Table 3 in PR 2305 includes specific WAIRE Points for each action. Warehouse operators (or owners who opt in) would earn Points relative to their level of implementation of an action with the Points associated with each annualized metric in Table 3. The basic equation that needs to be followed to earn Points from the Menu is shown in Equation 2 below. As an example, if a warehouse operator demonstrates that they had 520 ZE Class 8 truck visits[47] to their warehouse during a compliance period, they would earn 72.7 WAIRE Points for that action following the method below.

Equation 2:

WAIRE Points per Annualized Metric × Level of implementation ÷ Annualized metric = Points earned

For ZE Class 8 visits example above: 51 Points × 520 visits ÷ 365 visits = 72.7 Points

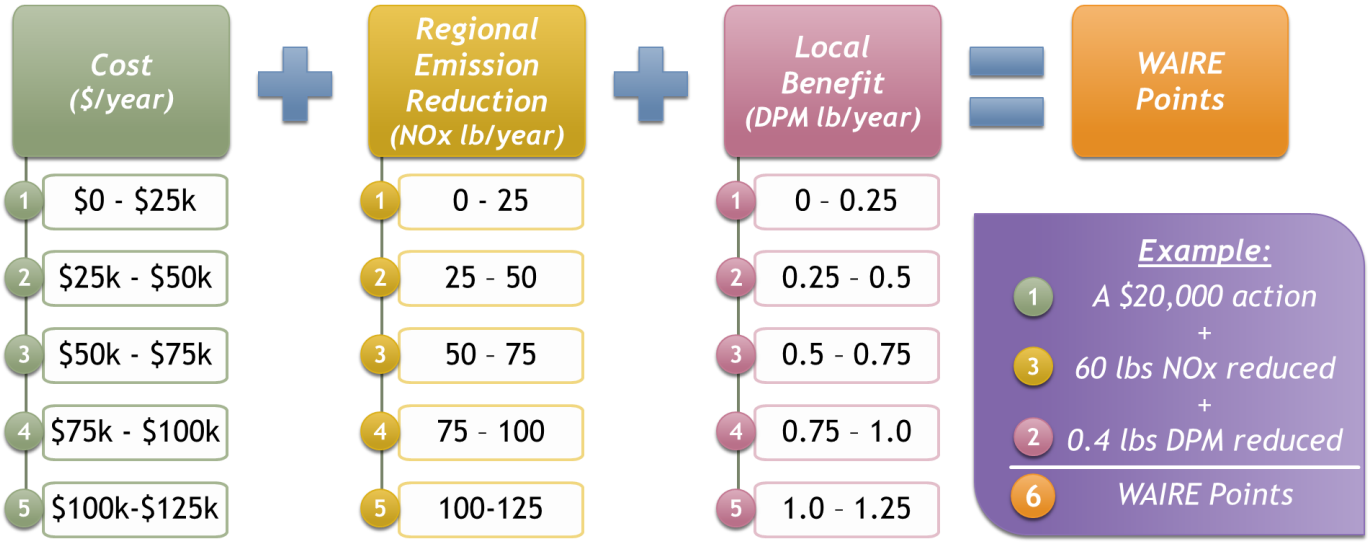
[46] Points can be earned even if local ordinances (e.g., from a city or county) or building codes include requirements for some of the actions covered by PR 2305. Local land use authorities also have the option to require higher compliance obligations under CEQA using the framework set up by PR 2305. For example, as a condition of approving a new warehouse project, a land use agency could require a warehouse operator to earn additional WAIRE Points beyond their WPCO in order to reduce air quality impacts. However there is no obligation on land use agencies under PR 2305 or PR 316 unless they are a warehouse owner or operator subject to PR 2305.

[47] 520 visits is the same as 1,040 one-way truck trips.

Figure 7 below shows the underlying calculation used to develop the number of WAIRE Points associated with each WAIRE Menu action. The details for these calculations are provided in Appendix B to this staff report. An earlier draft of this appendix was provided to the Working Group as the WAIRE Menu Draft Technical Report on March 3, 2020. This more detailed calculation approach is not used by warehouse operators or owners to earn WAIRE Points from the Menu. This approach is just the original analysis used to establish the balancing between different menu actions in PR 2305. In this approach, each WAIRE Point consists of three elements: the incremental cost to complete the action, the regional emission reduction of NOx in lbs/year, and the local DPM emission reductions in lbs/year. Each of these elements is calculated for individual actions at a set level of implementation (i.e., the annualized metric), binned and then summed to simplify comparisons.

Actions are split primarily into two groups, one-time investments in technologies that can reduce emissions or facilitate the implementation of emission reductions, and ongoing use of these technologies. Points are earned separately for the investment and the ongoing use. Points can be earned from both a one-time investment in emission reduction technologies and use of that technology in the same compliance period. For example, a warehouse operator could install a charging station and earn Points from that action, and begin using that charging station to earn more Points in the same compliance period.

Figure 7: Approach to Develop WAIRE Points for Each WAIRE Menu Action*



**This approach is not used by warehouse operators or owners to earn Points. This is only the underlying methodology to the WAIRE Menu.*

Finally, PR 2305 does not prohibit operators from using incentive funding from South Coast AQMD, CARB, or other sources to earn WAIRE Points. However, many of these programs have express limitations in using their funds to comply with a regulation. Because these limitations are written into each specific program's requirements, they are not included in PR 2305 as those programs' requirements could change through time. Staff is unaware of any requirements in programs like Carl Moyer, AB 617 funding, or similar programs that limit the use of funds with

WAIRE Menu items associated with ongoing use (e.g., truck visits). However, there are commonly limitations in these funding programs associated with the purchase of vehicles or equipment.

Paragraph (d)(4)
Paragraph (d)(4) describes the Custom WAIRE Plan option, including the requirements for what needs to be included in a Plan and Plan application, and the process and criteria for approval or disapproval of the Plan application, or rescission of an approved Plan by South Coast AQMD. Custom WAIRE Plans are only potentially approvable if they include actions that are not already included in the WAIRE Menu in Table 3 of PR 2305. Points may only be earned from an approved Custom WAIRE Plan. The Custom WAIRE Plan only needs to describe how Points would be earned under the plan, not how all Points would be earned to meet the WPCO if the Plan only addresses part of the points compliance obligation. The methodology to calculate WAIRE Points in Custom WAIRE Plan applications is described in the WAIRE Program Implementation Guidelines, and will be consistent with the WAIRE Menu Technical Report methods in Appendix B. The general approach requires comparison of baseline conditions without the Custom WAIRE Plan to the NOx and DPM emission reductions and the incremental costs when the Plan is implemented. Emission reductions must be quantifiable, verifiable, real, and achieved as quickly as feasible, and no later than three years after Plan approval.

Key milestones need to be described in the Custom WAIRE Plan application and must be adhered to if approved. Approved plans that do not make adequate progress on these approved milestones may have their Plan approval rescinded 30 days after notification by the Executive Officer (EO) of identified deficiencies. If the deficiencies are not corrected in that period, the EO may then rescind the Plan approval. If a warehouse facility or land owner opts into the program and has a Custom WAIRE Plan approved by South Coast AQMD, then they are required to implement it. If the Plan is not implemented, then the entity who filed the Plan application shall be the entity who will be held in violation of the rule for any compliance period covered by the approved Plan for which a sufficient number of WAIRE Points was not earned as demonstrated in the Plan. If a warehouse operator (or owner who opts in) does not earn a sufficient number of WAIRE Points to satisfy their WPCO as demonstrated in a previously approved Plan, they may still satisfy their WPCO for that compliance period through the completion of actions from the WAIRE Menu, or by paying a mitigation fee pursuant to paragraph (d)(5), and document these actions in their Annual WAIRE Report.

Examples of potential Custom WAIRE Plans that some industry stakeholders have expressed potential interest in include: installing offsite charging/fueling infrastructure for ZE vehicles, installing and operating energy efficiency systems for cold storage warehouses, installing onsite ZE charging stations with higher power (i.e., above 350 kW) than is described in the WAIRE Menu, or overcompliance with upcoming CARB regulations should they be approved (such as the TRU regulation or ACF). Other custom approaches are also potentially approvable provided they meet the criteria described in paragraph (d)(4).

Custom WAIRE Plans that rely on VMT reductions will be limited to those projects that can show that these VMT reductions go beyond what is modeled in the latest Regional Transportation Plan (RTP) from the Southern California Association of Governments (SCAG). The Plan application itself would need to include the analysis showing how VMT reductions would be lower than RTP

modeled VMT. An example custom approach that may be disqualified from this includes an operator who moves operations from multiple smaller operations into a larger facility, thus reducing truck trips and VMT between the previous smaller warehouses. However, this reduction in VMT for that operator likely does not reduce VMT overall because the smaller warehouses are not expected to stay vacant given the low vacancy rates experienced by warehouses in the South Coast AQMD region.[48] Hence, while the operator's VMT declines, the region's VMT may actually increase. Similarly, a warehouse operator that demonstrates that they have a lower trip generation rate and VMT than would be calculated using default values has not demonstrated that overall VMT in the region is reduced. The RTP models average trip generation rates, and outputs average miles per trip. Some warehouses are therefore expected to be higher, and some lower than the average.

Although earning Points through VMT reduction programs may not be likely in most situations, PR 2305 is still expected to provide an additional motivation for warehouse operators to improve efficiency beyond normal market forces. Because the WPCO is tied to a warehouse's annual truck trips, if a facility can find ways to improve efficiency and reduce its number of truck trips, then its compliance obligation under PR 2305 will be lower. PR 2305 has no requirements for warehouse owners or operators to reduce or limit the number of truck trips to their facility.

Paragraph (d)(5)

If a warehouse operator does not earn a sufficient number of WAIRE Points to satisfy their WPCO from the WAIRE Menu or from an approved Custom WAIRE Plan, a warehouse operator may choose to pay a mitigation fee to the South Coast AQMD at a cost of $1,000 per WAIRE Point. This value was determined by comparing the potential costs of implementing a variety of WAIRE Menu actions at an individual warehouse under different stringencies using methods described in the WAIRE Menu Technical Report (see Appendix B), and evaluating how many WAIRE Points were earned for each action. Although the costs vary across actions, many actions are approximately equal to $1,000 per WAIRE Point.[49] Additional discussion about the WAIRE Mitigation Program that would spend the collected fees is included at the end of this chapter.

Paragraph (d)(6)

This paragraph describes the limited transfer of WAIRE Points under PR 2305. PR 2305 is not a credit trading system. Transferring WAIRE Points may only be allowed in three limited instances of overcompliance with rule requirements. First, if an operator conducts warehousing activities at multiple warehouses, it may be more feasible for them to make investments at a larger scale at one facility, compared to repeated smaller investments at several facilities. Under PR 2305, this operator could over-comply and earn extra Points at one warehouse, and then transfer the excess to another warehouse in their control. Because one of the purposes of PR 2305 is to reduce local emissions, the full value of any Points transferred from one warehouse to another is discounted by the amount of the WAIRE Points that were earned from local emission reductions of diesel PM.

[48] Vacancy rates in 2019 in South Coast AQMD warehouses are about 4%, about 50% lower than the vacancy rates of surrounding markets. Source: IEc Task 2 "Technical Memorandum on Real Estate Markets Neighboring the South Coast AQMD Region"

[49] Examples are shown in slides 16-19 from the March 3, 2020 Working Group. http://www.aqmd.gov/docs/default-source/planning/fbmsm-docs/whse_isr_slides_3-3-2020.pdf

Table 3 in PR 2305 already provides the discounted Point value, and operators (or owners who opt in) do not need to determine the amount to discount other than looking up values in that table.

The second transfer method involves a warehouse operator earning excess WAIRE Points in one year and banking those Points to transfer into a subsequent year. These Points are not discounted and can be banked for up to three years. For example, excess Points earned in the compliance period from January 1, 2022 to December 31, 2022 would be usable until the end of the compliance period ending December 31, 2025, and reported in the Annual Report no later than 30 days after January 1, 2026 (pursuant to subparagraph (d)(7)(C)). This three-year period could be shorter if the action that earned Points would have already been required by another regulation in the year in which the Points would otherwise be used. WAIRE Points may also be earned prior to a warehouse operator's first compliance period. For example, an operator of a 125,000 sq. ft. warehouse could earn Points in the 2022 compliance period, even though PR 2305 does not impose a WPCO on a warehouse of this size until the 2024 compliance period. The three-year banking clock in this instance would not commence until after their first compliance period in 2024. The extra time is meant to encourage early compliance and achieve emissions reductions sooner.

The final transfer method involves transfers between a warehouse facility or land owner and a warehouse operator, and vice versa. Warehouse facility or land owners may find it advantageous to improve their properties using options within PR 2305 on their own. Any Points earned from this activity may be transferred to an operator at that site over the subsequent three-year period. Operators may also transfer Points earned in excess of their WPCO back to a warehouse facility or land owner, who may then transfer those Points to a subsequent operator at that site.

Paragraph (d)(7)
This paragraph outlines the required reports and notifications that operators and owners must submit. Warehouse facility owners (not warehouse land owners) must submit a notification on September 1, 2021 or within 14 days after a new operator has the ability to use at least 50,000 sq. ft. of a warehouse with $\geq$ 100,000 sq. ft. of floor space that may be used for warehousing activity. A typical date for this would be the start date of a lease. Notification is also required after a warehouse building has been modified such that it has new square footage. A report must also be submitted within three days of the EO's request.

Warehouse operators must submit a more detailed one-time Initial Site Information Report approximately six months before their first Annual WAIRE Report must be submitted for that site. As an example, if Operator A has recently moved to a new warehouse and has not been required to submit an Annual WAIRE Report before for that site, they are then required to submit the Initial Site Information Report. This is the only Initial Site Information Report that Operator A will need to submit for that site. If Operator A moves to another warehouse and has never submitted and Annual WAIRE Report for that second warehouse, they will need to submit an Initial Site Information Report for that warehouse. Initial Site Information Reports must also be submitted within 30 days of the request from the EO.

Warehouse operators who are required to earn WAIRE Points, and warehouse facility or land owners who earn WAIRE Points as applicable, are required to submit an Annual WAIRE Report within 30 days after January 1 of every year for which they must satisfy a WPCO (in the case of

operators), or earn WAIRE Points (in the case of owners opting in). The Annual WAIRE Report is the primary mechanism by which operators demonstrate how they have earned a sufficient number of WAIRE Points for the preceding compliance period. If an operator with a WPCO departs a warehouse before the end of that compliance period (e.g., if their lease ends), they are required to submit their Annual WAIRE Report no later than the date that they vacate the warehouse. No Annual WAIRE Reports are due before the applicable Initial Reporting Date in Table 1. Because the WPCO is tied to the number of truck trips at a warehouse while the operator was responsible for warehousing activities, the operator's Annual WAIRE report in this instance only needs to demonstrate how Points were earned for the portion of the compliance period when the operator was at that warehouse.

Reporting, Notification, and Recordkeeping Requirements – Subdivision (e)

This subdivision describes the information that must be included in the various reports and notifications required by PR 2305, as well as recordkeeping requirements. An online reporting portal is anticipated to be created if PR 2305 is approved by the Governing Board that will be used for all report and notification submissions. Reporting procedures will be further documented in the WAIRE Implementation Guidelines (Appendix A).

Paragraph (e)(1)

The Warehouse Operations Notification described in this paragraph includes basic information about the warehouse facility itself, whether the warehouse facility owner is also an operator, as well as information about any entities leasing the site, and how much of the site they have leased.

Paragraph (e)(2)

The Initial Site Information Report provided by a warehouse operator must include information about how many square feet they can use for warehousing activities. There are two cases when this is the only information that needs to be provided for this report. First, if the warehouse operator is in a building where the total square footage that can be used for warehousing activities is less than 100,000 sq. ft., then no more information is required. Second, some warehouse operators may lease only a portion of a warehouse with more than 100,000 sq. ft. that can be used for warehousing activities. In this situation, if the operator only can use <50,000 sq. ft. (e.g., due to lease conditions), then they do not need to report any further information. This second case does not apply where there are multiple operators under the ownership or control of a single parent company who each operate <50,000 sq. ft., but who collectively operate more than 50,000 sq. ft.

Apart from the two cases described above, Initial Site Information Reports must include information about actual truck trip data from the previous 12-month period, and the anticipated truck trips in the following 12-month period, by truck class or truck type (e.g., tractors or straight trucks). Trucks delivering or picking up goods from a warehouse are a proxy for total activity and emissions related to a warehouse and will use a truck entrance that is different than the employee vehicle entrance (that may also have minor use for mail trucks, or refuse pickup for administrative activities at the warehouse). In order to streamline reporting, only those trucks or tractors that use a warehouse's truck driveway must be included, with the intention of focusing on truck activity most closely aligned with total warehouse activity and emissions. Occasional truck traffic that utilizes the employee parking driveway for building services activities like mail delivery or trash pickup do not need to be included.

Additional data that must be reported includes information about any trucks owned by the operator that serve that warehouse, information about any onsite alternative fueling stations, information about any yard trucks operated at the site (owned or non-owned), and information about any onsite energy generation equipment. Finally, the report must include the anticipated options that the operator plans to use to earn Points for the current compliance period. These anticipated options might not end up being the actual options used to meet the WPCO, but they do provide an early planning step for operators to consider how they will comply with their WPCO in six months.

Paragraph (e)(3)
The Annual WAIRE Report shall include actual truck trip data used to determine the WPCO pursuant to paragraph (d)(1). The report shall also include how many WAIRE Points were earned from the WAIRE Menu and details about the reporting metric from the WAIRE Menu, the Points from a Custom Plan, and the Points from mitigation fees. Finally, the report shall include current contact information for the warehouse operator.

Paragraph (e)(4)
Records which demonstrate the accuracy and validity of any information reported to South Coast AQMD must be kept for a period of seven years after the reporting deadline and made available upon request during normal business hours.

Paragraph (e)(5)
Some warehouse facility or land owners, or operators may choose to hire consultants to complete some of the reporting requirements in PR 2305. This paragraph ensures that any reports are submitted by an official authorized by an officer of the warehouse owner or operator, as applicable. This authorized official may or may not be an employee of the warehouse owner or operator. The authorized official must certify that the information reported is accurate based on their best available knowledge.

WAIRE Implementation Guidelines – Subdivision (f)
This subdivision identifies that the EO will periodically publish the WAIRE Implementation Guidelines referred to throughout PR 2305 (Appendix A of this staff report).

Exemptions – Subdivision (g)
Three limited exemptions are described in this subdivision. First, similar to paragraph (e)(2), warehouse operators who cannot use more than 50,000 sq. ft. of a warehouse that is larger than 100,000 square feet, for warehousing activities due to lease conditions (e.g., they have leased <50,000 sq. ft.), are not required to earn any WAIRE Points. This exemption does not apply if the warehouse operator is under the control of a parent company of one or more lessees in the same building, and collectively the entities under the parent company's control operate more than 50,000 sq. ft. of a building that is 100,000 square feet or greater.

The second exemption states that warehouse operators with a WPCO <10 are not required to earn any WAIRE Points.[50] This exemption reduces the burden on the smallest warehouse operations that have a low volume of truck trips. No warehouse operations in the analysis of PR 2305 were identified to have a WPCO <10, but there is a possibility that a small number of warehouse operators may qualify and utilize this exemption. The warehouse operator would not be subject to the requirement to earn WAIRE Points in paragraph (d)(1), but the warehouse operator is still subject to the reporting requirements in paragraph (d)(7).

The third exemption relates to rare, unforeseen circumstances, beyond the reasonable control of the warehouse operator, or owner, who made an investment or took action to earn WAIRE Points, but due to a defect in their investment were unable to earn WAIRE Points. For example, if a warehouse operator purchases a zero emission truck and anticipates using this same truck to earn Points, but a malfunction in the powertrain due to an equipment manufacturer defect (e.g., malfunctioning electric motor, fuel cell stack, etc.) results in an inability to use the equipment, then the operator may apply for relief for the Points that would have be earned. The exemption shall be granted if the vehicle or equipment is shown to be due to a manufacturer defect or an installation defect.

Sunset Date for Rule – Subdivision (h)

PR 2305 will sunset upon final action by the U.S. EPA (e.g., when a final rule becomes effective) finding that all air basins within South Coast AQMD have attained the 2015 NAAQS for ozone (i.e., 70 parts per billion), and when CARB has determined that South Coast AQMD has met the state ozone standard (also 70 parts per billion).[51] The sunset date for the WPCO will be 45 days after the end of the compliance period during which the latter of U.S. EPA or CARB makes the relevant finding. All reporting requirements associated with this final compliance period will remain in effect, however no reporting will be required for future compliance periods.

The 2015 standard requires ozone levels in South Coast AQMD to meet the standard in 2037. Before then, the 1979 (revoked, 1-hour standard), 1997 (revoked 8-hour standard) and 2008 ozone standards must be met in 2022, 2023, and 2031, respectively. Under section 175A of the Clean Air Act, when a nonattainment area is redesignated as meeting attainment, it must prepare a maintenance plan that ensures the area will continue to meet the air quality standard for another 10 years. In addition, anti-backsliding requirements may also apply.[52] PR 2305 could potentially be applied to maintenance plan and anti-backsliding requirements for the 1979, 1997, and 2008 ozone standards prior to its sunset. Even with the sunset, PR 2305 is expected to assist in meeting the 2015 ozone standard. At this time, it is uncertain if PR 2305 would be needed for a maintenance plan or anti-backsliding requirements when the 2015 ozone standard is met because ZE and NZE technologies may be more widespread. As such, the Executive Officer shall prepare a report for the full Governing Board one year prior to the anticipated sunset that evaluates the need for the rule in light of these and any other applicable Clean Air Act requirements. The report shall also

[50] A WPCO of 10 is approximately equal to about two class 8 truck visits per day. Using default truck trip rates, a warehouse operator in a 100,000 sf warehouse would be required to earn about 61 WAIRE Points at a stringency of 0.0025 and annual variable of one.

[51] The averaging period for the federal and state standards differ, so it is possible that they may not be achieved in the same year.

[52] Implementation of the 2008 National Ambient Air Quality Standards for Ozone: State Implementation Plan Requirements, Final Rule. https://www.govinfo.gov/content/pkg/FR-2015-03-06/pdf/2015-04012.pdf

evaluate the state of NZE and ZE technologies used at warehouses, the emissions inventory of warehouses, and any other U.S. EPA or CARB regulations that apply to warehouses. Based on these findings, the Executive Officer shall make a recommendation whether any portions of the rule should be retained or amended.

Severability – Subdivision (i)

In the event a court holds that a portion or portions of PR 2305 are invalid or unenforceable, subdivision (h) allows the other portions of the rule to remain fully applicable and enforceable. Similarly, if the exemptions in PR 2305 are held by judicial order to be invalid, then the warehouse operators that had been covered by the exemption shall have to comply with the requirements of PR 2305.

PROPOSED RULE 316 – FEES FOR REGULATION XXIII

Purpose – Subdivision (a)

The purpose of the Proposed Rule 316 (PR 316) is to act as a companion rule to Proposed Rule 2305 (PR 2305) – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program. PR 2305 requires reporting information about facility operations and recordkeeping. PR 316 establishes the administrative fees that PR 2305 warehouse operators and owners must pay in order to recover South Coast AQMD administrative costs associated with ensuring compliance with PR 2305.

The proposed purpose is as follows:

> *California Health and Safety Code Section 40522.5 provides authority for the South Coast Air Quality Management District to adopt a fee schedule for areawide or indirect sources of emissions which are regulated, but for which permits are not issued, to recover the costs of programs related to these sources. The purpose of this rule is to recover the South Coast AQMD's cost of implementing Rule 2305.*

Applicability- Subdivision (b)

Warehouse owners and operators routinely move into or out of warehouses. As the applicability is tied to reports that must be submitted pursuant to PR 2305, any individual company may be required to pay multiple fees under PR 316 in any one year, then potentially not be subject to fees in the following year if they are not required to submit any of the applicable reports.

The proposed applicability is as follows:

> *This rule applies to owners and operators of facilities subject to Rule 2305 that submit an Annual WAIRE Report, a Custom WAIRE Plan application, an Initial Site Information Report, a Warehouse Operations Notification, or that pay a Mitigation Fee.*

Definitions – Subdivision (c)

PR 316 includes definitions of specific terms related to the warehousing industry and aspects of implementing PR 2305. Most definitions refer back to definitions within PR 2305. Please refer to PR 316 subdivision (c) for each specific definition.

Proposed Definitions:
Annual WAIRE Report
Custom WAIRE Plan Application

Initial Site Information Report
Mitigation Fee
Warehouse
Warehouse Operations Notification
Warehouse Operator
Warehouse Facility Owner
Warehouse Land Owner
Warehousing Activities

Annual WAIRE Fees – Subdivision (d)

Fees that will be established in this subdivision will be set at a flat level that is equal to the level of effort required by South Coast AQMD staff to conduct compliance activities related to the reports for which the fees are being paid. Fees must be paid at the time that the report must be submitted pursuant to PR 2305.

Custom WAIRE Plan Application Evaluation Fee – Subdivision (e)

Custom WAIRE Plans applications are expected to be unique, and require varying levels of effort by staff to review depending on the complexity of the application. Similar to other plan review fees in South Coast AQMD Rule 306, the fees in this subdivision are set consistent with the amount of staff time needed to complete an application review. An initial fee must be paid upfront as a deposit to cover a minimal amount of staff time, and subsequent fees may be assessed if more time is required. Staff will track time spent reviewing a Custom WAIRE Plan application, and if less cost is incurred than was paid in the initial fee, a refund will be issued.

Mitigation Program Administration Fee – Subdivision (f)

PR 2305 includes an option for warehouse operators (or owners who opt in) to pay a mitigation fee to South Coast AQMD to earn WAIRE Points. These collected fees will be used for a mitigation program to incentivize near-zero and zero emissions trucks and zero emissions charging infrastructure. Funds will be directed to projects in the communities near the warehouses that paid the fees. South Coast AQMD administers many incentive programs currently, including Carl Moyer, SOON, AB 617, etc. Prolonged experience with these programs has shown that some funds are needed to ensure efficient and accurate program administration. The amount set in PR 316 is 6.25 percent of the mitigation fee a warehouse operator or owner pays, and is consistent with recent program administration requirements for similar incentive programs.[53] Based on South Coast AQMD experience with current funding programs like Carl Moyer and Community Air Protection Program grants (i.e., AB 617), this level of funding is needed for the significant administrative effort to conduct outreach to industry, communities, and local governments, and to administer funds and track projects at a local scale (e.g., for each of about three dozen Source Receptor Areas).

Payment Due Dates – Subdivision (g)

Payment of fees for Custom WAIRE Plans are due no later than 60 days after an invoice has been provided. Fees for Annual WAIRE Reports, Initial Site Information Reports, and Warehouse

[53] AB 134 (2017): http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180AB134
AB 617 Incentives Guidelines:
https://ww2.arb.ca.gov/sites/default/files/2020-10/cap_incentives_2019_guidelines_final_rev_10_14_2020_0.pdf

Operations Notifications are due when the applicable report must be submitted. Requirements for payments in this subdivision are consistent with other South Coast AQMD fee programs in Rule 301.

Exemptions – Subdivision (h)

Two exemptions are provided in this subdivision. First, warehouse facility owners who submit a Warehouse Operations Notification for a warehouse that has less than 100,000 sq. ft. that can be used for warehousing activities are exempt from PR 316 fees. Second, warehouse operators who use <50,000 sq. ft. of a warehouse for warehousing activities are also exempt from PR 316 fees. The collection of this information will occur online, and no additional compliance with these components of the WAIRE Program is expected for these entities, hence staff costs are expected to be de minimis for this activity. This reported information is needed however to verify that the owner or operator does not have any further obligations under PR 2305.

WAIRE Mitigation Program

The main intent of the WAIRE Mitigation Program is to provide NOx and DPM emission reductions for communities around warehouses that paid the mitigation fees. Any in-lieu mitigation fees paid to South Coast AQMD by a warehouse operator (or owner who opts in) would be targeted to projects in the surrounding area for NZE or ZE trucks, or ZE charging/fueling infrastructure.[54] Any solicitations for requests for funding, or funding allocations that would be spent from the WAIRE Mitigation Program must be approved by the South Coast AQMD Governing Board in a public meeting. The proposed incentives would be used toward the purchase of NZE and ZE trucks or the purchase and installation of ZE charging or hydrogen fueling infrastructure. The WAIRE Mitigation Program would be available to any applicant that has trucks domiciled and/or used in the same geographic area of the warehouses that paid the WAIRE Program mitigation fee or applicants who intend to purchase and install ZE charging or hydrogen fueling infrastructure to serve that same geographic area and county. Funds would be prioritized first to areas in the same Source Receptor Area (SRA)[55] as the warehouse. Should there be insufficient project applicants in any area for the amount of funding available, the funding may be redirected to an adjacent SRA in the same county as the primary SRA. Project funding solicitations would be issued within one year of receiving mitigation fees, and could potentially be coordinated with solicitations from other incentive programs. Incentive projects would be evaluated for cost effectiveness to maximize the potential for NOx and DPM reductions of each incentive project. Because this funding program is wholly within the control of South Coast AQMD, funds may be combined with other incentive programs as allowable on a case-by-case basis.

[54] In order to avoid low quality workmanship and potential safety concerns, consideration may need to be made for a skilled and trained workforce. It is important that any installed infrastructure with the WAIRE Mitigation Program perform at a level that consistently meets the needs of the fleets it would serve and minimizes unnecessary impacts on the grid.

[55] http://www.aqmd.gov/docs/default-source/default-document-library/map-of-monitoring-areas.pdf

The WAIRE Mitigation Program incentives would be offered as a solicitation to receive enough applications similar to the existing incentive programs of Carl Moyer,[56] Proposition 1B,[57] or VW Mitigation Trust.[58] Similar to the existing incentive programs, there would be an application evaluation following the end of the solicitation. This would include evaluation of application documents, subsequent inspection of the NZE or ZE truck purchased or the ZE charging or hydrogen fueling infrastructure installed, and annual reports to follow the emission reductions of the incentive projects for the life of the incentive project contracts. The ultimate program design is not limited to matching these existing programs however, and other models may emerge after receiving stakeholder input as funding becomes available (e.g., voucher programs, a focus on grid upgrades on the utility side of the meter for some sites, consideration of small businesses, incorporation of community input and/or suggested projects that reduce NOx, etc.).

Finally, the incorporation of a well-trained and skilled workforce for ZE infrastructure installation is integral to the state's transportation electrification goals. According to a study commissioned by the state Workforce Development Board under AB 398 (2017), there is a strong relationship between high labor standards and investments in energy efficiency projects in both the installation and operations of ZE charging and fueling infrastructure. Workforce development, skilled training, and career development that addresses industry needs can lead to improved productivity and work quality, which are important considerations for PR 2305. ZE charging infrastructure projects funded by the WAIRE Mitigation Program will support equity and inclusion to ensure a well-trained and skilled workforce to comply with Public Utilities Code § 913.4(f) and the California Renewables Portfolio Standard Program. Skill standards such as specialized certifications in the installation, operation, and maintenance of zero emission technologies will be required to ensure safety and high performance.[59]

Additional details to this mitigation program will be developed in a future public process as part of the development of funding solicitations. Solicitations and grant award decisions will be made by the Governing Board in public meetings, and the public will be encouraged to participate and provide feedback. In addition, the Resolution included in the Board package for PR 2305 and PR 316 will include specific language laying out requirements for the WAIRE Mitigation Program.

[56] http://www.aqmd.gov/home/programs/business/business-detail?title=heavy-duty-engines&parent=vehicle-engine-upgrades
[57] http://www.aqmd.gov/home/programs/business/business-detail?title=goods-movement-emission-reduction-projects-(prop-1b)&parent=vehicle-engine-upgrades
[58] http://www.aqmd.gov/home/programs/business/business-detail?title=vw&parent=vehicle-engine-upgrades
[59] https://laborcenter.berkeley.edu/wp-content/uploads/2020/09/Putting-California-on-the-High-Road.pdf

CHAPTER 3: IMPACT ASSESSMENT

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AFFECTED INDUSTRIES
BASELINE EMISSIONS INVENTORY
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COMPARATIVE ANALYSIS

INTRODUCTION

PR 2305 and PR 316 will apply to warehouses with greater than or equal to 100,000 square feet of indoor floor space. These warehouses are part of a larger goods-movement network of facilities located throughout the South Coast AQMD region that also includes marine ports, airports, rail yards, and smaller warehouses.

Warehouses serve as an intermediate storage facility for goods coming from manufacturing facilities, other warehouses, or food production sites that are ultimately destined for another location, including retail stores, other warehouses, customers (e.g., through e-commerce), or other manufacturing operations. Goods are transported to and from warehouses in trucks of a variety of sizes, including smaller Class 2b-7 trucks used for local delivery or larger Class 8 tractor trailers (typically diesel-powered) that can transport goods either locally or nationally. These trucks will back up to a warehouse's loading dock to load/unload their cargo in or out of the warehouse. Some warehouses also allow trailers to be parked within their truck yard for short periods of time. These trailers are moved around the yard or to/from a loading dock with a yard truck (typically diesel-powered).

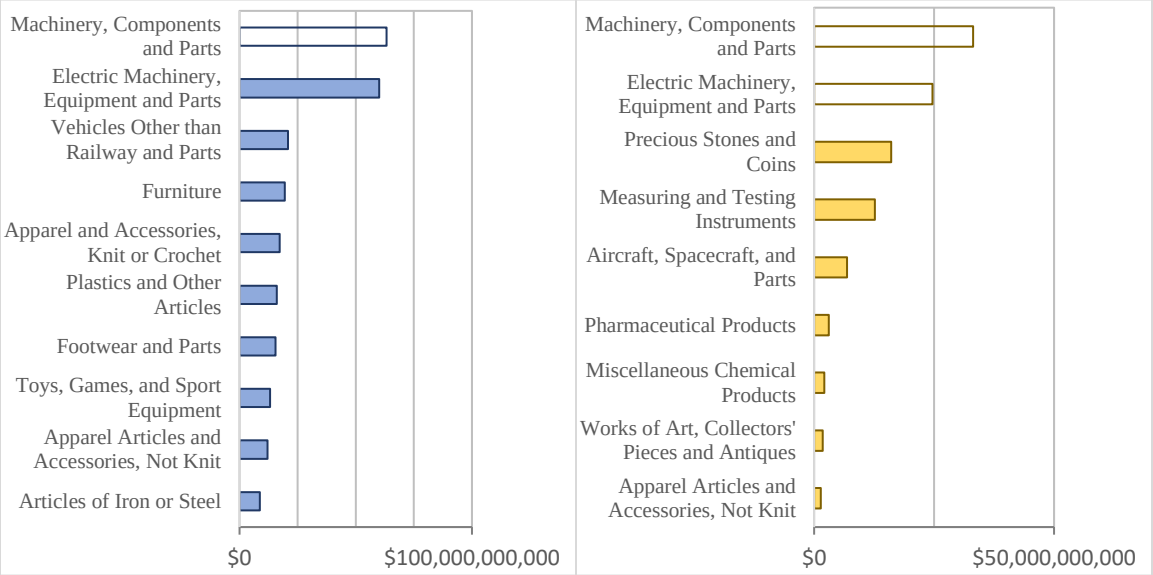
Inside the warehouse, goods are stored on storage racks that may be more than 20 feet high. The level of automation varies inside each warehouse, but, if automation is present, can include conveyor systems, robotics, and scanners. Goods are commonly moved around inside a warehouse by employees operating pallet jacks or small industrial forklifts. Additional activities include sorting, labeling, repackaging, palletizing, applying scannable bar codes (SKUs), racking, and packing/unpacking trucks. Many additional activities can be present at a facility with a warehouse including supporting office administration, manufacturing, vehicle maintenance, or retail stores that are open to the general public. Some warehouses also support cold storage, typically for food products, and will have large refrigeration systems. Trucks distributing goods to/from these cold storage warehouses typically keep goods at their appropriate temperature with a small diesel-powered transport refrigeration unit (TRU) mounted on the truck or trailer.

AFFECTED INDUSTRY

Southern California is a major gateway for goods coming from Asia. A wide variety of industries have supply chains which relies on goods moving through Southern California. Approximately $500 billion in goods were moved through the larger Southern California Association of Governments (SCAG) region in 2016, with imports accounting for about 75%. It is unclear how much of this total flow of goods move through warehouses subject to PR 2305 and PR 316. However about 69% of imports from the ports of Los Angeles and Long Beach (LA/LB) do not go directly onto rail, and therefore are expected to utilize warehouses within the South Coast AQMD region. Figure 8 shows the top commodities traded through the ports of LA/LB and through the Los Angeles and Ontario airports in 2018.[60]

[60] https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal_goods-movement.pdf

Figure 8: Top Commodities Traded Through Long Beach and Los Angeles Ports (left) and Los Angeles and Ontario Airports (right)



Warehouses are operated by cargo owners or by third party logistics (3PLs) firms who manage warehouses on behalf of cargo owners.[61] Warehouses are typically owned by a landlord[62] who leases the facility for a short period (e.g., three years) either to a cargo owner or 3PL. All three groups of industries (i.e., cargo owners, 3PLs, and warehouse owners) will be affected by PR 2305 and PR 316. Some motor carriers may choose to update some of their business practices (e.g., using more NZE or ZE trucks) in response to shifting market conditions brought about by PR 2305 (or other CARB regulations or incentive programs), however they are not regulated by PR 2305.

As shown in the baseline emissions inventory below, most NOx and diesel PM emissions associated with warehouses come from trucks. Trucks are owned and/or operated by motor carriers, and their services are provided on behalf of the owner of the goods they are carrying. Warehouse operators often do not own the goods in their warehouse, and in these cases they may not be directly involved in hiring all or any motor carriers that visit the warehouse.

Industry stakeholders have indicated that the business relationships between warehouse operators, cargo owners, and motor carriers can vary widely, even in a single warehouse. Some warehouses are more vertically integrated where the operator owns the goods in the warehouse, and directly contracts with motor carriers, or uses their own fleet, to transport the goods to retail establishments.[63] In this situation, the warehouse operator has a relatively high level of control of

[61] https://scag.ca.gov/sites/main/files/file-attachments/task4_understandingfacilityoperations.pdf
[62] In rare instances, the land beneath a warehouse building is owned by a different entity than the warehouse building itself.
[63] As estimated in Appendix C to this report, up to 40% of warehouse operators subject to PR 2305 may own a fleet. The number of warehouse operators who also directly arrange for some level of trucking services to their facility is unknown, but would increase the total number of warehouses who have a direct ownership or other business relationship with at least some trucks going to their facility. Staff conversations with warehouse operators have

the trucks and cargo flowing through the warehouse.[64] Other warehouse operators may not own any goods within the warehouse, or have a direct relationship with any motor carriers visiting the warehouse, or own a fleet themselves. The warehouse operator may have very little control over the trucks calling at the warehouse in this configuration.

One common relationship between all warehouse operators is they either own the goods in the warehouse themselves, or have a direct contractual relationship with the goods owner to manage the warehousing of those goods. The specific conditions in these contracts can vary widely depending on the needs of the two parties. For example, some warehouse operators have indicated their contracts with motor carriers have included air quality goals, such as providing incentives to fleets that met EPA SmartWay standards,[65] or requiring use of zero emission (ZE) trucks. Under PR 2305, some warehouse operators may choose to include contract provisions either with motor carriers or with goods owners who contract with motor carriers, that take into account the requirements of the rule. This could include requiring or incentivizing near zero emission (NZE) or ZE truck visits, or increasing the price charged for warehousing operations so that the operator can comply with PR 2305 in other ways.

Affected Facilities

There are approximately 45,000 industrial buildings of any size located in the South Coast AQMD region, totaling about 1.6 billion square feet. Warehousing makes up a significant fraction of this industrial space, with approximately 90% of these buildings classified as distribution, light distribution, cold storage, truck terminal, or warehouse.[66] Some industrial properties also include a combination of warehousing and manufacturing uses.

Most industrial properties are smaller in size, typically less than 100,000 square feet. However, the majority of the industrial building square footage occurs in larger buildings (Figure 9). The amount of industrial building space within South Coast AQMD's region has been growing substantially over the past several decades, with most of the growth occurring in the counties of San Bernardino and Riverside since the year 2000 (Figure 10).[67] Warehousing is anticipated to continue to grow in the SCAG region at a rate of ~1.8% annually.[68]

indicated that while not ubiquitous, it is not uncommon for many warehouse operators to have at least some trucking companies that they directly work with.

[64] Note that even in this instance, the supplier of some of the goods to the warehouse may arrange to transport inbound shipments without involving the warehouse operator.

[65] EPA SmartWay is a voluntary program that promotes fuel efficiency for freight carriers. https://www.epa.gov/smartway

[66] www.costar.com

[67] Ibid.

[68] https://scag.ca.gov/sites/main/files/file-attachments/final_report_03_30_18.pdf

Figure 9: Industrial Building Count (left) and Square Footage (right) by Building Size in South Coast AQMD Jurisdiction

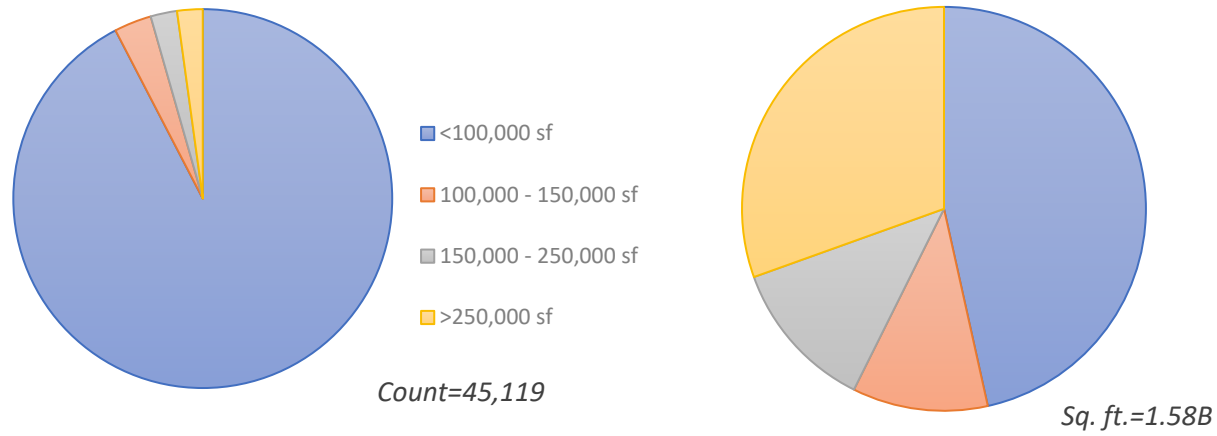
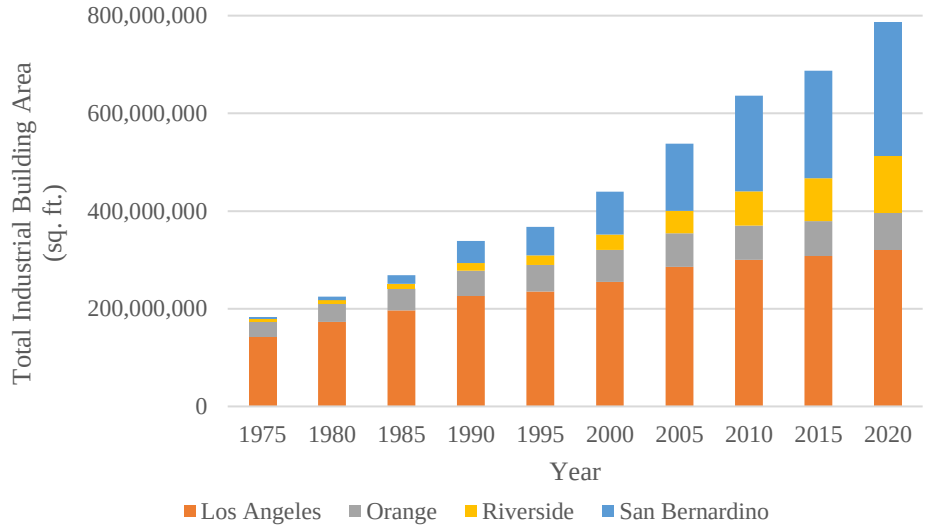


Figure 10: Industrial Building Growth by County



There are currently about 3,320 facilities with 100,000 square feet or more of building area that may be subject to PR 2305 and PR 316 (see Appendix C for a list of addresses and a discussion of how the number and type of facilities was determined). Of these facilities, an estimated 2,902 are expected to be required to earn WAIRE Points under PR 2305, with the remainder only subject to limited reporting (e.g., facilities with ≤100,000 sq. ft. of warehousing activity in a building with >100,000 sq. ft.). Of the warehouses expected to be required to earn WAIRE Points, about 38% may have more than one operator in a single building (yielding a total of about 4,000 operators), about 45% may own a truck fleet,[69] and about 17% may be owner occupied (with any combination thereof).

[69] Data is not available for how many trucks from operator-owned fleets serve a warehouse.

BASELINE EMISSIONS INVENTORY

The discussion below provides the method for estimating baseline emissions of NOx and diesel PM in 2019, 2023, and 2031 for the 2,902 warehouses expected to be required to earn WAIRE Points under PR 2305.[70] The estimate presented here relies on the substantial work previously conducted to estimate vehicular-related emissions, including work performed by:

- California Air Resources Board (CARB) both for the 2016 AQMP emissions inventory[71] and for the Draft Mobile Source Strategy[72],
- SCAG for the 2016 Regional Transportation Plan, and
- South Coast AQMD for the 2016 AQMP

South Coast AQMD also sponsored a study to evaluate warehouse activities that affect air quality, co-sponsored with the National Association for Industrial and Office Parks (NAIOP).[73] The study was conducted by the Institute of Transportation Engineers (ITE) to update warehouse trip generation estimates for warehouses.[74]

Methodology for Estimating NOx Emissions from Warehouses

Trip Generation Rates

Data was obtained for three categories of warehouses from CoStar[75] including warehouses ≥100,000 and < 200,000 sq. ft., ≥200,000 sq. ft., and all cold storage warehouses ≥100,000 sq. ft. Current warehouse data was projected to 2023 and 2031, using growth factors derived from SCAG's Industrial Warehousing report[76].

Trip generation rates for on-road vehicles were obtained from the High-Cube Warehouse Vehicle Trip Generation Analysis[77] by ITE and supplemented with data from the City of Fontana's Truck Trip Generation Study[78].

Table 5: Trip Generation Rates in Trips/Thousand Sq. Ft.

Warehouse Category	Class 8	Class 4-7	Passenger Vehicles
≥200,000 sq. ft.	0.33	0.12	1.000
≥100,000 – <200,000 sq. ft.	0.21	0.14	1.385
Cold Storage (≥100,000 sq. ft.)	0.75	0.29	1.282

[70] The spreadsheet that includes all calculations described here is available at: www.aqmd.gov/fbmsm
[71] https://www.arb.ca.gov/app/emsinv/fcemssumcat/fcemssumcat2016.php
[72] https://ww2.arb.ca.gov/resources/documents/2020-mobile-source-strategy
[73] http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/high-cube-warehouse
[74] https://www.ite.org/pub/?id=a3e6679a%2De3a8%2Dbf38%2D7f29%2D2961becdd498
[75] https://www.costar.com/
[76] https://www.scag.ca.gov/Documents/Task4_UnderstandingFacilityOperations.pdf
[77] *https://www.ite.org/pub/?id=a3e6679a%2De3a8%2Dbf38%2D7f29%2D2961becdd498*
[78] https://www.tampabayfreight.com/pdfs/Freight%20Library/Fontana%20Truck%20Generation%20Study.pdf

Table 6: Warehouse Square Footage for Each Warehouse Category

Warehouse Category	2019	2023	2031
≥200,000 sq. ft.	521,727,570	562,574,867	644,269,462
≥100,000 – <200,000 sq. ft.	214,795,154	231,611,979	265,245,630
Cold Storage (≥100,000 sq. ft.)	8,188,346	8,829,431	10,111,601

Trucks

Baseline composite truck emission rates[79] (ER) were calculated from EMFAC2017 for heavy duty trucks of Class 4-7 and Class 8 for calendar years 2019, 2023, and 2031. EMFAC2017 provides activity and emission rates for all on-road vehicles that operate within California, however, the analysis presented here is limited to those categories most likely to deliver goods to and from warehouses. EMFAC categories[80] in this analysis and their relationship to truck class are shown in Table 7 below.

Table 7: EMFAC Truck Categories

EMFAC Category	Description	Truck Class
T6 CAIRP Small	Medium-Heavy Duty Diesel CA International Registration Plan Truck with GVWR<=26,000 lbs	Class 4-6
T6 Instate Small	Medium-Heavy Duty Diesel Instate Truck with GVWR<=26,000 lbs	
T6 OOS Small	Medium-Heavy Duty Diesel Out-of-State Truck with GVWR<=26,000 lbs	
T6 CAIRP Heavy	Medium-Heavy Duty Diesel CA International Registration Plan Truck with GVWR>26,000 lbs	Class 7
T6 Instate Heavy	Medium-Heavy Duty Diesel Instate Truck with GVWR>26,000 lbs	
T6 OOS Heavy	Medium-Heavy Duty Diesel Out-of-State Truck with GVWR>26,000 lbs	
T7 CAIRP	Heavy-Heavy Duty Diesel CA International Registration Plan Truck with GVWR>33,000 lbs	Class 8
T7 NNOOS	Heavy-Heavy Duty Diesel Non-Neighboring Out-of-State Truck with GVWR>33,000 lbs	
T7 NOOS	Heavy-Heavy Duty Diesel Neighboring Out-of-State Truck with GVWR>33,000 lbs	
T7 POLA	Heavy-Heavy Duty Diesel Drayage Truck in South Coast with GVWR>33,000 lbs	
T7 Tractor	Heavy-Heavy Duty Diesel Tractor Truck with GVWR>33,000 lbs	

Vehicle miles traveled (VMT) per trip of 14.2 mi/trip and 39.9 mi/trip for medium-heavy (Class 4-7) and heavy-heavy duty trucks (Class 8) respectively, were derived from SCAG's 2016 Regional Transportation Plan modeling analysis (Table 8).

[79] This is the sum of each truck category's emissions rate multiplied by its corresponding VMT, and then divided by the total sum of VMTs.

[80] https://ww3.arb.ca.gov/msei/downloads/emfac2017-volume-iii-technical-documentation.pdf

Table 8. Truck activity data from SCAG's Heavy-Duty Truck Regional Travel Demand Model

Truck Class	VMT (mi/day)	Trips (trip/day)	Mile/trip
Class 4-7	7,744,000	544,000	14.2
Class 8	12,060,000	302,000	39.9

Class 8 truck emissions were discounted by 22.2% to account for the trips made in between warehouses by trucks.[81] Total idling emissions in the South Coast Air Basin (SCAB) for these truck classes were proportioned by the VMT estimate associated with warehouse trucking to calculate potential idling emissions associated with warehouses. The equations below show how preliminary emissions estimates were calculated.

Equation [1]:

$$VMT\ Associated\ with\ Warehouses = Warehouse\ size\ (ksf) \times trip\ rates\ \left(\frac{trips}{ksf}\right) \times \frac{miles}{trip}$$

Equation [2]:

$$Running\ Exhaust\ Emissions\ Associated\ with\ Warehouses = ER_{Class\ 8} \times Warehouse\ VMT_{Class\ 8} \times (1 - 0.222) + ER_{Class\ 4-7} \times Warehouse\ VMT_{Class\ 4-7}$$

Equation [3]:

$$Idling\ Exhaust\ Emisisons\ associated\ with\ Warehouses = \left(\frac{Warehouse\ VMT_{Class\ 8}}{Total\ VMT_{Class\ 8}}\right) \times Idling\ ER_{Class\ 8}\ (1 - 0.222) + \left(\frac{Warehouse\ VMT_{Class\ 4-7}}{Total\ VMT_{Class\ 4-7}}\right) \times Idling\ ER_{Class\ 4-7}$$

CARB recently approved two regulations that are expected to lower the emissions from trucks beginning with model year 2024 trucks, including the Advanced Clean Trucks Regulation and the Low NOx Omnibus Regulation. Additional emission reductions are anticipated from the upcoming Heavy Duty Inspection and Maintenance (I/M) regulation[82]. CARB modified EMFAC 2017 to account for these regulations in the META tool that supports its Draft 2020 Mobile Source Strategy. These modifications were applied to the truck categories and VMT associated with warehouses under PR 2305. The anticipated emission reductions from these regulations associated with the 2,902 warehouses expected to earn WAIRE Points under PR 2305 is shown in Table 9.

[81] https://scag.ca.gov/sites/main/files/file-attachments/task4_understandingfacilityoperations.pdf (pg 3-24)
[82] https://ww2.arb.ca.gov/our-work/programs/heavy-duty-inspection-and-maintenance-program

Table 9: Estimated Baseline Truck Emission (tpd) Associated with PR 2305 Warehouses Required to Earn WAIRE Points

	2019		2023		2031	
	NOx	**Diesel PM**	**NOx**	**Diesel PM**	**NOx**	**Diesel PM**
EMFAC 2017 Baseline	41.67	0.67	20.19	0.14	20.18	0.14
Reductions from CARB ACT, Low NOx Omnibus and Heavy Duty I/M Regulations	0	0	-0.005	< -0.01	-3.37	-0.03
Total	***41.67***	***0.67***	***20.19***	***0.14***	***16.81***	***0.12***

Passenger Vehicles

Similar to the methodology described for trucks, composite emission rates for running exhaust and start exhaust emissions for light duty cars and trucks from EMFAC2017, default car trip lengths from SCAG (10.6 mi./trip), and ITE trip generation rates for each warehouse category were used to estimate emissions from passenger car travel attributed to each warehouse category. No corrections outside of default values discussed above were made for passenger cars. Baseline emissions for this category are shown in Table 10 below.

Table 10: Estimated Baseline Passenger Car Emission (tpd) Associated with PR 2305 Warehouses Required to Earn WAIRE Points

	2019		2023		2031	
	NOx	**Diesel PM**	**NOx**	**Diesel PM**	**NOx**	**Diesel PM**
Total	***1.14***	***0.02***	***0.70***	***0.02***	***0.39***	***0.01***

Cargo Handling Equipment

Two main types of cargo handling equipment are typically operated at warehouses. These include yard trucks and industrial trucks (including pallet jacks and forklifts). Emissions from industrial trucks are not estimated for PR 2305 warehouses.[83] Yard trucks operated at warehouses are typically powered by diesel engines, and can be certified as off-road (which restricts the yard truck to one warehouse's yard) or on-road (which allows for short trips to nearby warehouses). Some warehouses may have more than one yard truck operating onsite, while others may have none. Several data sources[84] were used to estimate the potential yard truck emissions associated with warehouses subject to PR 2305 including:

[83] Warehouses subject to PR 2305 have indoor areas that are nearly always above grade compared to the nearby truck and trailer yard to accommodate trucks backing up to a dock. Industrial trucks therefore operate almost exclusively in an indoor environment in these warehouses. During site visits, staff did not observe any industrial trucks powered by internal combustion engines (ICEs) at warehouses subject to PR 2305, and operators cited the desire to avoid operating ICEs in indoor environments.

[84] Population data for yard trucks operated at warehouses is not available from CARB.

- A business survey of warehouses commissioned by South Coast AQMD.[85] Respondents to this survey indicated that larger warehouses (>200,000 sq. ft.) operate an average of 3.6 yard trucks per million square feet of warehouse space, while smaller warehouses (100,000 to 200,000 sq. ft.) operate an average of 1.2 yard trucks per million square feet.
- Yard truck manufacturing data by calendar year was purchased from Powersys.[86] This data product includes an attrition model that estimates the retirement of older yard trucks through time. Both on-road and off-road data is available from this product.
- Activity data was provided by a yard truck manufacturer. On-road yard trucks are estimated to travel 2,145 mi/yr and off-road yard trucks are estimated to operate for 1,430 hrs/yr.
- Calendar year-specific emission rates for on-road and off-road yard trucks was obtained from the Carl Moyer Guidelines.[87]

The estimated baseline NOx and diesel PM emissions from yard trucks are presented in Table 11 below.

Table 11: Estimated Baseline Yard Truck Emissions (tpd) Associated with PR 2305 Warehouses Required to Earn WAIRE Points

	2019		2023		2031	
	NOx	Diesel PM	NOx	Diesel PM	NOx	Diesel PM
Total	***0.09***	***0.003***	***0.09***	***0.003***	***0.08***	***0.003***

Transport Refrigeration Units (TRUs)

Updated emission estimates were based on CARB's current rulemaking effort affecting TRUs.[88] Half of all truck, trailer, and genset TRU emissions in the South Coast Air Basin were assumed to be associated with cold storage warehousing as refrigerated goods must travel to or from a warehouse for local delivery. This emission total was further reduced by the amount of cold storage warehousing square footage subject to PR 2305 WAIRE Point requirements relative to total cold storage warehousing in the South Coast AQMD jurisdiction (which is about 62%). Results of this analysis are presented below in Table 12.

Table 12: Estimated Baseline TRU Emissions (tpd) Associated with PR 2305 Warehouses Required to Earn WAIRE Points

	2019		2023		2031	
	NOx	Diesel PM	NOx	Diesel PM	NOx	Diesel PM
Total	***1.82***	***0.08***	***1.64***	***0.07***	***1.61***	***0.06***

[85] http://www.aqmd.gov/docs/default-source/ceqa/handbook/high-cube-warehouse-trip-rate-study-for-air-quality-analysis/business-survey-summary.pdf
[86] https://www.powersys.com/
[87] https://ww2.arb.ca.gov/sites/default/files/classic/msprog/moyer/guidelines/2017/2017_cmpgl.pdf
[88] https://www.arb.ca.gov/orion/

Summary of Baseline Emissions

Table 13 presents a summary of total baseline emissions associated with the 2,902 warehouses expected to earn WAIRE Points under PR 2305. This emissions total represents about 19% and 28% of the South Coast AQMD carrying capacity[89] in 2023 and 2031, respectively.

Table 13: Summary of Baseline Emissions Associated With PR 2305 Warehouses Expected to Earn WAIRE Points

Emission Source	2019		2023		2031	
	NOx	Diesel PM	NOx	Diesel PM	NOx	Diesel PM
Trucks	41.67	0.67	20.19	0.14	16.81	0.12
Passenger Vehicles	1.14	0.02	0.70	0.02	0.39	0.01
Yard Trucks	0.09	0.003	0.09	0.003	0.08	0.003
TRUs	1.82	0.08	1.64	0.07	1.61	0.06
Total	*44.72*	*0.774*	*22.61*	*0.227*	*18.89*	*0.192*

RULE STRINGENCY

Many factors go into considering the stringency of proposed rules. For PR 2305, the draft stringency recommended here considered the following points: the need for emission reductions (discussed in Chapter 1), the significance of emissions associated with the warehousing industry (discussed above in the Summary of Baseline Emissions), the potential emissions reductions from PR 2305 when considering other measures, and the impact to industry.

Potential Emission Reductions from PR 2305 and PR 316 When Considering Other Measures

As described in the baseline emissions inventory analysis above, recent CARB regulations have been quantified to the extent possible. In addition, CARB's Draft Mobile Source Strategy (Draft MSS) is designed to consider all the other measures that may be needed across every mobile source sector to meet various state goals, including attainment of federal air quality standards. This strategy includes very aggressive targets across all sectors, and any shortfall in one sector (e.g., ocean going vessels) would need to be made up by another sector (e.g., trucks).

South Coast AQMD staff submitted comments to CARB stating the Draft MSS needs to go even further, since emission reductions modeled in CARB's Draft MSS are not sufficient to meet either of the upcoming 2023 or 2031 federal deadlines for ozone reduction. Even in the most aggressive modeling in the Draft MSS,[90] in 2023 more than 95% of heavy-duty trucks will be no cleaner than 2010 engine standards assumed for all trucks in the baseline emissions inventory from the 2016 AQMP. This scenario projects these trucks will still make up about 57% of the truck fleet in 2031.

[89] The carrying capacity is the maximum amount of NOx emissions that are allowable in the air basin while still meeting 2023 and 2031 federal ozone standards.

[90] The Draft MSS did not explicitly consider any emission reductions from PR 2305 and PR 316.

Since the 2016 AQMP requires a 45% and 55% reduction in NOx by 2023 and 2031 respectively, the continued presence of large fractions of 2010 MY trucks in the fleet will hamper efforts to meet these deadlines. Any additional emission reductions provided by PR 2305 and PR 316 would assist in meeting the region's federal air quality attainment needs.

Impact to Industry

Some potential impacts to industry from PR 2305 include increased costs of warehouse operations and potential imposition of competitive disadvantages relative to warehousing in other regions. The potential cost impacts are described in the 'Compliance Costs' section below, and will be analyzed further in the socioeconomic analysis that will be released for public review at least 30 days prior to the public hearing to consider adoption of PR 2305 and PR 316.

The potential imposition of competitive disadvantages from air quality regulatory costs on the goods movement industry has been analyzed in two studies. First, one study was conducted by Industrial Economics Inc. (IEc)[91] and funded by South Coast AQMD to analyze the potential for PR 2305 and PR 316 to cause warehouses to relocate to nearby areas in order to avoid compliance with the rules. The second study by Davies Transportation Consulting Inc. was funded by the ports of LA/LB to analyze how the logistics industry might respond to a new truck rate for imported goods at marine terminals. These studies will be discussed in greater depth in the socioeconomic analysis, but a brief synopsis of the results is included below.

IEc Warehouse Relocation Study

The IEc study found the warehousing industry in the South Coast AQMD is robust, and has grown at faster rates than surrounding areas (see Figure 10 and Figure 11), all while experiencing consistent increases in rent that have outpaced neighboring markets (see Figure 12). Since 2010, the rent increases in South Coast AQMD have average about $0.47 per sq. ft. annually, all while growing in capacity by about 17 million sq. ft. per year. Nearby areas outside the South Coast AQMD jurisdiction have only increased their rents about $0.06 per sq. ft. annually over the same period.[92]

Industry stakeholders interviewed as part of the IEc study pointed to several benefits that warehouses rely on that are unique to this area, including the highly developed transportation network of multiple ports, railways, and interstate highways, along with a large labor pool that is difficult to access in more remote regions, and proximity to the large metropolitan customer base.

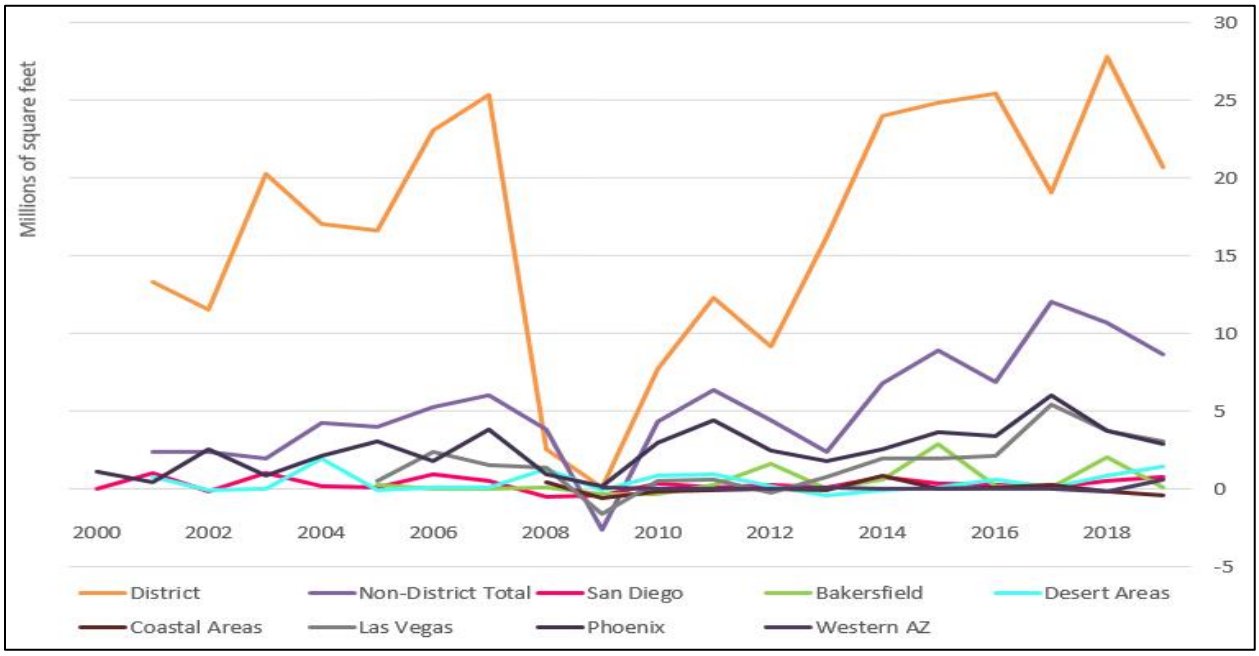
IEc modeled the potential costs that warehouses face with and without PR 2305 and PR 316 using two different methods. These analyses took into account different costs in neighboring markets such as rent, labor, utilities, transportation, etc., as well as costs associated with different potential stringencies of PR 2305 and PR 316. If costs are cheaper in a neighboring region compared to South Coast AQMD, then a warehouse would be motivated to relocate its operations. The analyses considered costs for existing building stock in neighboring areas, as well as hypothetical building stock assuming that existing vacant land that is industrially zoned could accommodate warehouses.

[91] Study will be included as an appendix to the socioeconomic analysis and is also located here: www.aqmd.gov/fbmsm.

[92] These annual $0.47/sf increased rents result in an additional cost to industry in the South Coast AQMD jurisdiction of about $11.4 billion from 2010-2019 compared to non-District $0.06/sf increases in rents.

One method that assumed all warehouses serve all markets equally found that no warehouses would relocate even with compliance costs of up to $2/sq. ft. of warehousing space. A more conservative modeling method found that up to 10 warehouses would have cheaper costs today (without PR 2305) in neighboring regions if the warehouses were solely dedicated to a single market (e.g., serving the national market only via inbound drayage trucks from the port and outbound trucking to intermodal railyards).[93] This same conservative model found that no additional warehouses would experience cheaper costs in neighboring areas (and hence potentially relocate) if compliance costs from PR 2305 were at or below $1.50/sq. ft.

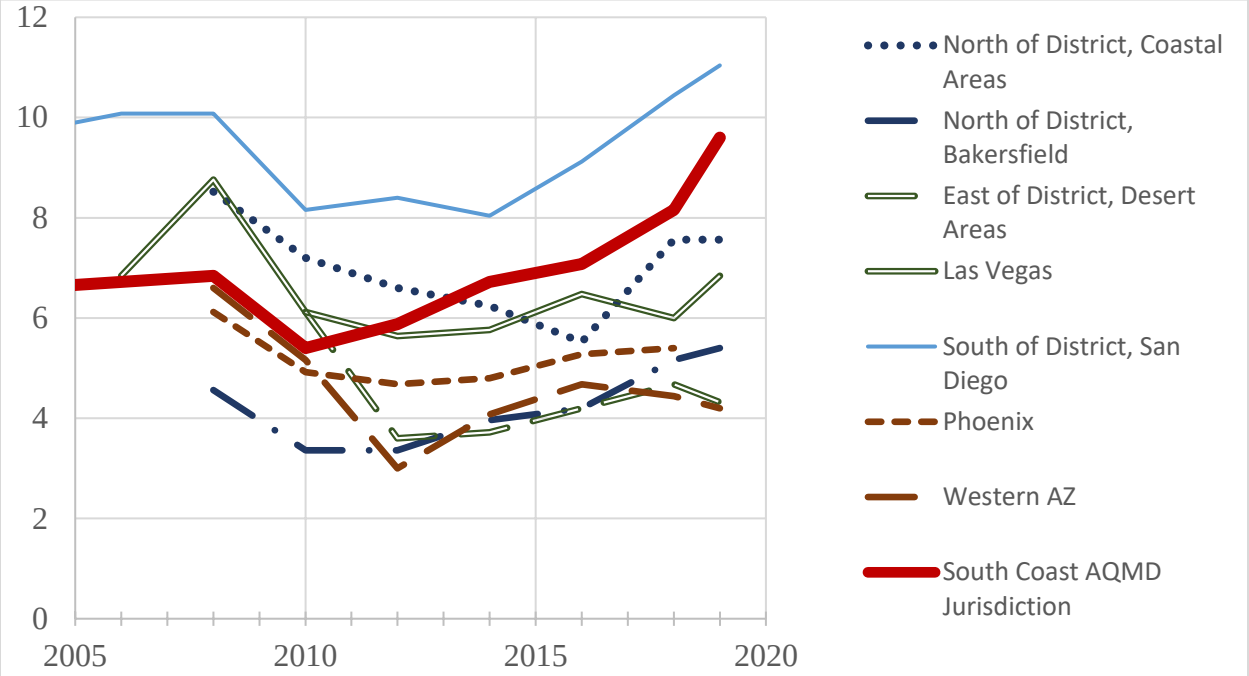
Figure 11: Annual Net Absorption[94] in Warehousing Space in South Coast AQMD Jurisdiction and Neighboring Areas



[93] As seen in Figure 10 and Figure 11, warehousing is preferentially growing in the South Coast AQMD jurisdiction compared to neighboring markets. One indication of the conservative nature of this modeling approach is that it finds that the opposite should be occurring in the baseline, and a small number of warehouses should relocate outside of the South Coast AQMD jurisdiction.

[94] Net absorption is a common metric used to track warehouse industry growth and is defined as the amount of warehouse space that tenants moved into minus the amount of warehouse space vacated in a given time period. Continually rising net absorption in South Coast AQMD indicates that more warehouses are being built and occupied than are being vacated. Negative net absorption indicates that more tenants are vacating warehouses than moving into warehouses during a given time period.

Figure 12: Warehousing Historical Rents in South Coast AQMD Jurisdiction and Neighboring Areas



Davies Transportation Consulting Port Study

The Davies study evaluated the potential for cargo diversion away from the ports of LA/LB if the ports implemented an update to its Clean Truck Program that would impose a new truck rate on loaded cargo containers that move through the port complex, with exemptions provided for NZE (through 2031) and ZE trucks. This study evaluated the different types and ultimate destinations throughout the country of cargo imported to the ports. A model was developed that evaluated the potential costs of using different ports, including the cost of increased time to travel from east Asia to ports in the eastern half of the United States.[95] This analysis found only a portion of goods are potentially subject to diversion to different ports, even at the maximum truck rate evaluated.[96] If the truck rate were set at $70/TEU[97], the study found that the potential diversion of total containerized imports would only be up to 1.4%. The ports ultimately approved a truck rate of $10/TEU,[98] though they have yet to implement the rate. Based on the Davies study, this rate level would result in 0.2% diversion of total containerized imports.

[95] As an example, the Davies study found that goods traveling from Shanghai to the New York/New Jersey port took more than 10 days longer than goods travelling from Shanghai to the ports of LA/LB.

[96] The Davies study found that 35% of imported goods would not relocate at all to a different port within the study parameters (i.e., up to $70/TEU). These are goods that are goods destined for the local market or for markets within about an 800-mile trucking distance from the ports.

[97] Twenty-foot Equivalent Unit. Most marine containers that are trucked out of the ports are forty-foot equivalent units, equal to two TEUs.

[98] https://polb.granicus.com/MinutesViewer.php?view_id=77&clip_id=7245.

Potential Impact of PR 2305 and PR 316 on Industry Competitiveness

The two studies analyze the effect of diversion of the logistics sector away from the South Coast AQMD jurisdiction, but with important differences. The Davies study found cargo owners had limited choices if the ports implemented the Clean Truck Program. They could either pay for the cost of NZE or ZE trucks, pay the $10/TEU rate, or relocate to a different port.[99] The study concluded that at $70/TEU it would be more cost effective for the vast majority of goods (98.6%) to continue using the ports of LA/LB.

Because PR 2305 and PR 316 apply at warehouses, not at ports, a cargo owner has more options than simply paying the maximum cost of complying with these rules (through increased warehousing costs in the South Coast AQMD jurisdiction) or diverting their cargo to another port. Under PR 2305, cargo owners will have many options and they can implement the cheapest option for their business operation that may be significantly lower cost than the maximum cost option (see ~~Table 20: Total Cost Summary of Each Compliance Scenario (2022-2031) After Accounting for CARB's ACT and Low NOx Omnibus Regulations~~ Table 20).

In addition, cargo owners could utilize warehouses just outside of the South Coast AQMD jurisdiction in neighboring areas, rather than shifting to a different port. The IEc study found the stringency of the rule would have to be more than $1.50/sq. ft. for it to be more efficient to divert a small amount of cargo outside of the Basin to warehouses that are not subject to PR 2305 and PR 316. The cost of diverting cargo to other ports would be even higher than diverting it to warehouses outside the basin, due in large part to the increased travel times: moving cargo to a nearby region increases travel time by only a few hours,[100] rather than 10+ days from moving goods to a port on the east coast.

Finally, the Davies study and others[101] have documented the ports of LA/LB have lost market share of containerized imports continuously since at least 2003. The reasons for this loss have been attributed to many macroeconomic causes that outweigh any increased regulatory costs in California, including labor stoppages in 2002 and 2014/2015, the widening of the Panama Canal in 2016, the recent shifting of some manufacturing from east China to southeast Asia in response to trade tensions,[102] increased investments in infrastructure at competing ports, the lack of increased trade with areas outside of east Asia, etc.

Despite this longer term shift in global trade flows, containerized traffic at the ports of LA/LB has steadily increased[103] (Figure 13) and is still expected to reach 34 million TEUs by 2040.[104] Warehousing in the South Coast AQMD jurisdiction has grown rapidly (Figure 10 and Figure 11)

[99] The Davies study analyzed a variety of costs for goods travelling from Shanghai, China to Chicago, including from ocean shipping, rail shipping, trucking, port and rail fees, the value of time differences in shipping routes, etc.
[100] For example, travel time without traffic from the ports to Bakersfield is about 2.5 hours, while travel time from the ports to Ontario (located in the Inland Empire) is about 1 hour.
[101] https://www.pmsaship.com/wp-content/uploads/2019/12/Briefing-Paper-Loss-of-Market-Share-at-U.S.-West-Coast-Ports.pdf
[102] https://www.freightwaves.com/news/freight-volumes-shift-east-as-supply-chains-move-out-of-china
[103] https://www.polb.com/business/port-statistics#latest-statistics, https://www.portoflosangeles.org/business/statistics/container-statistics
[104] https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal_goods-movement.pdf

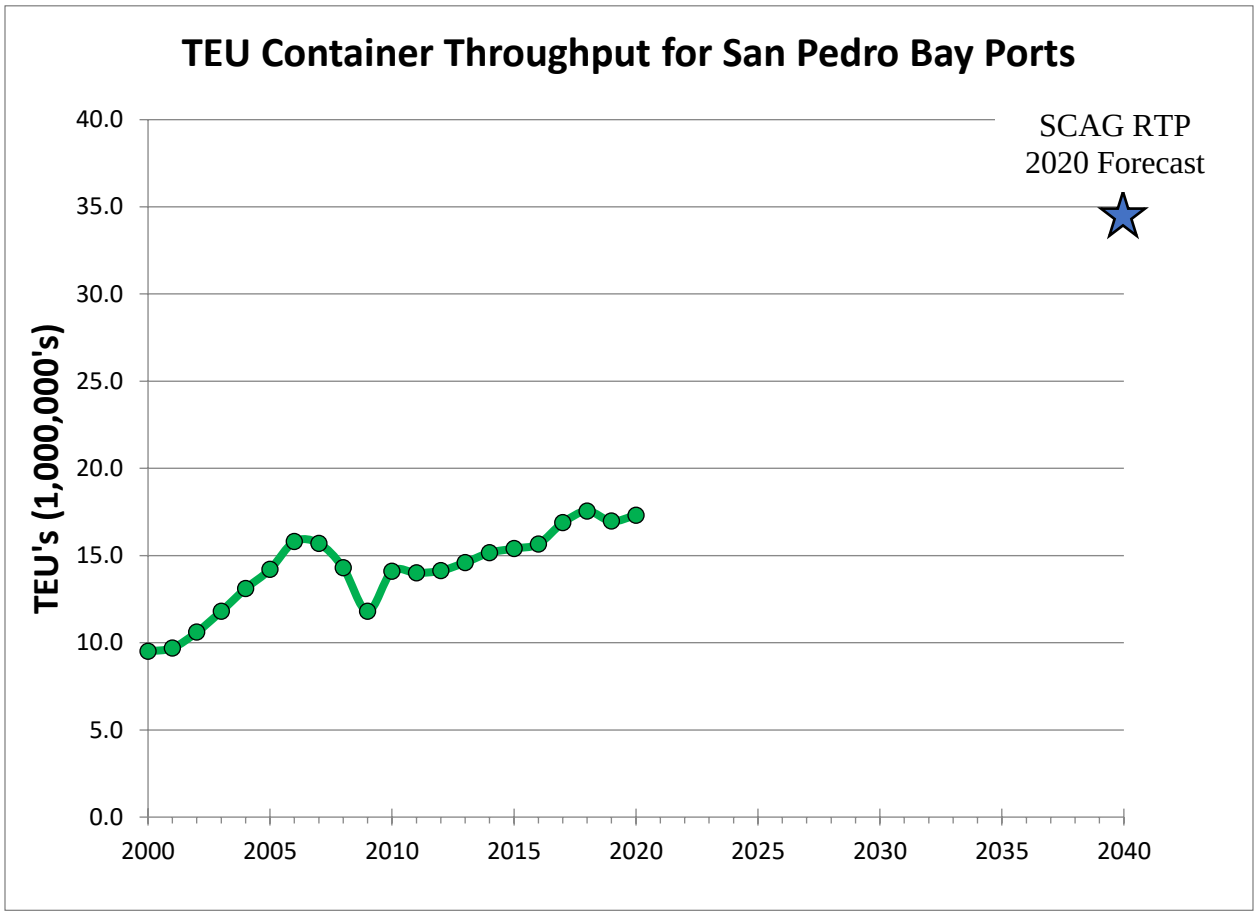
to accommodate this increased goods movement activity and is expected to continue.[105] Thus, even with a loss of market share, given the significant and continued growth in the logistics industry in South Coast AQMD's jurisdiction, it is not clear that any logistics activity has relocated as opposed to experiencing faster growth in other areas.[106] Similarly, the warehousing industry has experienced significant increased costs (Figure 12), and yet has continued to grow faster than neighboring regions (Figure 11). PR 2305 and PR 316 would also impose additional costs on the industry, however relocation of warehousing due to these rules is not expected if costs are below $1.75 per sq. ft. Similar to the port analysis, it is possible that the growth of warehousing may change in the future in response to many factors (regulatory costs from CARB and/or South Coast AQMD, land costs, labor availability, changing market conditions, etc.)[107]

[105] https://scag.ca.gov/sites/main/files/file-attachments/final_report_03_30_18.pdf

[106] As an example, in April 2021 Maersk (the largest container shipping line in the world, https://www.forbes.com/sites/niallmccarthy/2021/03/29/the-world-largest-container-shipping-companies-infographic/) increased its service for the Asia-US East Coast route, but did not reduce its service for the Asia-West Coast route (https://www.freightwaves.com/news/maersk-adding-weekly-service-to-us-east-coast). The stated reasons for this shift are strong market demand on the US East Coast, a desire to create a more reliable service to the US East Coast, and infrastructure bottlenecks on the US West Coast coupled, with no mention of air quality regulations.

[107] Although PR 2305 is not expected to result in relocation of logistics activity at the proposed level of stringency, CEQA analysis requires a different legal standard of review. To be conservative in that analysis, some relocation is therefore considered to be possible in order to evaluate any potential environmental impacts.

Figure 13: Containerized Trade Flows at the Ports of Long Beach and Los Angeles



Summary of Considerations For Determining PR 2305 Stringency

Because of the pressing need to meet federal air quality standards in 2023 and 2031, both from a public health perspective and from a public policy perspective (e.g., avoiding federal sanctions), the stringency of the rule should be set at a level that achieves emission reductions beyond what other regulations will require, and that is within South Coast AQMD's legal authority. The immediacy of the 2023 deadline also drives a need for a phase-in schedule that can achieve emission reductions early.

The logistics industry and warehousing in particular are robust in our region and have continued to grow rapidly despite experiencing headwinds such as continuously increasing rents and loss of market share to other ports. However, as demonstrated in the 'Compliance Costs' section below, there will be financial impacts to industry to implement PR 2305, and it will also require many warehouse operators and cargo owners to change their business practices to implement actions required by PR 2305. After balancing all of these factors, staff is proposing to set the stringency of PR 2305 at 0.0025 WAIRE Points per Weighted Annual Truck Trip (WATT),[108] phased in over

[108] As described in Chapter 2, warehouse operators must track their WATTs every year to determine their WAIRE points compliance obligation.

a three-year period after a warehouse operator's initial requirement date. The discussion below presents the potential impacts of PR 2305 and PR 316 based on this stringency and phase-in schedule.

SCENARIO ANALYSIS

In response to stakeholder feedback, PR 2305 provides a flexible suite of options for warehouse operators to comply. This proposed rule will require subject warehouse operators to annually earn WAIRE Points[109] by completing any combination of 1) implementing actions from the WAIRE Menu, 2) developing and implementing an approved Custom WAIRE Plan, or 3) paying a mitigation fee.

The WAIRE Menu includes 32 options to earn WAIRE Points, and any approved Custom WAIRE Plan would include additional options as it is limited to actions not on the WAIRE Menu. With about 4,000 warehouse operators and dozens of options available for compliance, it is not possible to determine the precise cost or emissions impact of PR 2305 and PR 316. In addition, due to annual compliance obligations, the potential compliance approach from one year may differ from the approach in a following year as technologies and markets evolve, and as early investments are utilized. Because of the variety of outcomes possible, annual updates on the implementation of PR 2305 and PR 316 will be provided to the South Coast AQMD Mobile Source Committee, and additional information will be made available on the South Coast AQMD website. This regular tracking, with opportunity for public input, will allow for timely adjustments to be made to the WAIRE Program should they be necessary.

There are other similar existing programs that also include multiple compliance options including South Coast AQMD Rule 2202 – On-Road Motor Vehicle Mitigation Options[110] and San Joaquin Valley Air Pollution Control District (SJVAPCD) Rule 9510 – Indirect Source Review[111]. Both of these rules allow facilities to comply through prescriptive measures in the respective rule, or through paying a mitigation fee[112]. In the case of Rule 2202, approximately 8% of facilities pay the mitigation fee, and the remainder choose a different compliance option.[113] In addition, Rule 9510 has shown as technologies advance, the compliance approaches change. As an example, when SJVAPCD Rule 9510 started in 2006, about 14% of projects reduced emissions using clean construction equipment, whereas the most recent report from 2020 shows 42% of projects chose this option.[114]

Notwithstanding the potential uncertain outcomes, a robust analytical approach has been conducted to estimate the potential impacts of PR 2305 and PR 316, including through the

[109] As described in Chapter 2 and in PR 2305 (d)(1), a facility's WAIRE Points Compliance Obligation (WPCO) is determined based on four parameters: 1) the number of truck trips to a facility in any given year, 2) the stringency of the rule, 3) an annual variable that determines how quickly the rule phases in, 4) a warehouse operator's Initial Reporting Date based on the size of the facility.
[110] http://www.aqmd.gov/docs/default-source/rule-book/reg-xxii/rule-2202.pdf
[111] http://www.valleyair.org/rules/currntrules/r9510-a.pdf
[112] Called an Air Quality Investment Program fee for Rule 2202 and an Off-Site Emissions Reduction Fee for Rule 9510. Rule 9510 also allows compliance through a Voluntary Emissions Reduction Agreement that is similar to a mitigation fee.
[113] http://www.aqmd.gov/home/research/documents-reports/activity-report
[114] https://www.valleyair.org/ISR/Documents/2020-ISR-Final-Annual-Report.pdf

development of 19[115] different scenarios designed to show the range of potential outcomes. A description of these 19 scenarios analyzed is included in Table 14 below. The scenarios were developed to show potential end-member impacts from all 32 WAIRE Menu actions,[116] as well as using mitigation fees.[117]

Each scenario is structured to follow a series of choices a warehouse operator may make based on compliance choices from a previous year. For example, if a warehouse operator purchased an NZE Class 8 truck in their first year complying with PR 2305 to earn WAIRE Points, they were assumed to use that same truck in subsequent years to earn additional WAIRE Points.

As a bounding analysis approach, all 2,902 warehouses were assumed to only comply with a single scenario approach from 2022 through 2031. No single scenario in this bounding analysis is expected to occur. Rather, they present possible extreme compliance outcomes. In reality, a hybrid of all scenarios (or other compliance approaches encompassed within the range of scenarios analyzed) is expected to occur.

The scenario analysis included in this second draft staff report includes minor updates since the previously released draft staff report released on March 3, 2021. For these scenario analyses,[118] all 2,902 warehouses potentially required to earn WAIRE Points were modeled for every year from 2022-2031 using their square footage and the applicable average trip generation rates[119] to determine the amount of WAIRE Points they are required to earn in each year, referred to as their WAIRE Points compliance obligation (WPCO). The amount of warehousing space required to earn WAIRE Points was grown 1.8% per year, consistent with analysis from SCAG.[120] The prioritization steps below were used to determine how WAIRE Points would be earned for each scenario. If sufficient WAIRE Points were not earned for any of the previous steps to satisfy a warehouse operator's WPCO in a given year, WAIRE Points were assumed to have been earned from the next step.

1) Banked WAIRE Points earned in any of the previous three years[121]
2) WAIRE Points earned from <u>using</u> vehicles or equipment[122] acquired or installed in any previous year[123]
3) WAIRE Points earned from <u>acquiring or installing</u> vehicles or equipment

[115] A new scenario was added since the Preliminary Draft Staff Report – Scenario 7a.
[116] See Appendix B – WAIRE Menu Technical Report for supplemental details for each action.
[117] Custom WAIRE Plans were not modeled as they are not expected to be used by most facilities. The potential costs and emissions impacts from Custom WAIRE Plan implementation is expected to be within the range of analysis shown for the 18 scenarios.
[118] The updated spreadsheet that includes all calculations described here is available at: www.aqmd.gov/fbmsm
[119] See PR 2305 (d)(1)(C)
[120] https://scag.ca.gov/sites/main/files/file-attachments/final_report_03_30_18.pdf
[121] PR 2305 (d)(6)(B) allows extra WAIRE Points earned in any one compliance year to be transferred for use in any of the next three compliance years.
[122] Trucks earning WAIRE Points were assumed to make 520 visits per year (10 per week), and travelled default distances of 39.9 miles per trip for class 8, and 14.2 miles per trip for all smaller trucks. Yard trucks were operated for 1,000 hrs/yr.
[123] As a simplifying assumption, the scenarios analyzed here include one half of a year's usage of equipment or vehicles in the year it was installed or acquired.

4) Mitigation fees were assumed paid to provide supplementary WAIRE Points if other prescribed actions within a scenario were not available or sufficient to satisfy the WPCO.

Table 14: Scenario Descriptions

#	Scenario Description	Notes
1	NZE Class 8 truck acquisitions and subsequent visits from those trucks	
2	NZE Class 8 truck acquisitions and subsequent visits from those trucks (early purchase)	One additional truck is acquired earlier than required, thus increasing WAIRE Points earned from truck visits in subsequent years.
3	NZE Class 8 truck acquisitions (funded by Carl Moyer program) and subsequent visits from those trucks	No WAIRE Points earned for truck acquisitions. Mitigation fees paid to earn WAIRE Points in first year of compliance.
4	NZE Class 8 truck visits from non-owned fleets	No WAIRE Points earned for truck acquisitions.
5	ZE Class 8 truck visits from non-owned fleets	No WAIRE Points earned for truck acquisitions. ZE Class 8 trucks are assumed to not be commercially available until late 2022. Mitigation fees paid to earn WAIRE Points until then.
6	Level 3 charger installations followed by ZE Class 6 & Class 8 truck acquisitions and subsequent visits from those trucks, using installed chargers	Chargers provide ~30,000 kWh/year per Class 6 truck, and ~90,000 kWh/yr per Class 8 truck. Class 8 trucks only acquired if 25 Class 6 trucks had been previously purchased for one warehouse.
7	Pay Mitigation Fee	
7a	Pay Mitigation Fee and account for NZE trucks visiting the facility incentivized from the WAIRE Mitigation Program	Incentivized trucks earn WAIRE Points and reduce mitigation fees paid.
8	NZE Class 6 truck acquisitions and subsequent visits from those trucks	
9	NZE Class 6 truck visits from non-owned fleets	No WAIRE Points earned for truck acquisitions.
10	ZE Class 6 truck visits from non-owned fleets	No WAIRE Points earned for truck acquisitions.
11	Rooftop solar panel installations and usage	Solar panel coverage limited to 50% of building square footage. Mitigation fees used to make up any shortfall in WAIRE Points.
12	Hydrogen station installations followed by ZE Class 8 truck acquisitions and subsequent visits from those trucks, using the hydrogen station	System installation in first year is followed by a truck acquisition. In subsequent years trucks are only acquired if needed to earn WAIRE Points.
13	ZE Class 2b-3 truck acquisitions and subsequent visits from those trucks	
14	ZE Class 2b-3 truck visits from non-owned fleets	
15	Filter System Installations	
16	Filter Purchases	
17	TRU plug installations and usage in cold storage facilities	Scenario is only applied to cold storage warehouses. Plugs limited to 1:10,000 sq. ft. of building space.
18	ZE Hostler Acquisitions and Usage	

Emission Reductions

The total potential emission reductions associated with PR 2305 and PR 316 from each scenario above are presented in and below.[124] The methods used to calculate the emission reductions are

[124] Appendix D includes a discussion of how 'SIP creditable' emission reductions can potentially be determined.

consistent with the baseline emissions inventory methodology described above, or with the WAIRE Menu Technical Report in Appendix B, as applicable.[125] Emission reductions from mitigation fees paid to earn WAIRE Points are assumed to achieve NOx emission reductions at $100,000/ton in the year after the fee was paid (consistent with current criteria used for funding Class 8 NZE trucks). Although individual funded projects would vary in the amount of reductions and the duration over which the reductions occur, this simplified approach is sufficient to evaluate programmatic impacts of an ongoing WAIRE Mitigation Program. Emission reductions from the Mitigation Program would be lower than shown in these tables if a portion of the funding goes towards projects that facilitate emission reductions from other programs (such as ZE charging/fueling infrastructure).~~Table 15: Total NOx Emission Reductions (tpd) for 19 Bounding Analysis ScenariosTable 16: Total Diesel PM Emission Reductions (tpd) for 19 Bounding Analysis Scenarios~~

As discussed in the Baseline Emissions Inventory section above, CARB regulations are expected to also reduce emissions from trucks going to PR 2305 warehouses. Tables ~~17~~ 15 and ~~18~~ 16 below show the 'surplus' emission reductions that would be expected for each scenario after taking into account emission reductions from CARB's ACT, Low NOx Omnibus, and Heavy Duty I/M rules. As stated in the Air Quality Need section of Chapter 1, there is no requirement that the emission reductions from statewide rules will apply in the South Coast AQMD jurisdiction, and PR 2305 and PR 316 would ensure that higher emission reductions are actually achieved here, as demonstrated in Tables 15- and 16 .

Table 15: NOx Emission Reductions (tpd) for 19 Bounding Analysis Scenarios After Discounting Reductions from CARB Regulations

Scenario	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
1	0.5	1.0	1.9	2.6	2.9	3.0	3.0	3.0	3.0	2.9
2	0.7	1.2	2.1	2.8	3.1	3.2	3.2	3.2	3.1	3.1
3	0.5	3.6	3.0	3.4	3.6	3.6	3.6	3.5	3.5	3.5
4	1.0	1.5	2.5	2.8	2.9	2.8	2.6	2.4	2.1	1.8
5	0	5.1	2.3	2.6	2.7	2.6	2.4	2.2	1.9	1.6
6	0	0.1	0.5	0.9	1.2	1.4	1.5	1.5	1.5	1.4
7	0	3.7	8.8	15.0	17.6	18.9	19.3	19.6	20.0	20.3
7a	0	0.7	1.5	2.4	2.9	2.9	2.9	2.8	2.8	2.7
8	0.3	0.6	1.2	1.8	2.2	2.3	2.3	2.2	2.1	2.0
9	1.0	1.4	2.3	2.6	2.6	2.4	2.2	1.9	1.7	1.4
10	1.1	1.5	2.5	2.8	2.9	2.7	2.4	2.2	1.9	1.5
11	0.0	0.2	1.7	1.0	11.1	13.2	14.6	15.4	14.3	12.9
12	0.0	0.1	0.5	0.8	1.3	1.7	1.9	2.0	2.0	2.0
13	0.2	0.5	0.9	1.2	1.2	1.2	1.1	1.0	0.9	0.8
14	0.4	0.9	1.4	1.5	1.4	1.2	1.0	0.8	0.7	0.5
15	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0

[125] The emission reductions calculated in this second draft staff report do not allow a separation of reductions before CARB's ACT, HD I/M, and Low NOx Omnibus reductions as those regulations have now been integrated fully into the analysis. The only emission reductions shown in this draft fully account for those regulations.

17	0	0.02	0.1	0.2	0.3	0.3	0.3	0.2	0.2	0.1
18	0.0	0.04	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Table 16: Diesel PM Emission Reductions (tpd) for 19 Bounding Analysis Scenarios After Discounting Reductions from CARB Regulations

Scenario	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
1	0.004	0.007	0.014	0.019	0.021	0.022	0.022	0.023	0.023	0.023
2	0.006	0.009	0.015	0.021	0.022	0.023	0.024	0.024	0.024	0.024
3	0.004	0.012	0.021	0.023	0.025	0.025	0.025	0.025	0.025	0.025
4	0.009	0.011	0.018	0.020	0.021	0.021	0.020	0.018	0.016	0.014
5	0	0.010	0.015	0.017	0.017	0.017	0.016	0.015	0.013	0.011
6	0	0.001	0.003	0.005	0.007	0.008	0.008	0.009	0.009	0.009
7	0	0.001	0.004	0.006	0.007	0.008	0.008	0.008	0.008	0.008
7a	0	0.005	0.011	0.017	0.021	0.021	0.021	0.021	0.021	0.021
8	0.023	0.008	0.013	0.015	0.015	0.014	0.013	0.012	0.011	0.009
9	0.023	0.008	0.013	0.015	0.015	0.014	0.013	0.012	0.011	0.009
10	0	0	0	0	0	0	0	0	0	0
11	0	0.001	0.003	0.005	0.008	0.012	0.013	0.014	0.014	0.014
12	0.001	0.005	0.010	0.014	0.016	0.017	0.017	0.017	0.017	0.017
13	0.004	0.010	0.016	0.018	0.018	0.017	0.016	0.015	0.013	0.011
14	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0
16	0	0.001	0.004	0.005	0.005	0.004	0.003	0.002	0.001	0.000
17	0.000	0.001	0.002	0.003	0.003	0.003	0.003	0.003	0.003	0.003
18	0.023	0.008	0.013	0.015	0.015	0.014	0.013	0.012	0.011	0.009

WAIRE Program Compliance Costs

There are five types of compliance costs warehouse operators may experience with PR 2305 and PR 316 including: 1) costs to implement actions from the WAIRE Menu, 2) costs to develop and implement a Custom WAIRE Plan, 3) optional mitigation fees, 4) administrative fees pursuant to PR 316, and 5) costs associated with reporting and recordkeeping. ~~The analysis presented here is a preliminary draft, and staff anticipates continuing to work on these estimates.~~ Costs can be analyzed in a number of ways with a rule that includes as many options as PR 2305. One approach is to calculate costs using the scenario analysis presented above. A discussion of cost estimates with this approach is below. Because of the variability in emissions estimates and cost estimates in the extreme bounding analyses presented in the scenarios, cost effectiveness calculations may appear different than typical rules and regulations that have less flexibility than PR 2305. Although the bounding analysis scenarios presented are not expected to occur, the analytic approach provides a sound methodology to estimate average costs for any warehouse operator who chooses a scenario approach, both in terms of dollars per square foot of warehouse, as well as cost effectiveness (dollars per ton NOx reduced).

Scenario Cost Analysis

~~Preliminary e~~Expected costs resulting from each of the 19 bounding compliance scenarios are discussed below. The majority of expected costs result from the capital cost associated with the

estimated number of equipment acquisitions (ZE and NZE trucks, solar panels, charger installations, etc.) and the operating and maintenance (O&M) costs associated with usage of the equipment (fuel and electricity consumption, truck maintenance, etc.) in each scenario. This analysis attempts to isolate and attribute capital and O&M costs for only the equipment incremental to current CARB regulations such as CARB's ACT and Low NOx Omnibus regulations.

~~Table 20: Total Cost Summary of Each Compliance Scenario (2022-2031) After Accounting for CARB's ACT and Low NOx Omnibus Regulations~~Table 20 at the end of this ~~preliminary~~ analysis shows discounted total costs over a ten-year compliance time horizon (2022 – 2031). The costs shown in this analysis are in 2018 dollars and have not been discounted to account for the time value of money. Unless specified otherwise in the discussion here, incremental capital and O&M cost estimates are based on the analysis in the WAIRE Menu Technical Report in Appendix B, and the references contained therein.

To facilitate the discussion of the cost calculations, scenarios are grouped based on their compliance strategy. The groupings are comprised of (1) mitigation fees only; (2) truck acquisition and associated visits; (3) truck visits from non-owned fleets; (4) equipment acquisition and associated usage, and; (5) equipment/truck acquisition and associated usage/visits.

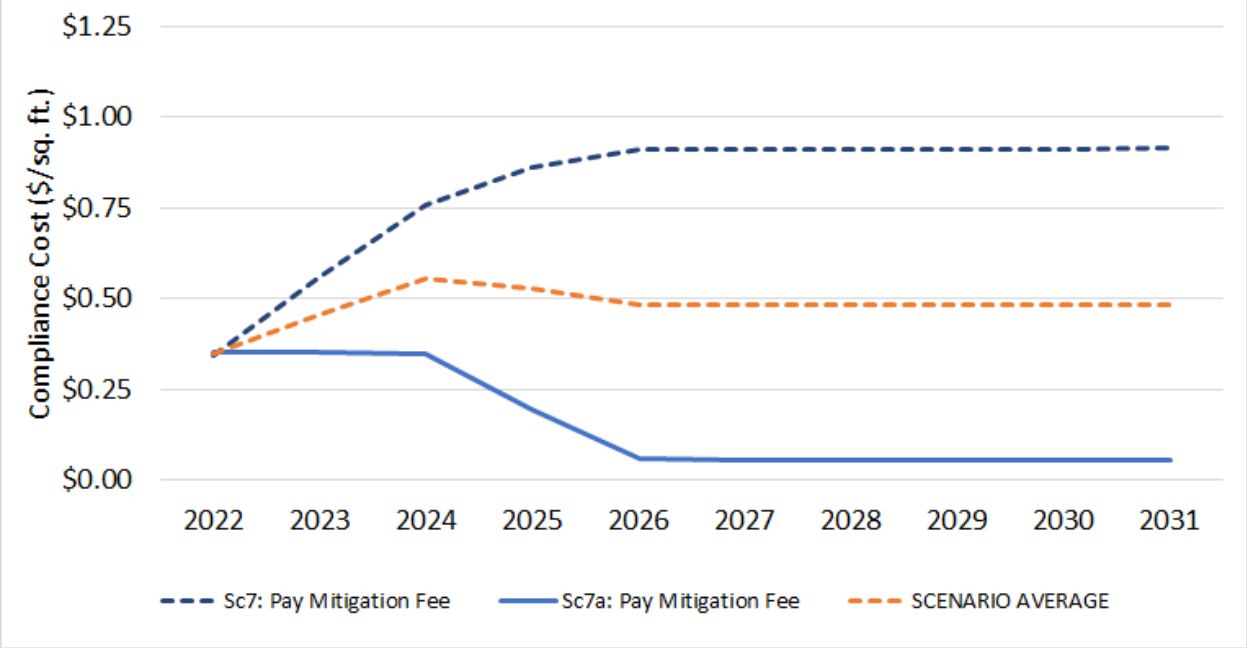
Mitigation Fees Only - Scenario 7 and 7a

The cost calculation for Scenario 7: Pay Mitigation Fee is straightforward. In lieu of earning WAIRE Points from equipment acquisitions and usage, all facilities choose to pay a fee of $1,000 for each WAIRE Point in their WPCO attributed to their facility in every year of compliance. The total cost associated with the mitigation fee presented here does not reflect earning any Points from any other actions, such as truck acquisitions and visits resulting from CARB's ACT regulation, and should be considered a conservative high-end estimate. It is likely trucks purchased and used due to CARB's ACT regulation will be used to earn WAIRE Points to reduce the total amount of mitigation fees collected.[115] This scenario also conservatively does not include any Points that might be earned from any trucks that are incentivized through the WAIRE Mitigation Program. Including these assumptions would significantly lower the cost, and the potential emission reductions from this scenario. This scenario is presented in all of the summary charts below as a point of comparison.

Scenario 7a assumes that facilities pay the mitigation fee and also actively track NZE truck visits from trucks funded by the mitigation fees. Facilities earn Points from visits from trucks purchased with collected mitigation fee funds. These points help to reduce a facilities' future year compliance obligation that would have otherwise been met through mitigation fee payments.

Figure 14 below presents total costs in each compliance year (2022 – 2031) for each mitigation fee scenario in dollars per square foot.

Figure 14: Potential Bounding Analysis Costs from Mitigation Fee Scenarios



Truck Acquisition and Associated Visits - Scenarios 1, 2, 3, 8, 13, and 18

Each scenario in this compliance strategy grouping relies on earning Points through purchase of clean trucks (NZE Class 8, NZE Class 6, ZE Class 2b-3, and ZE hostlers) and their subsequent usage (i.e. visits to the warehouse facility). Only those vehicle purchases and visits incremental to existing CARB regulations are considered.

~~Figure 15: Potential Bounding Analysis Costs from Truck Acquisition and Subsequent Usage Scenarios~~ Figure 15 below presents total costs (truck acquisition and usage) in each compliance year (2022 – 2031) for each scenario in dollars per square foot.

Figure 15: Potential Bounding Analysis Costs from Truck Acquisition and Subsequent Usage Scenarios

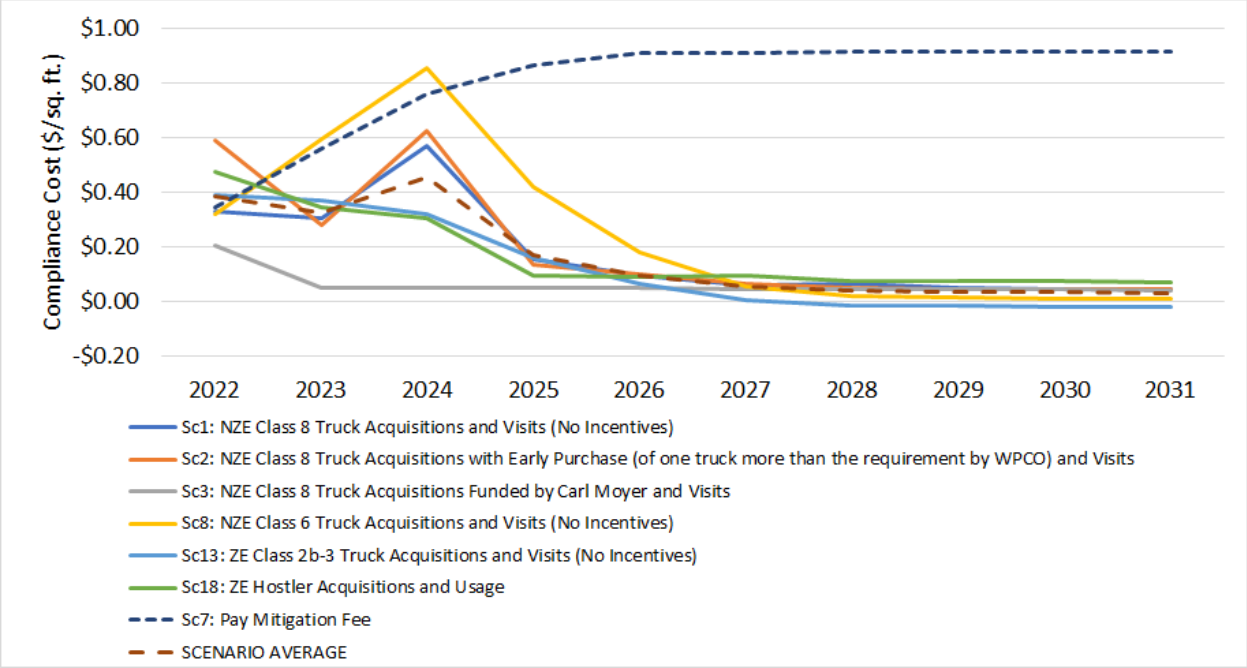


Table 17 below presents capital costs of Diesel and NZE trucks. These costs are assumed to remain constant across the entire compliance period.[126,127] Per unit incremental costs of NZE Class 8 and Class 6 trucks are assumed to be $65,000 and $30,000, respectively. These costs are inclusive of state sales and federal excise taxes and based on analysis documented in the WAIRE Menu Technical Report and the references cited therein.

Capital costs of battery-electric ZE trucks are expected to decrease over time as a result of decreased battery costs. Projected capital costs over time for each ZE vehicle class can be found in ~~Table 18: Capital Cost by ZE Truck Class and Year~~Table 18 below.[128,129,130] The incremental acquisition cost is set equal to the difference between the capital cost of each ZE truck and it's

[126] Capital costs for diesel trucks can be found in Table C-6 of the CARB ACT Appendix C-1 – SRIA submitted to DoF: https://ww3.arb.ca.gov/regact/2019/act2019/appc.pdf

[127] Capital costs for NZE Class 8 trucks can be found in Table 31 of the 2018 Feasibility Assessment for Drayage Trucks: https://cleanairactionplan.org/documents/final-drayage-truck-feasibility-assessment.pdf/. Class 6 capital costs were calculated by taking the ratio of capital costs for NZE Class 6 and 8 trucks found in the WAIRE Menu.

[128] Capital costs for each ZE truck class (2b-3, 6, 8) for model years 2024-2030 are taken from CARB's ACT Appendix C-1 – SRIA as submitted to DoF (Table C-7): https://ww3.arb.ca.gov/regact/2019/act2019/appc.pdf.

[129] To fill in missing years (2022, 2023), ZE capital costs were linearized between 2018 and 2024. 2031 costs assumed to be equal to 2030.

[130] ZE Hostler capital cost projections are not available for future years. Staff applied a yearly cost multiplier based on ZE Class 2b-3 capital costs to the incremental cost of ZE Hostlers included in the WAIRE Menu. A cost multiplier is generated by taking ratio of difference in capital cost in each year (2022 -2031) to the difference in capital costs in year 1 (2022).

diesel equivalent. An 8% sales tax is also applied to each ZE truck acquisition and a 12% federal excise tax is applied to all ZE Class 8 acquisitions.

When the number of truck purchases in any compliance year for a given scenario falls below the expected number of truck purchases in CARB's EMFAC 2017 projections for that year, the incremental acquisition cost for each truck class and fuel type is used. However, if the number of truck purchases in a scenario exceeds EMFAC 2017 projections, the full capital cost associated with each truck type is used for those trucks above projections. No financing costs have been included in this analysis.

Scenario 3 assumes all trucks purchased are subsidized by Carl Moyer incentive funds and no WAIRE Points (or costs) are attributed to warehouse operators for these vehicle purchases. Because no Points are earned for NZE Class 8 truck acquisitions in Scenario 3, it is necessary for facilities to pay a mitigation fee for the additional WAIRE Points needed for compliance in each calendar year (2022 – 2031) in which visits from Moyer-funded trucks are not sufficient to meet the WPCO.

Table 17: Capital Costs for Diesel and NZE Truck Acquisitions

Vehicle Class	Diesel	NZE
Class 2b-3	$50,000	N/A
Class 6	$85,000	$115,000
Class 8	$130,000	$195,000

Note: Capital costs for diesel trucks listed here are pre-tax.
NZE capital costs include sales taxes (Class 8 and Class 6) and federal excise taxes (Class 8 only).

Table 18: Capital Cost by ZE Truck Class and Year

Year	ZE Class 8	ZE Class 6	ZE Class 2b-3
2022	$292,544	$155,055	$71,920
2023	$246,948	$143,904	$68,318
2024	$201,351	$133,554	$64,896
2025	$194,134	$128,321	$63,635
2026	$188,312	$124,112	$62,599
2027	$183,371	$120,563	$61,684
2028	$178,870	$117,345	$60,829
2029	$174,809	$114,456	$60,035
2030	$170,748	$111,568	$59,241
2031	$170,748	$111,568	$59,241

Note: Capital costs for all ZE trucks listed here are pre-tax

Costs associated with the use/visits of facility-owned NZE and ZE trucks is done on a per-mile basis. Per-mile usage costs resulting from fuel consumption and other costs (including maintenance, fees, insurance, and mid-life costs) were calculated for all truck classes and fuel types and then multiplied by the expected VMT in each compliance year for each scenario.[131,132,133] A breakdown of total usage costs for each truck class and fuel type can be found in Table 19 below. Per-mile usage costs (not considering capital costs) of Class 6 and 8 NZE trucks is slightly lower than diesel, and results in a modest net savings to facilities. Per-mile usage costs of Class 2b-3, 6, and 8 ZE trucks is significantly lower than diesel and results in a net savings to facilities. Additionally, for Scenario 18, the incremental cost associated with ZE hostler/yard truck usage is taken from the WAIRE Menu Technical Report in Appendix B ($6,250/1000 hours), and the references therein.

Table 19: Annual Operating and Maintenance Costs by Vehicle Class and Fuel Type (in 2018 Dollars)

Vehicle Class	Fuel Type	Total Annual Fuel Cost	Total Annual Other Cost	Total Annual Miles	$/mile
Class 8	Diesel	$34,231	$15,306	54000	$0.92
	ZE	$13,125	$16,361	42000	$0.70
	NZE	$30,918	$16,841	54000	$0.88
Class 6	Diesel	$12,130	$7,844	24000	$0.83
	ZE	$3,923	$7,238	24000	$0.47
	NZE	$9,219	$8,525	24000	$0.74
Class 2b-3	Diesel	$2,418	$4,221	15000	$0.44
	ZE	$1,508	$3,843	15000	$0.36

Truck Visits from Non-owned Fleets - Scenarios 4, 5, 9, 10, and 14

Scenarios associated with this compliance strategy grouping earn WAIRE Points solely from visits to their facilities from non-owned NZE or ZE trucks. Costs for these scenarios only include visits above and beyond those resulting from existing CARB regulations. To calculate expected costs due to PR 2305, the incremental cost associated with each visit by truck class and fuel type was calculated based on the total cost of ownership (TCO) and multiplied by the number of visits by non-owned trucks necessary to comply in all compliance years.

[131] Data on maintenance costs, mid-life costs, fuel cost and fuel economy for diesel, ZE and NZE trucks is taken from the WAIRE Menu Technical Report in Appendix B.

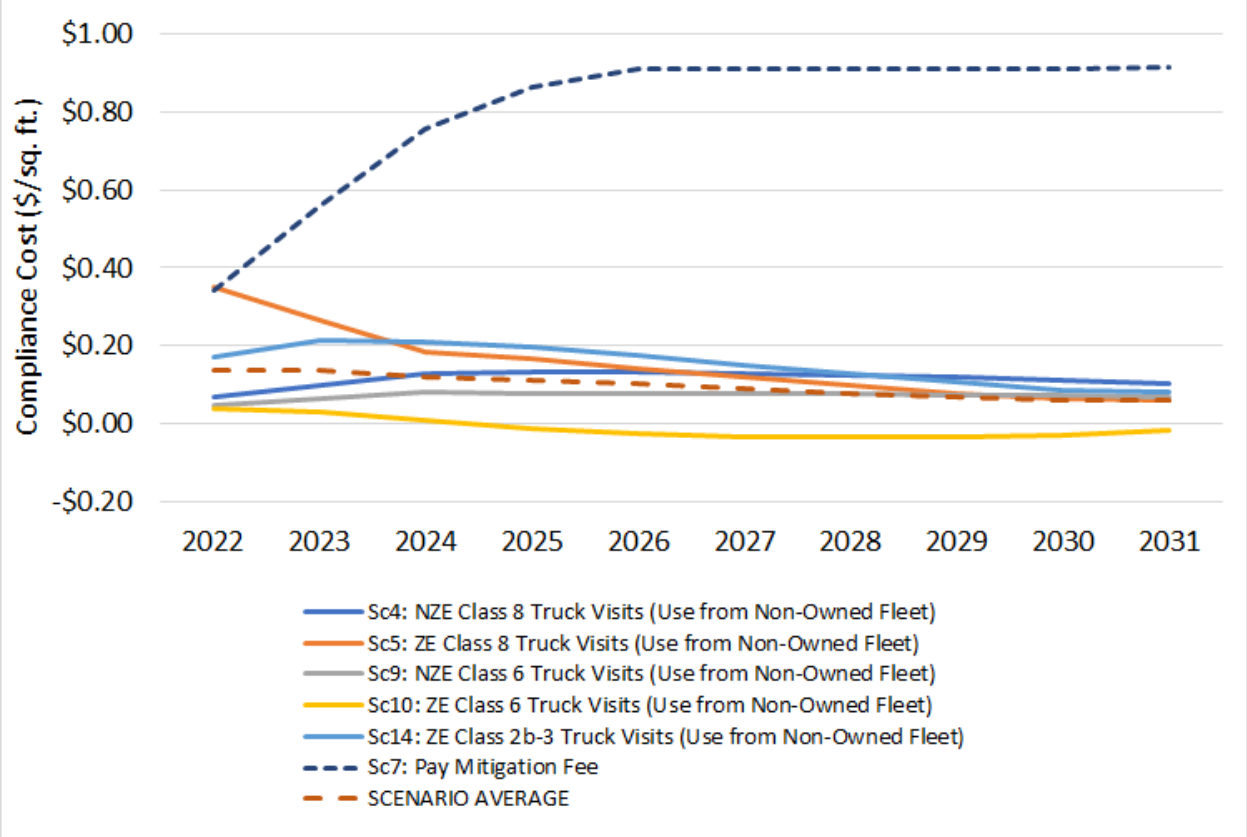
[132] Vehicle fees for all ZE and diesel truck classes are taken from CARB's ACT Total Cost of Ownership document: https://ww3.arb.ca.gov/regact/2019/act2019/apph.pdf. Fees for NZE trucks are assumed to be the same as diesel trucks.

[133] Annual insurance costs assumed to be equal to 3% of vehicle value. Vehicle value assumed to decrease by 10% in years 2-8 and an additional 5% in years 9-11. The average annual cost is included in the per mile cost analysis.

A TCO analysis was performed for each truck class and fuel type for each compliance year using the assumed acquisition and usage costs described above. A 4% financing rate was used over a five-year financing period. A 12-year useful life is assumed for all trucks and a 4% discount rate was used to discount all costs in years beyond 2022. The TCO for all diesel and NZE trucks is constant over the compliance period and does not vary based on the year purchased. Because capital costs for ZE trucks are assumed to decline over time, the TCO does vary by purchase year. For a more detailed discussion of the TCO analysis, please see the Compliance Costs section of the PR2305 Draft Socioeconomic Impact Assessment dated April 2021.

The analysis for scenarios 9 and 10 indicates that if all warehouse operators only complied using ZE or NZE Class 6 trucks as a bounding analysis, that the total VMT associated with WAIRE Points could exceed the VMT from these Class 6 trucks in EMFAC. To account for the shortfall in this bounding analysis, the analysis does not include WAIRE Points beyond existing VMT in EMFAC, and assumes that warehouse operators earn the remaining WAIRE Points necessary for compliance by paying the mitigation fee~~. Figure 16: Potential Bounding Analysis Costs from Truck Visits from a Non-owned Fleet~~Figure 16 below presents total costs, including non-owned truck visits and the mitigation fee (Scenario 5 only), in each compliance year (2022 – 2031) for each scenario in $/sq. ft.

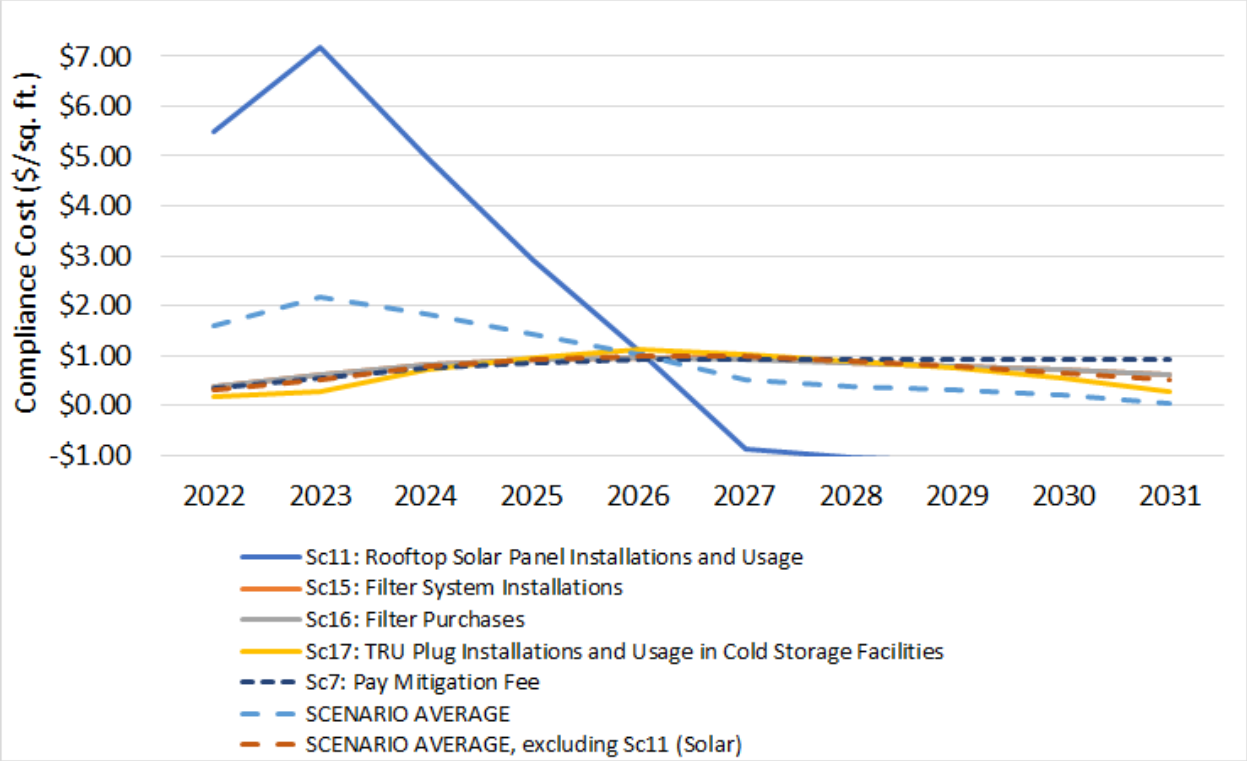
Figure 16: Potential Bounding Analysis Costs from Truck Visits from a Non-owned Fleet



Equipment Acquisition and Associated Usage - Scenarios 11, 15, 16, and 17

Facilities in these scenarios meet their WAIRE Point obligation by acquiring and using clean technologies, such as solar panels (Scenario 11), filter systems (Scenario 15), filters only (Scenario 16), and TRU plugs (Scenario 17). Costs associated with the acquisition and usage of these technologies, as well as construction and permitting costs for TRU plug installs are listed in the WAIRE Menu Technical Report in Appendix B. Usage of installed solar panels results in a cost savings equal to the assumed electricity price of $0.17 per kWh. TRU costs were only applied to cold storage warehouses. Construction and permitting costs associated with TRU plug installations have been included. For Scenario 11 and Scenario 17 only, it is necessary for facilities to pay a mitigation fee for the additional WAIRE Points needed for compliance in each calendar years 20234 – 2031. ~~Figure 17: Potential Bounding Analysis Costs from Non-truck Equipment and Associated Usage~~ Figure 17 presents total costs in each compliance year (2022 – 2031) for Scenarios 11, 15, 16, and 17 in $/sq. ft.

Figure 17: Potential Bounding Analysis Costs from Non-truck Equipment and Associated Usage



Equipment/Truck Acquisition and Associated Usage/Visits - Scenarios 6 and 12

Scenarios 6 and 12 assume facilities use both ZE truck and charging/fueling infrastructure acquisitions and their associated usage to earn WAIRE Points. Scenario 6 combines Level 3 charger installations with Class 6 and 8 ZE truck purchases. Scenario 12 combines hydrogen station installations and Class 8 ZE truck purchases. Incremental acquisition costs for Class 6 and 8 ZE trucks can be found in Table 18. Level 3 charger and hydrogen station installation and usage

costs are also listed in the WAIRE Menu Technical Report in Appendix B, along with construction and permitting costs for charger installation projects. To avoid double-counting, no costs are accumulated for charger usage as electricity costs are already accounted for in the per-mile usage costs for Class 6 and 8 ZE trucks. This analysis also assumes hydrogen costs decline over time from roughly $9.75/kg per in 2020 to $6.20/kg in 2031.[134] ~~Figure 18: Potential Bounding Analysis Costs from Equipment Acquisition (Truck and Non-Truck) and Associated Visits/Usage~~ Figure 18 below presents total costs for both scenarios in each compliance year (2022 – 2031) in $/sq. ft.

Figure 18: Potential Bounding Analysis Costs from Equipment Acquisition (Truck and Non-Truck) and Associated Visits/Usage

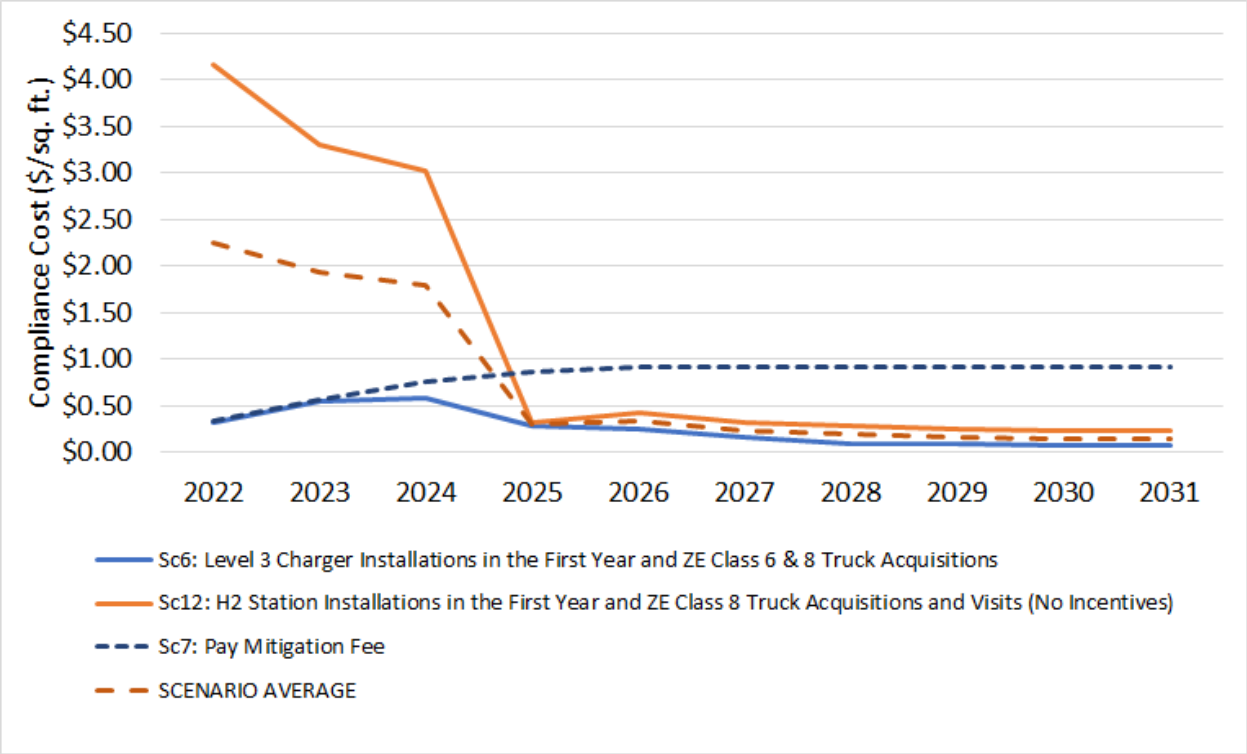


Table 20 below shows a cost summary for each compliance scenario including net present value (assuming 1% discount rate), average annual cost, and a weighted average annual cost per square foot of warehouse space after taking into account equipment acquisition from CARB's ACT, Low NOx Omnibus. The total costs presented here are inclusive of all administrative costs and fees related to compliance. These administrative costs are explained in more detail in the next section of this report.

[134] Hydrogen cost projections can be found in CARB ACT Appendix C-1 – SRIA submitted to DoF (Figure C-5): https://ww3.arb.ca.gov/regact/2019/act2019/appc.pdf

The costs presented here are default calculations broadly applicable to the industry, however individual warehouse operators may identify different specific costs for their operations. Warehouse operators are assumed to gravitate towards the lowest cost options for their specific situations. As such, the maximum cost that warehouse operators would be expected to incur is about $0.83/sq. ft./yr. resulting from the mitigation fee-only scenario. However, based on the cost analysis, it is likely that in most situations warehouse operators will identify substantially cheaper options that work within their operations.

Table 20: Total Cost Summary of Each Compliance Scenario (2022-2031) After Accounting for CARB's ACT and Low NOx Omnibus Regulations

	Equipment	Discounted Total Costs - NPV (1%) (in millions)	Discounted Total Costs - NPV (4%) (in millions)	Average Annual Cost (in millions)	Average Annual Cost ($/sq. ft)
Sc1	NZE Class 8	$1,225.7	$1,102.6	$127.2	$0.16
Sc2	NZE Class 8	$1,345.1	$1,219.9	$139.2	$0.17
Sc3	NZE Class 8	$430.2	$374.4	$45.2	$0.06
Sc4	NZE Class 8	$887.4	$749.5	$94.1	$0.12
Sc5	ZE Class 8	$1,067.2	$941.8	$111.5	$0.14
Sc6	ZE Class 6 & 8	$1,799.3	$1,603.8	$187.3	$0.23
Sc7	Mitigation Fee	$6,298.0	$5,264.0	$670.2	$0.83
Sc7a	Mitigation Fee	$1,097.7	$985.5	$114.0	$0.14
Sc8	NZE Class 6	$1,785.0	$1,627.1	$184.3	$0.23
Sc9	NZE Class 6	$553.6	$467.6	$58.7	$0.07
Sc10	ZE Class 6	-$114.9	-$87.3	-$12.6	-$0.02
Sc11	Solar	$9,796.9	$9,712.2	$979.0	$1.21
Sc12	ZE Class 8	$8,117.5	$7,445.5	$836.7	$1.04
Sc13	ZE Class 2b-3	$803.2	$752.8	$82.1	$0.10
Sc14	ZE Class 2b-3	$1,128.8	$978.3	$118.7	$0.15
Sc15	Filter System	$5,985.7	$5,056.7	$634.7	$0.79
Sc16	Filter	$5,862.9	$4,953.4	$621.6	$0.77
Sc17	TRU	$54.2	$45.8	$5.7	$0.70
Sc18	Yard Trucks	$1,152.6	$1,028.7	$120.0	$0.15

WAIRE Program Administrative Costs

PR 316 Estimated Costs

PR 316 details the administrative fees that PR 2305 regulated entities must pay to fund South Coast AQMD compliance activities for PR 2305. The total annual cost for South Coast AQMD to administer and enforce the WAIRE Program was determined as a function of the fully burdened hourly rates for staff multiplied by the total staff time required to process the three types of reports required by PR 2305, including the Warehouse Operations Notification, Initial Site Information Report, and the Annual WAIRE Report – and all the associated auditing and enforcement activities for the WAIRE Program. In addition, reporting would be conducted through a new web portal, which includes an estimated $25,000 annually to maintain. Warehouse Operations Notifications require significantly less information than the other two reports

There are 3,320 warehouse owners expected to initially submit a Warehouse Operations Notification, and about 4,000 initial warehouse operators across 2,902 warehouses that are expected to submit an Initial Site Information Report and Annual WAIRE Report during their first year that they would need to earn WAIRE Points. As described in Appendix C, an estimated 515 warehouse owners are operators who would need to submit a one-time Initial Site Information Report and Annual WAIRE Reports thereafter. The remaining warehouses are assumed to get a new operator every five years. Table 21 below shows how many reports are expected every year through 2031, including accounting for continued growth in the warehousing industry.

Table 21: Number of Reports Submitted by PR 2305 Warehouses Each Year

Year	Warehouse Operations Notification	Initial Site Information Report	Annual WAIRE Report
2021	3,320	0	0
2022	561	1,333	1,333
2023	561	1,894	2,695
2024	561	1,894	4,073
2025	578	578	4,120
2026	584	584	4,167
2027	591	591	4,214
2028	598	598	4,261
2029	604	604	4,308
2030	611	611	4,355
2031	617	617	4,402

Table 22 below shows the estimated average level of effort, burdened rates for staff, and costs for each report.

Table 22: PR 316 Fee Evaluation

Staff	Burdened Hourly Rate	Warehouse Operations Notification	Initial Site Information Report	Annual WAIRE Report
Planning & Rules Manager	$141.29	0.05 hrs	0.1 hrs	0.2 hrs
Program Supervisor	$126.57	0.05 hrs	0.2 hrs	0.6 hrs
Air Quality Specialist	$110.28	0.1 hrs	1.0 hrs	1.75 hrs
Air Quality Inspector II	$94.78	0 hrs	0.5 hrs	1.25 hrs
Staff Cost per Report		*$24.42*	*$135.59*	*$387.41*
Web Portal Cost per Report		*$5.09*	*$5.09*	*$5.09*
Total Cost per Report[135]		***$29.51***	***$140.68***	***$392.50***

Finally, Custom WAIRE Plan Application Evaluations will be assessed on a level of effort basis. A fee of $161.25 will be assessed for every hour of review, consistent with plan review fees for other South Coast AQMD programs.[136] Reviews are expected to require multiple hours of staff time, and an initial fee will be assessed when the application is submitted equal to five hours of review ($806.25). If review requires less than five hours, then a refund will be provided to the applicant.

Warehouse Operator Administrative Costs

Warehouse operators are expected to experience administrative costs associated with recordkeeping and reporting for PR 2305.[137] There are three main administrative costs that operators required to earn WAIRE Points will experience: reporting costs, total truck count costs, and NZE/ZE truck recording. The reporting associated with Initial Site Information Reports and Annual WAIRE Reports is expected to be similar to the kind of reporting required in CARB's ACT regulation, specifically for large entity reporting, and is estimated to be no more than 25 hours of work totaling $1,250 per year.[138]

The total truck count costs are associated with counting all truck trips to/from a warehouse in order to determine the WPCO. A variety of different methods exist to count trucks, such as security cameras that include a log of vehicles that pass the camera, in-road sensors which can count truck trips and identify the number of axles per truck, the use of an onsite personnel to check in all vehicles that enter, telematics systems, etc. Warehouse operators may already have measures in place for security and tracking purposes and would not experience additional costs from PR 2305 for installing new systems. To estimate administrative costs for this activity, the video recording method described in the WAIRE Implementation Guidelines is used as a default. This method allows a warehouse operator to record 24 hours of continuous video at each of their truck gates (assume an average of two per facility) one weekday and one weekend day per month that represent

[135] Similar to other South Coast AQMD fees in Regulation III, costs are expected to increase through time, consistent with the Consumer Price Index including for increased staff costs and overhead costs from inflation. All fees in PR 316 will therefore be adjusted periodically consistent with all other Regulation III fees pursuant to Rule 320.
[136] Rule 306(d)
[137] Engineering costs to implement specific WAIRE Menu actions (such as for charging infrastructure) have already been included in the compliance cost estimates above.
[138] https://ww3.arb.ca.gov/regact/2019/act2019/isor.pdf

a peak period during the respective days of the week. Onsite personnel could then review the video (using standard video tools on already available desktop computers, cell phones etc.), sped up so as to reduce the time needed to view, and then count truck trips over that time period. These video counts could then be applied to the rest of the days in that month to come up with the total truck traffic expected at the site. The time needed to do this work is estimated at 144 person-hours per year (48 hrs/month * 2 truck gates * 12 months/year, with video sped up between 8X-10X speed). This low technology solution to counting trucks could result in staff costs of about $7,200 per year, however cheaper options may be used too as long as representative and verifiable methods are used.

If a warehouse operator chose to track NZE or ZE trucks that visited their facility in order to earn WAIRE Points, there are several potential methods available. If the trucks are owned by the warehouse operator, then delivery schedules or other paper records may suffice. Other methods could include telematics systems, automated license plate reader systems, contract data with trucking companies (if the operator contracts with a trucking company). This information may need to be supplemented with records that document that the truck used to earn WAIRE Points is an actual ZE or NZE truck. The simplest method could include truck driver check-ins where truckers could fill out a simple form that provides basic information about their truck, including license plate number, vehicle identification number, model year, weight rating (or class), fuel type, and trucking company name and contact information. This basic information could be compiled by onsite personnel and used as verification that a ZE or NZE truck visited the site. Supplementary information could also be kept if the operator chose to, such as photos or videos of the truck onsite. The number of ZE/NZE trucks visiting a site will vary, but a 250,000 square foot warehouse with an average truck trip rate would have about 42 Class 8 trucks visiting per day. Only five of these trucks per day would need to be NZE in order to meet that operator's WPCO at the proposed stringency of 0.0025. Onsite personnel could compile this info every week (one hour of effort) and use these records to demonstrate that they have met their WPCO. This type of reporting is expected to result in about $2,600 in administrative costs. Other WAIRE Menu options are not expected to exceed the administrative costs listed here.

The socioeconomic impacts from administrative costs, PR 316 fees, and WAIRE Points costs are included in the Draft Socioeconomic Impact Assessment. Additional analysis of PR 2305 costs is also included below.

FEASIBILITY

The potential feasibility of PR 2305 and PR 316 have been evaluated using a variety of approaches. Staff considered the technical, economic, and market feasibility as described below. Many technical assessment studies have been conducted on NZE and ZE technologies that may be used to comply with PR 2305. These studies are referenced in the WAIRE Menu Technical Report in Appendix B. Additional information on technical feasibility was also obtained from industry sources who have used technologies in commercial service at warehouses, and results from South Coast AQMD funded projects.[139] The technical feasibility of some WAIRE Menu actions are not

[139] Examples: http://www.aqmd.gov/docs/default-source/technology-research/clean-fuels-program/clean-fuels-advisory-agenda---september-17-2020.pdf, http://www.aqmd.gov/docs/default-source/technology-research/annual-reports-and-plan-updates/2019-annual-report-2020-plan-update.pdf

considered technically feasible today (e.g., ZE Class 8 trucks), however they are expected to become commercialized in the next two years and are therefore included as a compliance option. While this one menu option is just beginning to be commercialized, most other WAIRE Menu are commercially available today, including NZE trucks (which have been available for years), smaller ZE trucks, ZE yard trucks, solar panels, charging/fueling infrastructure, and filtration systems.

Economic impacts are considered in more detail in the socioeconomic impact analysis report, however some preliminary analysis is included here. First, the proposed rule may impose annual average costs between about $0-$12.6 million per year and $670 million per year,[140] which translates to a range of about -$0.02 per sq. ft. to $0.83 per sq. ft.

There are two points of comparison that illustrate the impact PR 2305 may have on industry. First, there are about $500 billion worth of goods that flow through the SCAG region every year, with the vast majority flowing through the import and export points in the South Coast AQMD region.[141] If only 31% of imported containerized goods at the ports of LA/LB go directly to rail, the majority of the remainder likely flows through the largest warehouses. The warehouses subject to PR 2305 include about 750 million sq. ft. of space, out of a total of about 1.2 billion sq. ft. of warehousing space in the entire SCAG region (all building sizes), or about 63%.[142] Because PR 2305 warehouses include the largest facilities, an even greater fraction of goods is expected to flow through these warehouses with smaller warehouses sending or receiving goods from the larger facilities. At the low end, it is possible to estimate that the total value of goods flowing through PR 2305 warehouses is at least $217 billion.[143] Using the ~$670 million annual cost from the mitigation fee-only scenario (Scenario 7) as a proxy for the highest costs that could be imposed by PR 2305 at the proposed stringency, at the high end PR 2305 and PR 316 could therefore add ~0.3% to the total cost of goods handled by warehouses. The much lower cost example of a mitigation fee scenario (Scenario 7a) shows that total costs may be as low as $114 million per year, which would be <0.05% of the total cost of goods handled by warehouses.

The potential cost effectiveness of PR 2305 is difficult to determine with the wide variety of options available for compliance. PR 2305 aims to reduce regional NOx emissions, as well as local emissions of diesel PM (to reduce regional PM and local toxics emissions), and local exposures to air pollution. Traditional cost effectiveness approaches are therefore not comparable to other programs focused solely on regional pollutant emission reductions that simply divide total cost by NOx emission reductions, or toxics rules that do not calculate cost effectiveness. Nevertheless, Table 23 below shows a cost-effectiveness in dollars per ton of NOx reduced after accounting for CARB's ACT, HD I/M, and Low NOx Omnibus regulations (using Table 20 and Table 15). These estimates are expected to be conservative because they don't account for all incentive programs that could help offset costs (e.g., Low Carbon Fuel Standard) and they only show a 10-year period (less than the useful life of a truck) of costs and

[140] The high end cost is set equal to the mitigation fee-only scenario.
[141] https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal_goods-movement.pdf
[142] Ibid.
[143] $500 billion * 69% (non-rail) * 63% (PR 2305 whse sq. ft./SCAG whse sq. ft.) = $217 billion

emission reductions. As shown in Figures 16 through 18, costs are much lower in later years, and emission reductions are expected to continue past 2031.

Table 23: Preliminary Estimates of Cost Effectiveness for Regional NOx Reductions After Considering CARB ACT, HD I/M, and Low NOx Omnibus Regulations

	Equipment	Total Nox Reductions (tons)	Discounted Total Cost - NPV (1%) (millions)	Discounted Total Cost - NPV (4%) (millions)	Cost-Effectiveness (1%)	Cost-Effectiveness (4%)
Sc1	NZE Class 8	8,609	$1,226	$1,103	$142,371	$128,075
Sc2	NZE Class 8	9,353	$1,345	$1,220	$143,808	$130,420
Sc3	NZE Class 8	11,623	$430	$374	$37,015	$32,213
Sc4	NZE Class 8	8,178	$887	$750	$108,507	$91,649
Sc5	ZE Class 8	8,502	$1,067	$942	$125,534	$110,781
Sc6	ZE Class 6&8	3,702	$1,799	$1,604	$485,970	$433,179
Sc7	Mitigation Fee	52,270	$6,298	$5,264	$120,490	$100,708
Sc7a	Mitigation Fee	7,880	$1,098	$985	$139,309	$125,068
Sc8	NZE Class 6	6,211	$1,785	$1,627	$287,406	$261,983
Sc9	NZE Class 6	7,075	$554	$468	$78,256	$66,088
Sc10	ZE Class 6	7,879	-$115	-$87	-$14,581	-$11,078
Sc11	Solar	30,824	$9,797	$9,712	$317,834	$315,086
Sc12	ZE Class 8	4,509	$8,118	$7,445	$1,800,480	$1,651,413
Sc13	ZE Class 2b-3	3,218	$803	$753	$249,588	$233,930
Sc14	ZE Class 2b-3	3,578	$1,129	$978	$315,529	$273,439
Sc15	Filter System	-	$5,986	$5,057	-	-
Sc16	Filter	-	$5,863	$4,953	-	-
Sc17	TRU	579	$54	$46	$93,567	$79,083
Sc18	Yard Trucks	260	$1,153	$1,029	$4,436,646	$3,959,829

The cost effectiveness of recent mobile source regulations varies depending on the program, and depending on the timescale chosen. The table below summarizes recent key regulations from CARB and their cost effectiveness through about 2032 (dollars per ton of NOx). Costs are substantially lower for many of these regulations when considering cost savings that are projected to occur in the 2030s and beyond, however the shorter timeline is compiled here to show a similar end year as for the analysis for PR 2305 (analysis conducted through 2031). The cost effectiveness for various scenarios with PR 2305 as shown in Table 23 above is similar to the wide range of values shown in Table 24 below.

Table 24: Cost Effectiveness of CARB Regulations

CARB Regulation	Approximate Cost Effectiveness (through 2032)
Airport Shuttle Bus	$430,000/ton NOx
Innovative Clean Transit	$271,000/ton NOx
At Berth (Ocean Going Vessels)	$83,000/ton NOx
Low NOx Omnibus	$39,000/ton NOx
Advanced Clean Trucks	$22,000/ton NOx

The market feasibility was evaluated by considering whether the proposed stringency of PR 2305 would result in a level of implementation that exceeds the potential ability of the market to respond. In an extreme hypothetical example, if the stringency of PR 2305 required ten billion miles of Class 8 ZE truck travel per year, but there is only a total of three billion miles of truck travel from all Class 8 trucks (fueled by diesel, electric, natural gas, etc.), then this would indicate that the stringency is infeasible.

The scenario analysis described above includes calculations to determine whether any bounding analysis scenario exceeded expected market conditions. The parameters that were evaluated include the number of new trucks purchased in a year, the amount miles travelled by trucks in a year, the amount of power required to charge trucks, and the amount of fossil fueled power generation in South Coast AQMD. In nearly all cases, PR 2305 would not exceed existing market capacity. In rare instances, some bounding analysis scenarios show that some new truck sales in early years of the program could be higher than is expected in EMFAC for those respective truck categories, assuming that every warehouse operator bought the same class of truck and technology (e.g., NZE or ZE) to comply with PR 2305. This is unlikely as no more than about 40% of warehouse operators are estimated to own truck fleets (and not every truck fleet owns all truck classes), and truck acquisitions to earn Points would necessarily be less than shown. Even in these extreme cases (which are not reasonably expected to occur), the amount of sales is typically no more than about double what is projected from EMFAC for our region. No scenarios were found to require total VMT for any truck class greater than what is included within EMFAC 2017. For example, no scenarios required more truck travel to earn Points than the total amount of truck travel in the air basin. Finally, the highest electricity demand for charging electric trucks (Scenario 6) is about 697 GWh per year. This level of charging is less than what CEC has preliminarily calculated for the total need for electric trucks in the South Coast AQMD region.[144]

[144] As part of the development of the 2020 Integrated Energy Policy Report, CEC staff included a scenario that explicitly evaluates the electric power needed if >100,000 ZE trucks are deployed to assist in meeting 2031 ozone standards. This analysis showed the projected electricity demand from charging these trucks would be about 1,684 GWh in 2031, with a peak summer hourly load of about 164 MW for Southern California Edison, the region's largest utility. This results in about a 1-2% increase in electricity demand overall from SCE compared to the 'mid' case analysis in the 2019 IEPR, but is still within the range of expected demand as the additional load does not exceed CEC's modeled 'high' case.

Considering the many different compliance options and business models of warehouse operators, it is unlikely that any of the extreme scenarios discussed above would be expected to occur. With roughly three dozen options for earning WAIRE Points (32 Menu actions, a mitigation fee option, and additional options from Custom WAIRE Plans), it is unlikely any particular scenario modeled would be chosen by more than a small fraction of all warehouse operators in any given year. If these more realistic lower levels of implementation are assumed for each scenario, then none of the market capping conditions would be exceeded. It is also foreseeable that if some of the extreme examples discussed above began to materialize during a compliance period, with all operators choosing the same exact truck type and technology to implement, that warehouse operators would respond to these market conditions and pivot to implement other alternatives.

SOCIOECONOMIC ASSESSMENT

A draft socioeconomic analysis was prepared and released for public comment and review on March 3, 2021, more than 30 days prior to the South Coast AQMD Governing Board Public Hearing on PR 2305 and PR 316, which is anticipated to be heard on May 7, 2021. A second draft of the socioeconomic analysis will be released together with this second draft staff report. ~~This~~ The final~~second draft~~ socioeconomic analysis includes updates based on a third-party peer review, among other updates.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

PR 2305 and PR 316 are considered a "project" as defined by the California Environmental Quality Act (CEQA). Pursuant to CEQA, the South Coast AQMD, as Lead Agency, prepared a Notice of Preparation (NOP) of the Draft Environmental Assessment (EA) and Initial Study (IS) to analyze environmental impacts from the project identified above pursuant to its certified regulatory program (Public Resources Code Section 21080.5, CEQA Guidelines Section 15251(l), and South Coast AQMD Rule 110). The NOP/IS was released for a 32-day public review and comment period that began Friday, November 13, 2020 and ended on Tuesday, December 15, 2020. In addition, because the proposed project could have statewide, regional or areawide significance, a CEQA Scoping Meeting was held on December 2, 2020 pursuant to Public Resources Code Section 21083.9(a)(2). The South Coast AQMD has also prepared a Draft EA (equivalent to a Draft EIR) which was~~and has~~ circulated ~~it~~ for a 45-day public review and comment period from January 26, 2021 to~~ending~~ March 12, 2021. The analysis in the Draft EA indicated that while reducing emissions is an environmental benefit, significant and unavoidable adverse environmental impacts may occur for the following environmental topic areas: 1) aesthetics; 2) agriculture and forestry resources; 3) air quality and greenhouse gas emissions; 4) biological resources; 5) cultural resources; 6) energy; 7) geology and soils; 8) hazardous materials and solid and hazardous waste;

https://efiling.energy.ca.gov/getdocument.aspx?tn=235836,
https://efiling.energy.ca.gov/GetDocument.aspx?tn=230923,
https://efiling.energy.ca.gov/GetDocument.aspx?tn=230924

9) hydrology and water quality; 10) mineral resources; 11) noise; 12) transportation; and 13) utilities and service systems.~~The Draft EA can be accessed at the following address: http://www.aqmd.gov/home/library/documents-support-material/lead-agency-scaqmd-projects~~

Seven comment letters were received relative to the Draft EA and the responses to comments have been included in Appendix E of the Final EA~~If comments are submitted, the letters and responses to comments will be incorporated into the Final EA which will be included as an attachment to the Governing Board package~~. Prior to making a decision on the adoption of PR 2305 and PR 316, the South Coast AQMD Governing Board must review and certify the Final EA, including responses to comments, as providing adequate information on the potential adverse environmental impacts that may occur as a result of adopting PR 2305 and PR 316.

DRAFT FINDINGS UNDER CALIFORNIA HEALTH AND SAFETY CODE SECTION 40727

California Health and Safety Code Section 40727 requires that prior to adopting, amending or repealing a rule or regulation, the South Coast AQMD Governing Board shall make findings of necessity, authority, clarity, consistency, non-duplication, and reference based on relevant information presented at the public hearing and in the staff report.

Necessity

PR 2305 and PR 316 are needed to protect public health by reducing local and regional emissions of NOx and diesel PM associated with warehouses and the mobile sources attracted to warehouses. By reducing these emissions, PR 2305 and PR 316 will also assist in meeting state and federal air quality standards for ozone and fine PM. NOx is a precursor to the formation of ozone and PM2.5, and diesel PM is a toxic air contaminant and component of fine PM.

Authority

Authority for the South Coast AQMD Governing Board to adopt PR 2305 and PR 316 may be found in sections 39002, 39650 through 39669, 40000, 40001, 40440, 40441, 40522.5, 40701, 40702, 40716, 40717, 40725 through 40728, 40910, 40920.5, 41508, 41511, and 41700 of the Health and Safety Code.

Clarity

PR 2305 and PR 316 are written or displayed so that its meaning can be easily understood by the persons directly affected by it.

Consistency

PR 2305 and PR 316 are in harmony with and not in conflict with or contradictory to, existing statutes, court decisions, or state or federal regulations.

Non-Duplication

PR 2305 and PR 316 will not impose the same requirements as any existing state or federal regulations. The proposed rule is necessary and proper to execute the powers and duties granted to, and imposed upon, the South Coast AQMD.

Reference

In adopting these rules, the following statutes which the South Coast AQMD hereby implements, interprets or makes specific are referenced: Clean Air Act Sections 110(a)(5)(C); 116; Health & Safety Code Sections 40440, 40716, 40717, and 40522.5.

COMPARATIVE ANALYSIS

California Health and Safety Code Section 40727.2 requires South Coast AQMD to perform a comparative written analysis when adopting or amending a rule or regulation that imposes a new or more stringent emission limit or monitoring, reporting, or recordkeeping requirement. The comparative analysis is relative to any existing federal or state requirements, existing or proposed South Coast AQMD rules and air pollution control requirements and guidelines which are applicable to the same sources as identified in the proposed rule or regulation. PR 2305 regulates warehouses as an indirect source that attract mobile sources of emissions, and PR 316 is the companion fee rule for PR 2305. Under California Health and Safety Code Section 40727.2(g), PR 316 does not in itself require a comparative analysis, but is included for completeness.

There are no comparable federal or state requirements or any comparable existing or proposed South Coast AQMD rules or requirements that apply directly to warehouses. However, there are many air quality regulations at the state and federal level that focus on emissions from the mobile sources associated with warehouses. These can broadly be placed into three categories. First are regulations that aim to reduce emissions through the engine standards for new vehicles. Second are regulations that aim to replace older vehicles with newer vehicles with cleaner technologies through fleet rules. Third are regulations that focus on air quality impacts from facilities that attract mobile sources, such as employee commutes. PR 2305 and PR 316 look at the activities associated with a warehouse facility and aim to reduce air quality impacts beyond what is already required by any existing or proposed regulatory requirement. PR 2305 and PR 316 are summarized below in Table 25.

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Table 25: Proposed Rule 2305

Rules	Rule Elements		
	Applicability	Requirements	Reporting, Notification, and Recordkeeping
PR 2305	Owners and operators of warehouses located in the South Coast AQMD jurisdiction with greater than or equal to 100,000 square feet of indoor floor space in a single building (PR 2305(b)).	Warehouse operators are required to earn WAIRE Points annually, either by completing actions off the WAIRE Menu, a Custom WAIRE plan, or paying a mitigation fee based on truck trips. (PR 2305(d)).	Periodic reports on warehouse statistics and its operations. Recordkeeping requirements for all information submitted for rule compliance (PR 2305(e)).

A comparative analysis of other regulations that focus on emissions from the mobile sources associated with warehouses is presented below in Tables ~~28, 29, and 30~~26, 27 and 28.

Table 26: Engine Standards

Rules	Rule Elements		
	Applicability	Requirements	Reporting, Notification, and Recordkeeping
U.S. EPA Phase 1 and CARB Phase 2 Heavy-Duty Fuel Efficiency and Greenhouse Gas (GHG) Standards[145]	Manufacturers, sellers, or importers of heavy-duty trucks and engines, specifically model-year 2014 tractors, vocational vehicles, heavy-duty pick-up trucks and vans, and trailers hauled by heavy-duty tractors.	GHG emission and fuel economy standards on truck and engine manufacturers Require manufacturers to improve existing technologies or create new technologies to meet these standards.	Report emissions test data and results, technical vehicle data, and end-of-year sales information. Manufacturers will have to keep records of this information.
CARB Tractor-Trailer GHG Regulation[146]	Owners of 53-foot or longer trailers and heavy-duty tractors that pull them.	The tractors and trailers subject must either use U.S. EPA "SmartWay" certified tractors and trailers, or	Report applicable owners. Must keep records of compliance.

[145] https://www.govinfo.gov/content/pkg/FR-2016-10-25/pdf/2016-21203.pdf
[146] https://ww3.arb.ca.gov/regact/2018/phase2/finalatta.pdf?_ga=2.205908496.2040751625.1614668703-251503538.1597351373

		be retrofitted with SmartWay verified technologies.	
U.S. EPA Non-Road Diesel Engines and Fuel Standards[147]	Entities that produce or import non-road diesel engines, or produce, import, distribute, or sell and fuel for non-road diesel engines.	Set emission standards for nonroad diesel engines. Phase-in less polluting engine standards. Require: new test procedures and engine certifications.	Registration and reporting required. Recordkeeping for all reporting.
U.S. EPA Non-Road Large Spark Ignition Engines Standards[148]	Manufacturers of non-road large-spark ignition engines.	Non-road emission standards.	Reporting requirements if cannot meet the emission standards.
CARB Optional Reduced NOx Emission Standards for On-Road Heavy-duty Engines	On-road heavy-duty engines.	Sets optional low NOx emission standards. Lists low NOx certified heavy-duty engines[149].	
CARB Heavy Duty Low NOx Omnibus Rule	Heavy-duty vehicle engines.	Lower NOx emission standards to 0.05 g/bhp-hr for 2024-2026, 0.02 g/bhp-hr starting in 2027. Revise testing, certification, and warranty requirements.	
CARB Heavy-Duty Inspection and Maintenance Program[150]	Heavy-duty vehicles.	Inspection and maintenance programs for vehicle lifetime.	

[147] https://www.govinfo.gov/content/pkg/FR-2004-06-29/pdf/04-11293.pdf
[148] https://www.govinfo.gov/content/pkg/FR-2002-11-08/pdf/02-23801.pdf
[149] https://ww2.arb.ca.gov/sites/default/files/classic//msprog/onroad/optionnox/optional_low_nox_certified_hd_engines.pdf
[150] https://ww2.arb.ca.gov/our-work/programs/heavy-duty-inspection-and-maintenance-program

Table 27: Fleet Rules

Rules	Rule Elements		
	Applicability	Requirements	Reporting, Notification, and Recordkeeping
CARB Truck and Bus Regulation	Diesel-fueled vehicles with a gross vehicle weight rating (GVWR) greater than 14,000 lbs.	Requires the installation of verified PM diesel emission control strategy (DECS) on heavy-duty vehicles. Replace engine to meet 2010 emission standards.	Reporting required for exemptions.
CARB Transport Refrigeration Unit (TRU) Air Toxics Control Measure (ATCM)	Diesel-fueled engines used to refrigerate perishable goods. TRU generator sets that provide onboard electric power refrigeration systems.	Reduce emissions of diesel PM from TRUs.	In-Use Recordkeeping and Reporting.
CARB In-Use Off-Road Diesel Regulation	Existing (in-use) off-road diesel-fueled vehicles.	Engine performance requirements to reduce NOx, diesel PM, and other criteria pollutant. Limit idling time. Restricts purchase of new vehicles based on engine emission standards.	Owners of off-road diesel fleets report fleet information, annually update fleet information. Recordkeeping required for reports submitted.
CARB Large Spark Ignition (LSI) Rule	Fleet operators of LSI engines vehicles.	Hydrocarbon and NOx emission standards, using fleet average.	Recordkeeping requirements and labeling of LSI equipment.
CARB Advanced Clean Trucks	Truck manufacturers of medium- and heavy-duty trucks. Large fleets with a gross vehicle weight rating (GVWR) greater than 8500 lbs.	Truck manufacturer sales mandate for zero-emission medium- and heavy-duty trucks	Large entities and truck fleets report how fleets are operated, and the number of contractors used to run the fleets.

Table 28: Facility-Based Rules and Other Types of Rules

Rules	Rule Elements		
	Applicability	Requirements	Reporting, Notification, and Recordkeeping
South Coast AQMD Rule 2202 (Employee Commute Reduction)	Employers with 250 or more employees.	Implement emission reduction strategies. Choose from three options.	Plan submission.
AB 617 Community Air Protection Program	Environmental justice communities.	Reduce local air pollution from warehouses through an indirect source rule.	Community Emission Reduction Plan. Community Air Monitoring Plan.

Appendix A: WAIRE PROGRAM IMPLEMENTATION GUIDELINES

DRAFT WAIRE PROGRAM IMPLEMENTATION GUIDELINES

~~March~~ May 2021

DRAFT WAIRE PROGRAM IMPLEMENTATION GUIDELINES

OVERVIEW
APPLICABILITY
CALCULATIONS
TRUCK TRIP COUNTS FOR DETERMINING WPCO
REPORTING
RECORDKEEPING
WAIRE MENU
CUSTOM WAIRE PLAN
WAIRE MITIGATION FEE
WAIRE POINTS TRANSFERS
EXEMPTIONS
COMPLIANCE PROGRAM

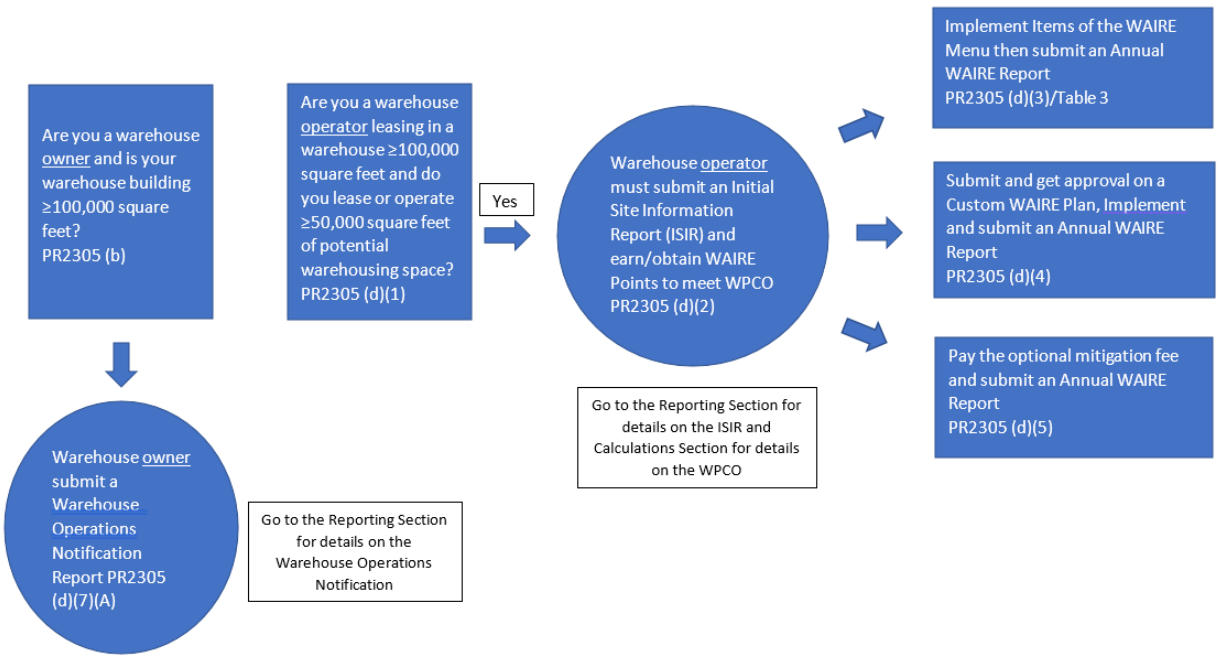
OVERVIEW

Proposed Rule (PR) 2305 is the Warehouse Indirect Source Rule (ISR) which provides the Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program, a menu-based points system. The WAIRE Program determines a warehouse operator's WAIRE Points Compliance Obligation (WPCO) based on annual truck trips to each applicable new and existing warehouse that has at least 100,000 square feet of indoor floorspace within a single building that may be used for warehousing activities. Each warehouse operator must earn or obtain WAIRE Points to meet their WPCO on an annual basis. PR 316 establishes fees to fund South Coast AQMD compliance activities associated with PR 2305.

The WAIRE Program Implementation Guidelines (Guidelines) do not supersede the requirements specifically stated in PR 2305 and PR 316 but are meant to provide warehouse operators and owners with further guidance on complying with the rules. In any instance where an interpretation of requirements in these Guidelines conflicts with PR 2305 or 316, the rule language takes precedence. All owners and operators subject to PR 2305 and 316 should anticipate that the reports they submit and the records that they keep will be reviewed by South Coast AQMD staff in desktop audits and onsite field inspections, and are subject to public records act requests. Further, data regarding warehouse operator compliance will be made publicly available on South Coast AQMD's website. For any questions about this guidance document, please contact program staff at waire-program@aqmd.gov.

APPLICABILITY

Figure 1 – Applicability Flow Chart



The warehouse ISR applies to warehouse operators and owners of warehouses greater than or equal to 100,000 square feet of indoor floor space within a single building that may be used for warehousing activities. A warehouse operator or owner whose warehousing activity is not explicitly excluded from PR 2305 is presumed to be included in rule requirements. Figure 1 represents a simplified diagram of the requirements for warehouse owners and operators of applicable warehouses. Warehouse owners are only required to submit a Warehouse Operation Notification Report which detail the size and tenant status of the warehouse, further details are provided in the Reporting Section of these Guidelines. Warehouse operators are required to submit an Initial Site Information Report and are required to earn WAIRE points. Warehouse owners may choose to earn WAIRE points on behalf of the warehouse operator.

In addition to the warehouse size applicability, the warehouse ISR is implemented over time based on the applicable warehouse sizes. The warehouse size phase-in shown in Table 1, and details the date range for the Initial Compliance Period when warehouse operators must earn or obtain WAIRE Points to meet their WPCO, and also the due dates for Initial Site Information Report, and the first Annual WAIRE Report.

Table 1 – Implementation Schedule

Phase	Warehouse Size (square feet)	Initial Site Information Report Due Date	First Annual WAIRE Report Due Date	Initial Compliance Period
1	> 250,000	July 1, 2022	January 31, 2023	January 1, 2022 to December 31, 2022
2	> 150,000-<250,000	July 1, 2023	January 31, 2024	January 1, 2023 to December 31, 2023
3	> 100,000-<150,000	July 1, 2024	January 31, 2025	January 1, 2023 to December 31, 2024

CALCULATIONS[151]

The WPCO is the number of WAIRE Points a warehouse operator must earn or obtain to comply with PR 2305. Figure 2 represents a simplified diagram of how a WPCO is calculated based on the number and type of trucks that enter or exit a warehouse site.

Figure 2



Truck trips are defined as one-way trips that tractors and straight trucks make to a warehouse facility when delivering goods to or from another location.[152] They are counted when a truck enters or exits a site. A single visit from a truck is equal to two trips. PR 2305 refers to the total calculated truck trips in a compliance period as Weighted Annual Truck Trips (WATTs) which is calculated by inputting the actual truck trip counts of the number and type of trucks in the following equation:

$$WATTs = [Class\ 2b\ to\ 7\ truck\ trips] + [2.5 \times Class\ 8\ truck\ trips]$$

As shown in Figure 2, the WATTs are multiplied by the Stringency factor and the Annual Variable to provide the WPCO for the warehouse. The Stringency factor is defined as 0.0025 WAIRE Points per WATTs, and the annual variable is determined by the phase-in schedule of the warehouse and is provided in Table 2.

Table 2 – Annual Variable

Annual WAIRE Report Year*	Annual Variable		
	Phase 1	Phase 2	Phase 3
2022	0.33	0	0
2023	0.67	0.33	0
2024	1.0	0.67	0.33
2025	1.0	1.0	0.67
2026 and beyond	1.0	1.0	1.0

*This is the compliance ~~year~~ period ~~that~~ for which a warehouse operator is first required to submit its Annual WAIRE Report.

[151] The WAIRE Menu Technical Report, included as Appendix B in the PR 2305 staff report, is included as an appendix to these Implementation Guidelines to assist in determining how WAIRE Points are calculated.

[152] A truck or yard truck delivering a trailer or goods from one part of a warehouse to another part of a warehouse is not considered a truck trip since it does not include delivery of goods to/from another location.

TRUCK TRIP COUNTS FOR DETERMINING WPCO

The WATTs calculation equation weighs the activity and emission contribution of a Class 2b-7 straight truck and that of a Class 8 tractor which emits approximately 2.5 times more NOx emissions. Class 8 tractors are differentiated from Class 2b-7 straight trucks by their Gross Vehicle Weight Rating being greater than 33,001 pounds. Absent more specific data, all tractors that can pull a trailer should be counted as Class 8, and all straight trucks should be counted as Class 2b-7.

With the WPCO being closely tied to the number of actual truck trips entering and exiting the warehouse site, it is important to accurately document the total number of truck trips and whether they were Class 8 tractors or Class 2b-7 straight trucks. Truck trips must be counted and records must be verifiable, where date and time of the truck trips recorded may be tied to the compliance period records for review. Below are five examples of methods to count the number of truck trips. The key criteria for ensuring that the truck trip counts are accurate enough for determining a warehouse operator's WPCO is that the data needs to be collected using a method that provides reliable and verifiable truck trip counts that are either contemporaneous (e.g., daily) or extrapolated from a short term contemporaneous tracking during a representative peak period, as described below. Warehouse operators are responsible for maintaining data the support the truck trip count and the data must be made available to South Coast AQMD for verification. Verifiable data can be provided through the following methods:

1. Electronic Telematics Systems – These systems are used to track truck activity, typically through the use of on-board GPS systems and fleet management software. These systems can track when equipped vehicles are located at a warehouse.

2. In-Roadway or Driveway Sensors - Various sensor technologies are available to count vehicles such as pneumatic tubes, radar, or lasers installed at a driveway. These devices are used to count the number of vehicles passing a certain point and can provide truck classification data (e.g., straight trucks).

3. Video Monitoring – Many warehouse operators already employ security cameras to monitor their gates. Warehouse operators could use staff or software to identify the number and type of trucks that enter the gate and note truck Class (i.e. straight trucks vs. tractors) from video recordings. Video recordings and subsequent counts can be continuous but in no cases should be less than one weekday (Monday – Friday) per month and one weekend day (Saturday or Sunday) per month (if the warehouse is open on weekends). Each weekday and weekend day once-per-month sample must be taken at least three weeks apart from the next respective sample. With this less intensive once-per month sampling method, a representative peak weekday and weekend day must be recorded (with documentation indicating why those days of the week were chosen). The weekday count may then apply to all weekdays during that month, and the weekend count may then apply to all weekend days during that month.

4. Guardshack – Many warehouse operators employ a guard or other personnel to (incomplete sentence) Contracts or other similar records – Many warehouse operators are responsible for shipments to/from their warehouse, including with their own fleet or through third party fleets. Records such as contracts or manifests that document the loads delivered to or picked up from a warehouse can be used to determine truck trip information provided that all trips to a site are documented (which could include supplementary sources of data, such as through methods described above).

Loss of Truck Trip Count Data
In the event that there is insufficient truck trip data due to events beyond the warehouse operator's control such as with records destroyed in a fire or other force majeure event, an alternative WATTs calculation may be used as described below.[153] The WATTs must be calculated using the equation and table below.

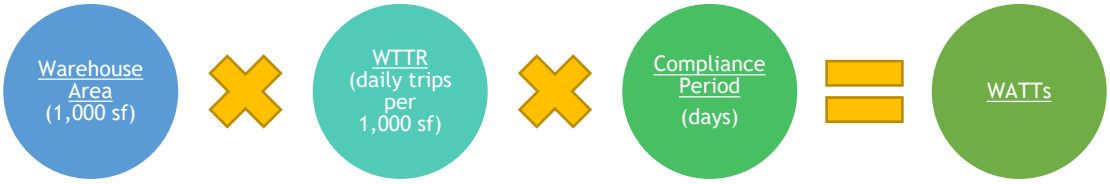


Table 3 Weighted Truck Trip Rates (WTTR)

Warehouse Type	WTTR (trips/1,000 sf)
≥200,000 sf	0.95
≥100,000 – 199,999 sf	0.67
Cold Storage (≥100,000 sf)	2.17

Example calculation for a 250,000 square foot (non-cold storage) warehouse that experienced a force majeure event and lost 30 days of records:

250 tsf × 0.95 trips/tsf × 30 days = 7,125 WATTs

These calculated WATTs would be added to the other WATTs counted during the rest of the compliance period to determine the warehouse operator's WPCO.

REPORTING

Report Submission

Warehouse operators and owners subject to PR 2305 are required to submit reports to South Coast AQMD to provide details on their applicable warehouse operations and compliance. PR 2305 requires that all records used to demonstrate compliance be maintained by warehouse operators or owners, as applicable, for a period of no less than seven years and made available to South Coast AQMD upon request during normal business hours in order to determine compliance. Table 3 provides an overview of the reporting requirements for PR 2305. Appendix A to these Guidelines will provide a user's guide to the WAIRE Program Online Portal (POP) through which warehouse operators and owners will submit their required reports and pay necessary fees.[154]

[153] This alternative calculation can only be used in cases of force majeure. Normal practice requires the warehouse operator to count all truck trips. Further details on the alternative WPCO calculation are available at PR2305 (d)(1)(C).
[154] This appendix will be developed if the rule is approved and once the WAIRE POP has been developed. If the WAIRE POP system is not available, all reports should be submitted to waire-program@aqmd.gov.

Table 4 Reporting Overview

WAIRE Program Report	Reporting Entity	Information Required	Due Dates
Warehouse Operations Notification (WON)	Warehouse Owners	• Warehouse size and area that may be used for warehousing activity, • Warehouse operator(s) name and contact information, • Lease end date (if applicable), • Previous warehouse operator(s) information, • Square footage used by the warehouse owner for warehousing activities	• On or before September 1, 2021 • Within 14 days of a new warehouse operator having access to at least of 50,000 square feet of space for warehousing activities, • Within 30 days after a renovation that alters the size of the warehouse, • Within 3 days of a request for the report from South Coast AQMD
Initial Site Information Report (ISIR)	Warehouse Operators*	• Warehouse size and space used for warehousing activities,** • Number of truck trips in the previous 12-month period,*** • Number of truck trips anticipated during the compliance period for which the upcoming AWR must be submitted, • Anticipated actions to meet the WPCO for the current compliance period, • Details on the following potential onsite equipment: owned or leased truck fleet, onsite alternative fueling stations, yard trucks, and onsite energy generation systems (e.g., solar)	• On or before July 1 of the first compliance period when the warehouse operator must submit their first Annual WAIRE Report for that warehouse • Within 30 days of a request for the report from South Coast AQMD
Annual WAIRE Report (AWR)	Warehouse Operators*	• Truck trip counts for the compliance period, • Number of WAIRE Points earned for each action, • Associated metrics for the WAIRE Menu actions used to earn WAIRE Points	• No more than 30 days after January 1 of the compliance period • If an operator vacates a warehouse before the AWR submission deadline in any year, they must submit an AWR no later than the date they vacate the warehouse.

* The warehouse owner may choose to comply on behalf of the warehouse operator, or may be required to submit the report if they are also the warehouse operator.
** If the warehouse building size is <100,000 sf, or if the warehouse operator leases <50,000 sf for warehousing activities, then no further reporting is required. Multiple warehouse operators owned or controlled by a single parent company collectively leasing ≥50,000 sf for warehousing activities in a warehouse do not qualify for this exemption from additional reporting. Also, if an activity is not expressly exempt from rule requirements, it is presumed to be subject to the rule.
*** Warehouses submitting an ISIR before,July 1 2022 are only required to report truck trips since July 1, 2021.

Warehouse Operations Notification Report

The Warehouse Operations Notification (WON) must be submitted by an authorized official of the warehouse owner through the WAIRE POP online system. The applicable administrative fee listed in PR 316 must be submitted via e-check or credit card at the same time as the WON. Warehouses owners submitting a WON for a warehouse with less than 100,000 square feet of floor area dedicated to warehousing activities are exempt from the reporting fee.

Warehouse Renovation or Size Change

In the event there is a change in the applicable 100,000 square feet or greater of indoor floor space within a single building that may be used for warehousing activities, a WON must be submitted within 30 days of receiving a certificate of occupancy from the applicable local building department. Example renovations could include expanding the size of the building to add more warehousing space, or constructing more office space within the warehouse such that the indoor floor space that may be used for warehousing activities is now less than 100,000 feet.

New Warehouse Operator

Any time a new warehouse operator takes over operational control of at least 50,000 square feet of a warehouse building with more than 100,000 square feet that may be used for warehouse activities, a WON must be submitted within 14 days to report that change. A typical example would include a new tenant's starting date for their lease.

Initial Site Information Report

The Initial Site Information Report (ISIR) must be submitted by an authorized official of the warehouse operator through the WAIRE POP online system. ISIRs are only submitted during the first compliance period a warehouse operator is occupying the warehouse[155], and prior to the first AWR unless requested by the South Coast AQMD Executive Officer. The applicable administrative fee listed in PR 316 must be submitted via e-check or credit card at the same time as the ISIR.

Warehouse Size

The ISIR must include the total indoor floor square footage of the applicable warehouse building and the amount of space the warehouse operator leases that may be used for warehousing activities. Typical records used to determine this information will be the operator's lease, information from the warehouse owner, and/or property tax assessment data. The warehouse operator may need to make their own determination about how much of the warehouse facility they can use for warehousing activities. [156] Vacant areas that may be used for warehousing activities (e.g., empty storage racks, open floor space designed for warehousing, drive paths for

[155] Additional ISIRs would be required to be submitted by the warehouse operator should they relocate to a different warehouse subject to PR 2305.

[156] Areas that may be used for warehousing activities include indoor spaces related to the storage and distribution of goods, including but not limited to the storage, labelling, sorting, consolidation and deconsolidation of products into different size packages. Supporting office administration (e.g., employee break areas, restrooms, offices, etc.), maintenance (e.g., vehicle maintenance or charging/fueling areas), manufacturing areas, or retail sales areas open to the general public, within the same warehouse building, that are physically separate from the warehouse area, are not considered warehousing activities.

pallet jacks or forklifts used in warehousing activities) must be included in the square footage calculation.

No additional reporting is required in the ISIR if 1) the total square footage that may be used for warehousing activities in that facility is less than 100,000 square feet, or 2) the warehouse operator's lease does not allow them to use more than 50,000 square feet for warehousing activities.

Truck Trips

There are two sets of truck trip data that must be reported in the ISIR. First, truck trips from the previous 12-month period must be recorded using the same types of methods used to determine the operator's WPCO (see discussion beginning on page 5). Because the ISIR is due by July 1, the typical applicable period for this reporting would be from the previous June 1 through May 31 period. Trips only need to be reported from periods when the operator occupied the warehouse. For example, if an operator's lease only began in September of that previous year, then truck trips only need to be reported from that period on.

Second, the operator must provide an estimate of the number of truck trips that will be reported during the applicable period for their upcoming Annual WAIRE Report. This estimate could just be an extrapolation of the data reported above for the previous 12-month period, or could include an estimate based on expected business through the end of the compliance period.

These two sets of truck trip data can serve as a basis for the operator to estimate their WPCO for that compliance period. However, the final WPCO used in the Annual WAIRE Report must be based on the actual truck trip counts during the compliance period itself (see discussion below).

Onsite Warehouse Equipment

The Initial Site Information Report requires information on existing onsite equipment at the warehouse for onsite fleets, ZE charging/fueling station, yard trucks, and solar panels. Baseline information on the onsite equipment is required to assist in calculating future WAIRE Points that may be potentially earned from the usage of the existing onsite equipment.

Anticipated Approach for Earning WAIRE Points

Using the truck trip data provided in the ISIR (described above) and the subsequent estimated WPCO, the warehouse operator must also submit how they anticipate meeting that WPCO for the current compliance period. This could include any combination of approaches from the WAIRE Menu, a Custom Plan, transferred Points, or the mitigation fee. This portion of the report is a planning exercise to assist the operator and the South Coast AQMD on the anticipated mechanisms that will be used for compliance. Recognizing that conditions can change, the actual approach used to earn WAIRE Points in the Annual WAIRE Report does not need to follow the approach outlined in the ISIR.

Annual WAIRE Report

An Annual WAIRE Report (AWR) must be submitted by every warehouse operator who must satisfy a WPCO for every compliance period, beginning with their Initial Compliance Period (see page 4). Warehouse owners who intend to voluntarily want to earn WAIRE Points, on

behalf of a warehouse operator, must also submit an AWR at the end of the compliance period when the Points were earned. The AWR must be submitted by an authorized official of either the warehouse operator, or owner if the WAIRE Points are earned by the owner, through the WAIRE POP online system. The applicable administrative fee listed in PR 316 must be submitted via e-check or credit card at the same time as the AWR.

Truck Trip Counts
The number of truck trips for the compliance period must be reported specifying the number of Class 2b-7 straight trucks and Class 8 tractors that entered or exited the warehouse site, following the methods described beginning on page 5. Upon entering the truck trip data for the compliance period into the WAIRE POP system, the corresponding WPCO will be displayed using the equation shown on page 5.

Earned WAIRE Points
The warehouse operator must report how the WPCO was satisfied in terms of how many WAIRE Points were earned from:

1) Each WAIRE Menu action, and/or
2) Actions in an approved Custom WAIRE Plan, and/or
3) Points transferred from another site, the warehouse owner, or banked from a previous year, and/or
4) The mitigation fee.

For WAIRE Points earned from the WAIRE Menu, the warehouse operator must report the associated level of implementation using the reporting metrics for each WAIRE Menu action (see Table 3 of PR 2305). The applicable increments of progress must be reported for actions implemented from an approved Custom WAIRE Plan. For WAIRE Points that were transferred or banked, the original method used to earn those WAIRE Points must also be reported, including who originally earned the WAIRE Points and when and how the WAIRE Points were earned.

RECORDKEEPING
Adequate records that document all reported information must be maintained for seven years after the applicable report was submitted and be available upon request during normal business hours. While summarized information is reported in the WON, ISIR, and AWR, during audits and field inspections South Coast AQMD staff will require warehouse operators and owners to provide detailed records in order to verify the accuracy of the information submitted.

WAIRE MENU

The WAIRE Menu provides flexibility in a warehouse operator's ability to comply with the WPCO. Table 3 in PR 2305 provides the WAIRE Menu showing the actions, the annual metrics, and the WAIRE Points based on the listed annual metric. The following discussion describes the factors that South Coast AQMD staff will review during audits and inspections for each WAIRE Menu option. Table 4 below provides an overview of the reporting metrics that warehouse operators must report on their AWR to earn WAIRE Points from the WAIRE Menu.

Table 4 – WAIRE Menu Item Metrics

WAIRE Menu Action/Investment	WAIRE Menu Reporting Metric for Each Compliance Period
Acquire ZE/NZE Trucks	Number of ZE/NZE Trucks Acquired by Truck Class
Visit from ZE/NZE Trucks	Number of ZE/NZE Truck Visits
Acquire ZE Yard Trucks	Number of ZE Yard Trucks Acquired
Use ZE Yard Truck	Number of Hours a ZE Yard Truck Operated
Install Onsite Solar Panel System	Kilowatt Rating of Installed System
Use Onsite Solar Panel System	Number of kWh Generated by the Solar Panel System
Install Stand-Alone MERV 16 or Greater Air Filtration Systems	Number of Stand-Alone Air Filtration Systems Installed
Replace MERV 16 or Greater Air Filters	Number of MERV 16 or Greater Air Filters Replaced

NZE/ZE Truck Acquisition

Many warehouse operators already own and operate trucks, and they may acquire NZE or ZE trucks for their fleet to earn WAIRE Points. Vehicle Identification Numbers and records verifying that the truck was acquired by the warehouse operator must be kept. Acquisition could include purchasing, leasing, or renting trucks. If a truck is leased or rented, the WAIRE Points earned for that temporary acquisition are proportional to the amount of the compliance period that the truck is leased or rented. For example, if truck is leased for 6 months of a 12-month compliance period, the number of WAIRE Points earned would be one half of the amount shown in Table 3 of PR 2305. In the case of a Class 6 NZE truck, the warehouse operator would earn 13 WAIRE Points, instead of the 26 WAIRE Points shown in the WAIRE Menu for the full annual period.

NZE trucks fueled by natural gas have been commercially available for the past few years in a variety of Classes, with engines ranging from 6.7 liters to 11.9 liters to serve both medium duty and heavy duty applications.[157] NZE engines are defined as the lowest non-zero optional low

[157] https://www.epa.gov/sites/production/files/2021-01/documents/420f21002.pdf, https://ww3.arb.ca.gov/msprog/onroad/cert/cert.php#6, https://www.ngvamerica.org/vehicles/availability/?vehicle_type=heavy-duty-truck-oems

NOx standard at the time of the engine's manufacture, which is currently 0.02 g/bhp-hr. One benefit of NZE is that publicly accessible fueling infrastructure for trucks already exists throughout the region and beyond.[158]

Many ZE trucks are also commercially available today in a variety of truck Classes, and many more are expected in the next few years.[159] In the near term, charging or fueling infrastructure may be installed at a warehouse facility (which also would earn WAIRE Points), or may be available from a truck leasing company. Additional ZE charging and fueling infrastructure is expected to be installed in the coming years.

If a warehouse operator earns WAIRE Points from the acquisition of ZE or NZE trucks, they will need to retain records of the purchase, lease, or rental of the truck (such as a purchase invoices, or lease agreement), and documentation (e.g., onsite video or photographs from multiple days) that the truck serves that warehouse facility (e.g., that it is domiciled at that site or regularly visits that site). The purchase, lease, or rental documentation must contain enough information to demonstrate that the truck is NZE or ZE, as well as the truck Classification (e.g., the gross vehicle weight rating).

Existing funding programs[160] like Carl Moyer, Proposition 1B, Hybrid Voucher Incentive Program, etc. cannot be used to purchase a truck and also earn WAIRE Points for truck acquisition due to statutory prohibitions preventing those incentive programs from being used to comply with a regulation. The warehouse operator therefore has the option of either receiving incentives to reduce the purchase price of a NZE or ZE truck or foregoing the incentives to earn WAIRE Points for the NZE/ZE truck acquisition.

NZE/ZE Truck Visits

WAIRE Points may also be earned for every visit to a warehouse by a NZE or ZE truck.[161] It is important to note, that WAIRE Points for acquisition and visits from the same truck can be earned in the same compliance period. Trucks that were purchased using incentive funds from the previously described funding programs, can be used for crediting towards number of ZE or NZE truck visits. WAIRE Points are earned for each NZE or ZE truck visit, which includes the truck trip into and out of the facility. The number of truck trips to earn WAIRE Points can be more or less than the annualized metric in the WAIRE Menu. WAIRE Point values from the WAIRE Menu can be ratioed (for any WAIRE Menu action), as demonstrated in the following example. In the WAIRE Menu, 42 Points are earned for 365 visits from a Class 8 NZE truck. If a warehouse operator has 1,000 Class 8 NZE truck visits during their compliance period, the number of WAIRE Points earned would be:

$$\frac{42\ Points}{365\ visits} = \frac{XX\ Points}{1{,}000\ Visits} \rightarrow \mathbf{115.1\ Points}$$

[158] https://afdc.energy.gov/fuels/natural_gas_locations.html#/analyze?region=US-CA&fuel=LNG&fuel=CNG&lng_vehicle_class=HD&show_map=true&cng_vehicle_class=HD

[159] https://globaldrivetozero.org/tools/zero-emission-technology-inventory/

[160] http://www.aqmd.gov/home/programs/business/business-detail?title=vehicle-engine-upgrades

[161] Trucks that have been purchased through incentive programs can earn WAIRE Points at the same level as trucks that are not incentivized.

NZE and ZE truck visits can come from the warehouse operator's own fleet or by any other third party fleet (whether contracted by the warehouse operator or not). NZE and ZE truck visit counts must be made contemporaneously with the trips and records documenting the visits must be verifiable by South Coast AQMD staff. Example methods to record these truck visits are described below.

1. Trucker check-in – Many warehouses already require some type of check-in from truck drivers when they arrive onsite. As part of that check-in process, warehouse operators could fill out a short form with the following information for every ZE or NZE truck that visits the site[162] (either themselves or through a form filled out by the truck driver):
    a. The date and time that the truck arrived
    b. Truck license plate number[163] and Vehicle Identification Number (VIN)
    c. Truck fuel type (e.g., natural gas, electric, hydrogen)
    d. Trucking Company Name, DOT number, and contact phone number (if not owned by the warehouse operator)
    e. If filled out by a truck driver unaffiliated with the warehouse, the driver's name and signature confirming that the above information is accurate
2. Electronic Telematics System (ETS) – ETS systems are increasingly used to track truck activity, and warehouse operators that employ these systems can use the data it collects and supplement it with truck characteristics (i.e., items b. through d. above) to determine how many NZE and ZE visits occur.
3. Security Cameras – Cameras may be used to record the trucks entering or exiting a warehouse site and document the truck license plate number (using either manual or automated tracking), and potentially other information such as fuel type, trucking company name, and DOT number. Information from items (incomplete sentence)
4. Contractual Records – Some warehouse operators arrange for trucking services from third party fleets. Provisions within the contract requiring NZE or ZE trucks to be used (and resulting in a specified number of visits) could be used as one method of documentation. Additional documentation verifying that the NZE or ZE trucks have actually visited the warehouse must also be maintained.

ZE Yard Trucks

Yard trucks are utility trucks that can be classified as on-road or off-road vehicles and are typically used to move trailers and containers around a warehouse yard or to nearby locations. NZE yard trucks are not included as an option in the WAIRE Menu but may earn WAIRE Points in a Custom WAIRE Plan (further details are provided in the Custom WAIRE Plan section). WAIRE Points may be earned for the acquisition[164] as well as the use of the ZE yard truck within

[162] As a point of reference, for a typical 250,000 sf warehouse that has about 42 Class 8 truck visits per day, only about 5 NZE Class 8 truck visits would be required per day on average (at a stringency of 0.0025) if this method was used to earn WAIRE Points.
[163] The license plate number of the truck/tractor, not the trailer.
[164] Similar to the discussion on truck acquisitions above, existing incentive programs cannot be used to acquire ZE yard trucks, due to limitations within the incentive funding programs.

the same compliance period. Proof of the acquisition of the ZE yard truck in the form of receipt, invoices, contract or similar documents must be kept by the warehouse operator.

Warehouse operators must keep records of the number of hours of ZE yard truck use during every compliance period for which it earns WAIRE Points. In most cases the operating hours for a yard truck can be obtained from an hour meter on the yard truck. If the yard truck does not have an hour meter installed, a warehouse operator could have one installed as a way to document the hours of operation needed to earn WAIRE Points, or the hours could be recorded through other means (like a time sheet). The hours of operation should be logged regularly either weekly or monthly to keep the records accurate and prevent errors in reporting the annual metric.

ZE Charging or Fueling Infrastructure

ZE charging or fueling infrastructure for on-road vehicles and yard trucks[165] can earn WAIRE Points when installed[166] and when used.[167] NZE fueling infrastructure installation or use is not included as an option in the WAIRE Menu and is prohibited from earning WAIRE Points in a Custom WAIRE Plan. Warehouse operators will need to consult with warehouse owners, local utilities, and local building departments prior to installing ZE infrastructure. Warehouse facility or land owners may also voluntarily install the ZE infrastructure and earn WAIRE Points, and subsequently transfer those WAIRE Points to the warehouse operator(s) at that site. Offsite installations can earn WAIRE Points, but only through a Custom WAIRE Plan.

Electric Charging Infrastructure Installation

A long lead time may be needed to install electric charging infrastructure at some sites, and WAIRE Points may be earned for several milestones that are achieved during project completion. The table below describes the milestones and examples of the documentation needed to verify that the milestone was achieved.

Electric Charger Installation Milestone	Examples of Documentation
Acquisition of the charger(s) (also called EVSE's)	Invoices and photo/video documentation that the chargers have been delivered to the site. Records of any incentives or rebates received for the chargers or charger installation.
Initiating onsite construction	Copies of permits and photo/video documentation showing that construction was initiated.

[165] ZE charging/fueling infrastructure installations or usage for industrial trucks used indoors (e.g., pallet jacks or forklifts) cannot earn WAIRE Points.

[166] In order to avoid potential problems of low quality workmanship and subsequent safety concerns, warehouse operators and owners earning WAIRE Points from installing ZE infrastructure are encouraged - though not required - to use a skilled and trained workforce as defined in Public Contract Code section 2601 for all construction work, and follow the Public Utilities Code section 740.20, subdivision (2) requirement that at least 25 percent of the total electricians working on an electric vehicle infrastructure project, at any given time, hold Electric Vehicle Infrastructure Training Program certification.

[167] Similar to truck acquisitions, most incentive funding programs from CARB, South Coast AQMD, and the Energy Commission cannot be used to install charging infrastructure used to earn WAIRE Points. However, utility programs like Southern California Edison's Charge Ready Transport program have different requirements and do not have the same restrictions.

The latter of final energization or permit sign-off for the system	Permit records and/or photo/video documentation of the system in use.

The WAIRE Menu only includes ZE charging infrastructure up to 350 kW. Chargers with higher ratings are not yet commercialized but are expected in the near future. Warehouse operators can earn WAIRE Points for these larger systems through a Custom WAIRE Plan. WAIRE Points can also be earned for installing chargers for Transportation Refrigeration Units (TRUs). As of February 2021, CARB is currently developing a new regulation that could mandate the installation and use of TRU chargers at cold storage warehouses covered by PR 2305. In order to earn WAIRE Points for TRU charger installations, if CARB's proposed rule is adopted and goes into effect, warehouse operators would be required to either install more chargers than required by CARB's rule in any given year, or install chargers before CARB's rule requires them.

Electric Charging Infrastructure Usage
Warehouse operators earning WAIRE Points from charger usage[168] for on-road vehicles and/or yard trucks are required to report total kWh dispensed from charging stations at that site. Charger usage earns WAIRE Points equally for trucks owned by a warehouse operator and for third party fleets. Individual charger kWh are not required to be recorded or reported if a single master electrical meter is dedicated to all chargers and does not serve any other electrical loads (this is a common setup in charger installations). Records documenting this electrical usage would typically include electric utility bills, but could also include photo documentation of meter readouts, or charging software system reports.

Similar to the discussion above for TRU charger installation, if CARB's proposed rule on TRU's is approved and goes into effect, WAIRE Points may only be earned for TRU charging if it exceeds requirements in CARB's rule. Records must be kept documenting how the usage goes beyond CARB requirements for any WAIRE Points earned in this situation.

Hydrogen Station Installation and Use
Hydrogen station installations are expected to occur on a faster timeline than electric charging infrastructure, and specific milestones are not included in the WAIRE Menu. WAIRE Points may be earned upon final station installation and availability for fueling. Records documenting the station installation can include permit records, invoices, and photo/video documentation of the station. The WAIRE Menu assigns 1,680 WAIRE Points for the installation of a hydrogen station capable of dispensing 700 kg/day for on-road vehicles and/or yard trucks. Similar to the ratio method described in the truck visit section, stations with higher or lower throughput capacities would receive proportionally more or less WAIRE Points than listed in the WAIRE Menu.

Hydrogen station use must be reported in total kilogram dispensed during the compliance period. The station can be used for the warehouse operator's own fleet or for third party trucks. Records

[168] Warehouse operators may obtain Low Carbon Fuel Standard (LCFS) credits and/or revenue from those credits and still earn WAIRE Points for that dispensed electricity.

documenting this use should include a meter read-out and can also include invoices for delivered hydrogen, or other similar records.

Solar Panel System Installation and Use

Solar panel system installations can be installed either on the roof of the warehouse or as a carport configuration. Warehouse operators will need to consult with warehouse owners, local utilities, and local building departments prior to installing solar panel systems. Additionally, the warehouse facility or land owner may voluntarily install the solar panels and earn WAIRE Points that they can subsequently transfer to their warehouse operator(s). Proof of the installation of the solar panel system and its kilowatt (kW) rating in the form of receipt, invoices, contract, photos/videos, or similar documents should be maintained for future audits and inspections. WAIRE Points will be awarded upon the latter date of system energization or final permit sign-off.

The total energy produced by the solar system is typically recorded through software systems and may differ from reports provided by utilities. The total system energy production (measured in kilowatt-hours or kWh) is available to earn WAIRE Points, not just the net energy reported by the utility. Both the installation size and the system usage can be scaled using the ratio method described in the truck visits section.

Air Filtration Systems

Air filtration systems can be installed or air filters replaced at residences, schools, daycares, hospitals, or community centers within three miles of the warehouse in order to reduce exposure to particulate matter.[169] The minimum type of filters that can be installed or replaced are minimum efficiency reporting value (MERV) 16 or greater efficiency. Records documenting the number of systems installed or filters replaced could include invoices, contracts, photos/videos of installed systems, or similar documents. The documentation must include proof that the systems were actually installed, and not just purchased. Earning WAIRE Points with this approach will therefore require coordination with, and voluntary cooperation from other entities. Air filtration system installations and filter replacements can be scaled using the ratio method described in the truck visits section.

[169] Example systems are described here: http://www.aqmd.gov/docs/default-source/ceqa/handbook/aqmdpilotstudyfinalreport.pdf

CUSTOM WAIRE PLANS

PR 2305 provides the option of proposing a Custom WAIRE Plan for actions that are not on the WAIRE Menu. WAIRE Points can only be earned upon approval of the Custom WAIRE Plan, any action or investments made prior to the approval of the Custom WAIRE Plan will not be considered for WAIRE Points. The process for applying for a Custom WAIRE Plan is shown in Figure 3 below. Custom WAIRE Plan Applications must be submitted through the WAIRE POP system, or as otherwise directed by South Coast AQMD, along with the applicable fee in PR 316.

Some examples of potential Custom WAIRE Plan proposals include jointly owned off-site ZE charging or fueling infrastructure, the use of battery storage systems or energy management that reduces emissions from local natural gas fired powerplants, and the acquisition and/or usage of NZE yard trucks. NZE yard trucks may be submitted as a Custom WAIRE Plan for consideration but only if they only utilize renewable fuels such as renewable natural gas (RNG), renewable propane, or other equivalents.[170] The section below provides an example of a Custom WAIRE Plan calculation methodology to earn WAIRE Points for NZE yard trucks.

NZE Yard Truck WAIRE Points Calculation Example

The acquisition and/or use of NZE yard trucks may be proposed as a Custom WAIRE Plan if the NZE yard truck's engine meets CARB's lowest Optional Low NOx standard (currently 0.02 g/hp-hr) applicable at the time of engine manufacture and is fueled with renewable fuels. The expected WAIRE Points for NZE yard trucks in a Custom WAIRE Plan are shown below, following the same methods as is described for ZE yard truck acquisition and usage in Appendix B – WAIRE Menu Technical Report.[171]

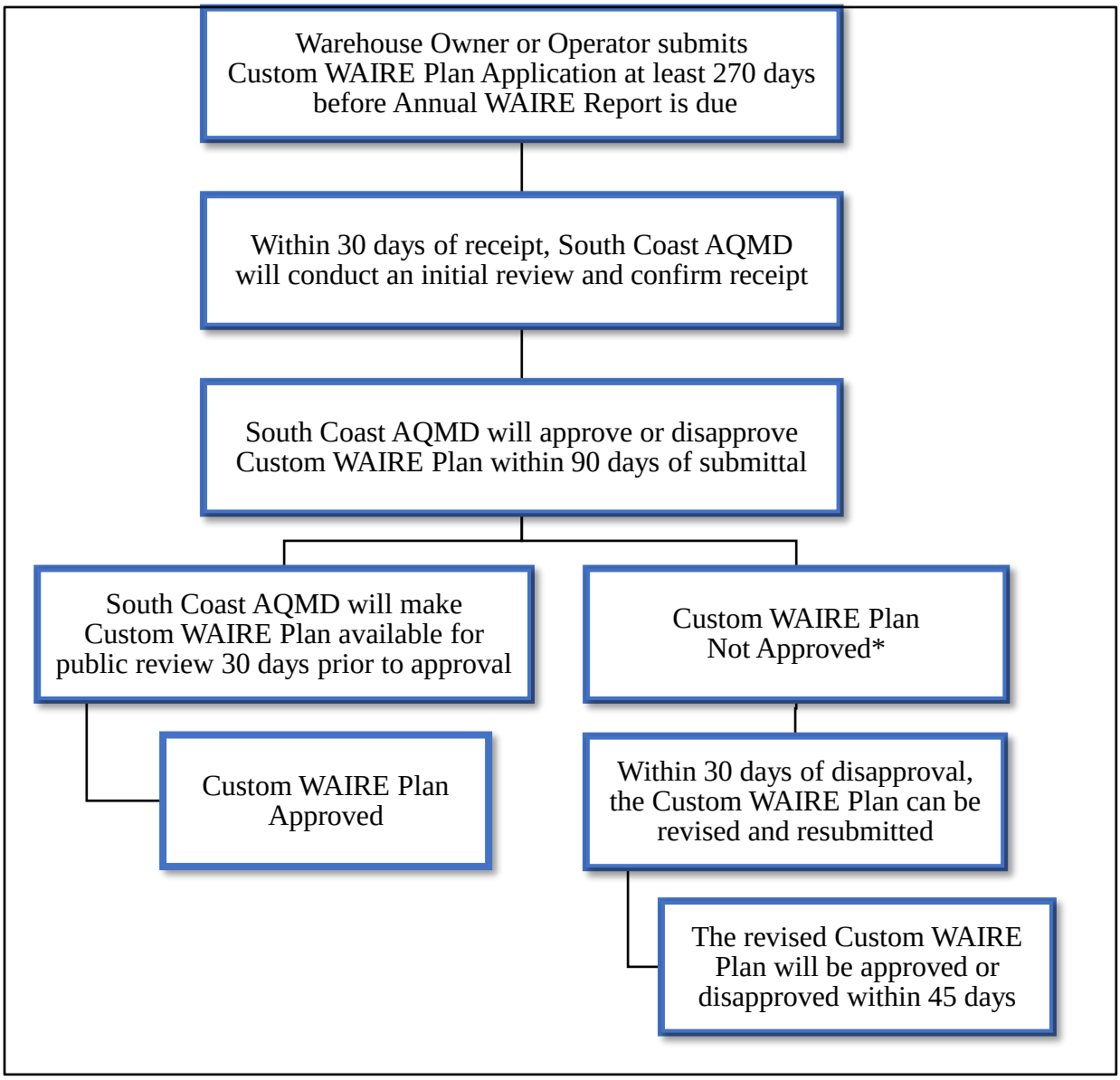
Acquire One NZE Yard Truck = 42 WAIRE Points

Use One NZE Yard Truck for 1,000 hrs in a year = 288 WAIRE Points

[170] Renewable fuels include any non-fossil fuel who carbon intensity is lower than the applicable standard for that year as determined through CARB's Low Carbon Fuel Standards program.

[171] The following key assumptions are used here: $50,000 incremental acquisition cost relative to diesel counterpart, $2,250 incremental annual usage cost relative to diesel (https://cleanairactionplan.org/documents/final-cargo-handling-equipment-che-feasibility-assessment.pdf/), 90% of the NOx emissions benefit as a ZE yard truck, and 100% of the Diesel PM benefit of a ZE yard truck.

Figure 3 – Custom WAIRE Plan Application Process



** A disapproval will identify the deficiencies in the application that must be revised before approval can be considered. Applications that have not been explicitly approved within the review period are presumed to be disapproved.*

Custom WAIRE Plan actions must meet similar criteria to the analysis conducted for the actions and investments included in the WAIRE Menu. Custom WAIRE Plan Applications must include the following elements:

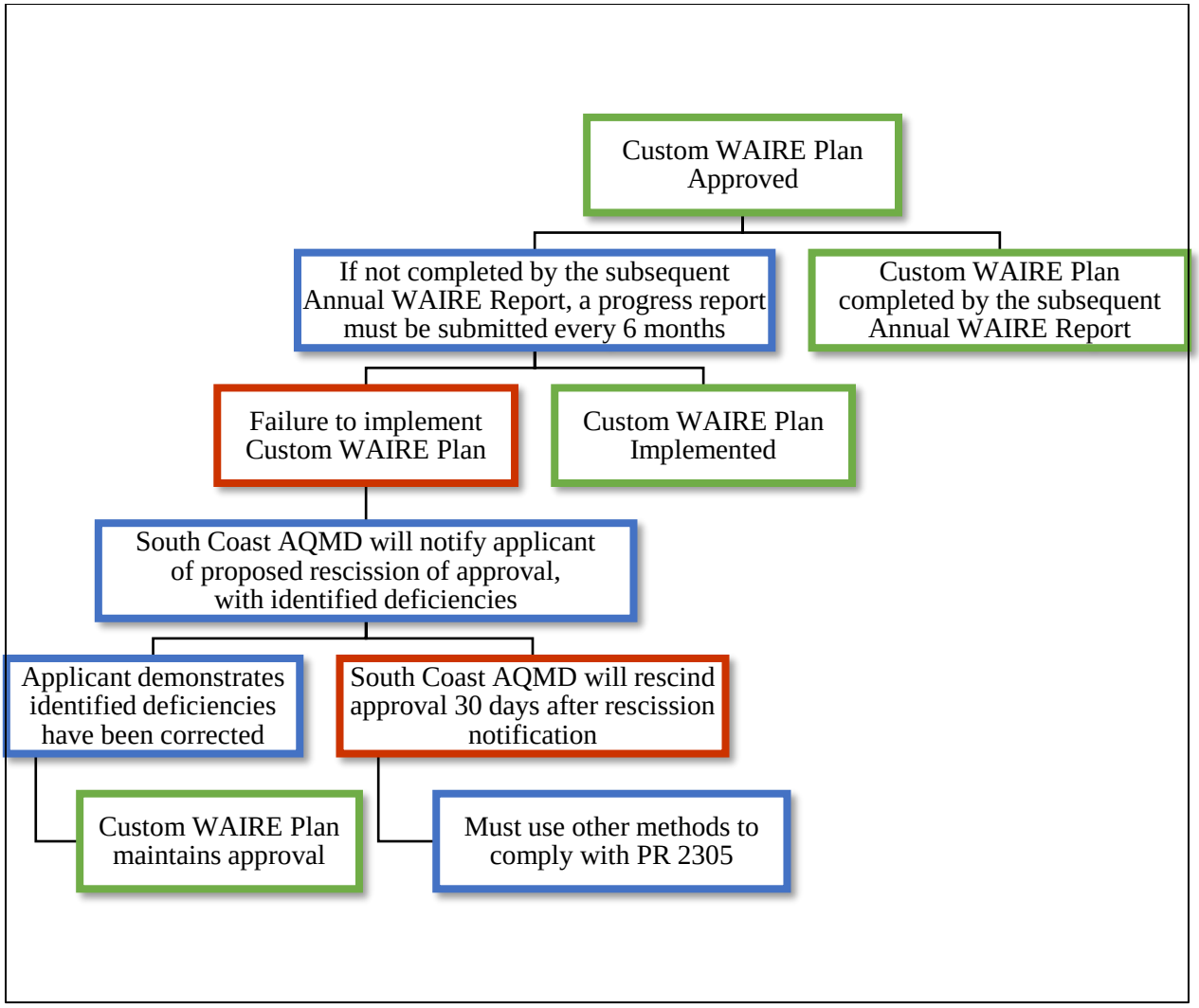
- A demonstration how the proposed action will earn WAIRE Points based on the incremental cost of the action, the NOx emission reductions from the action, and the DPM emission reductions from the action, relative to baseline conditions if the warehouse operator had not completed the action in that compliance period,
    - Baseline conditions should be calculated using the latest emissions estimation methodologies, such as those used in the most recently approved Air Quality Management Plan. The calculation of WAIRE Points from actions in a Custom WAIRE Plan should be consistent with the calculation methodologies included in the WAIRE Menu Technical Report included as Appendix B to the PR 2305 Staff Report. Emission reductions that go beyond baseline conditions must consider the effect of existing regulations that phase in through time, if applicable.
- A demonstration how WAIRE Points earned from the Custom WAIRE Plan for emission reductions are quantifiable, verifiable, and real,
- A description of how the proposed actions will achieve quantifiable, verifiable, and real NOx and DPM emission reductions as quickly as feasible, but no later than three years after plan approval,
    - All Custom WAIRE Plans must result in emission reductions, or directly facilitate emission reductions. Examples of facilitating projects could include installation of ZE charging infrastructure at an offsite location or acquisition of ZE TRUs that go beyond CARB requirements.
- A quantification of expected NOx and/or DPM emission reductions from the proposed actions within the South Coast AQMD and within three miles of the warehouse,
    - All Custom WAIRE Plan projects, including facilitating projects, must result in verifiable NOx and/or DPM emission reductions within three miles of the warehouse.
- A description of the method to be used to verify that the proposed actions will achieve NOx and/or DPM emission reductions,
    - Example methods documenting how the effectiveness of an action can be verified are included in these Guidelines for WAIRE Menu items.
- A schedule of key milestones showing the increments of progress to complete the proposed actions,
- A description of the location and a map of where the proposed actions will occur,
- Any expected permits or approvals required by other private parties, or South Coast AQMD, or other federal, state, or local government agencies to implement the Custom WAIRE Plan

Custom WAIRE Plan Milestones

The timetable of an approved Custom WAIRE Plan application allows for at least six months to implement the custom WAIRE Plan project (or three and a half months if the application was disapproved, resubmitted, and then approved). Some projects may take longer to implement and could extend beyond the compliance period when the Custom WAIRE Plan application was submitted. In these cases, a progress report must be submitted every six months after the Custom

WAIRE Plan was approved. In the event milestones are not reached, the progress report must explain the conditions that resulted in the milestone not being reached and propose a new milestone date. If in reviewing the progress report, South Coast AQMD staff determines that progress on the approved Custom WAIRE Plan is not adequate, a notice may be sent to the Custom WAIRE Plan applicant advising of the inadequate progress. The Custom WAIRE Plan approval may be rescinded 30 days after the notice if the applicant does not demonstrate how the identified deficiencies have been corrected. Figure 4 shows the Custom WAIRE Plan implementation process.

Figure 4 – Custom WAIRE Plan Implementation



WAIRE MITIGATION FEE

Warehouse operators may earn WAIRE Points by paying a mitigation fee at $1,000 per WAIRE Point, but any of the other methods that can earn WAIRE Points (i.e., the WAIRE Menu, Custom Plans, transferring) can be used to fully satisfy a warehouse operator's WPCO so that no mitigation fees are paid. There is also an additional 6.25% administration fee charged on top of any mitigation fees paid to cover South Coast AQMD's costs of administering the WAIRE Mitigation Program. Mitigation fees and accompanying administrative fees must be submitted through the WAIRE POP system with the AWR. Payments less than $300,000 can be made by e-check or credit card. Payments larger than this must be mailed to South Coast AQMD or submitted in person.

The WAIRE Mitigation Fee Program is expected to provide incentives toward the purchase of NZE and ZE trucks and ZE charging and fueling infrastructure. Warehouse operators may apply for the WAIRE Mitigation Fee Program funds. However, similar to other funding programs, the incentivized vehicle or equipment may not earn WAIRE Points for its acquisition, only for its subsequent use. Further, any ZE charging or fueling infrastructure funded by the WAIRE Mitigation Program must be publicly accessible and cannot solely be for the use of the operator's private fleet.

Projects funded by the WAIRE Mitigation Program will be approved annually or more often by the South Coast AQMD Governing Board and will follow the policies described in the Board Resolution that accompanies PR 2305 as well as subsequent requirements set out by the Board (e.g., in future solicitations).[172]

WAIRE POINTS TRANSFERS

WAIRE Points can only be transferred under limited situations, and only WAIRE Points in excess of the warehouse operator's WPCO may be transferred. The following are the three sole instances when WAIRE Points may be transferred or banked:

1. Excess WAIRE Points transferred to a warehouse operator's other warehouses:
   If a warehouse operator conducts warehousing activities at more than one warehouse during any single compliance period, then WAIRE Points earned for one warehouse may be used at the other warehouse(s) under the operational control of that same warehouse operator. Only those points earned in excess of a warehouse operator's WPCO at that site may be transferred, and only for the current compliance period. Any WAIRE Points transferred to a different warehouse shall be discounted as shown in the rightmost column in the WAIRE Menu in Table 3 of PR 2305.

2. WAIRE Points transferred between a warehouse owner and operator:
   A warehouse facility or land owner may voluntarily earn WAIRE Points during a compliance Period using the WAIRE Menu, a Custom WAIRE Plan, by paying a mitigation fee, or may have WAIRE Points transferred to them from the warehouse operator at that site. The warehouse facility or land owner may then transfer these WAIRE Points to any warehouse operator at the site where the WAIRE Points were earned within a three-year period after the points were originally earned. Any warehouse operator using these transferred WAIRE Points to satisfy a WPCO during this three-year period must demonstrate that any onsite improvements or

[172] A link to the resolution will be added here if the rule is approved.

equipment installations that were used to earn the WAIRE Points being transferred are still operational at that warehouse facility in the year that WAIRE Points are used.

a. Warehouse operators that vacate a warehouse before the end of a compliance period may transfer any excess WAIRE Points to the warehouse owner. These Points may then be transferred to the next warehouse operator.

3. Excess WAIRE Points banked for future use at that site:
WAIRE Points in excess of the warehouse operator's WPCO in one compliance period may be banked for use in any of the next three compliance periods. After this time, any remaining banked WAIRE Points will expire and can no longer be used. WAIRE Points banked for future use in this way cannot be transferred to another warehouse. WAIRE Points may not be transferred to a subsequent compliance period if the WAIRE Menu items used to earn WAIRE Points are required by U.S. EPA, CARB, or South Coast AQMD rules and regulations in that subsequent year. An example could include CARB's anticipated TRU rule that could require charging infrastructure at a future date. Installations earlier than CARB requirements could earn Points and be banked for future years. However, the banked Points can no longer be used in any year in which CARB requires those chargers to be installed. Further, if any onsite improvements or equipment installations that were used to originally earn the WAIRE Points are no longer functional, the banked WAIRE Points may not be used to satisfy a WPCO. Finally, if WAIRE Points are earned prior to a warehouse operator's first compliance period, the three-year clock on banked WAIRE Points does not begin until after their first compliance period.
In order to use banked WAIRE Points, the WAIRE Menu item that generated the WAIRE Points must still be onsite and was used for the compliance period that the WAIRE Points are to be used to comply with the WPCO. (Incomplete sentence) For Phase 2 and 3, there is an early action provision that allows for earning WAIRE Points ahead of their initial compliance period, and include a provision for the clock on three year life of the WAIRE Points for those early action WAIRE Points to not begin until after the initial compliance period.

It is the responsibility of the warehouse operator who uses transferred or banked WAIRE Points to keep records documenting how and when the WAIRE Points were originally earned. If WAIRE Points are transferred between the warehouse owner and operator, both entities must keep records documenting the agreement to transfer the WAIRE Points. To avoid any potential disputes, the agreement should be signed by authorized officials for both entities.

EXEMPTIONS

Warehouse operators may be exempt from parts of PR 2305 in ~~two~~three limited instances. First, warehouse operators who can only use less than 50,000 sq. ft. of a warehouse for warehousing activities are not required to earn any WAIRE Points. However, if the warehouse operator has the same parent company as another warehouse operator in the same building, and collectively they may use more than 50,000 sq. ft., then the exemption does not apply.

Second, warehouse operators with a calculated WPCO <10 are not required to earn any WAIRE Points but will still need to submit required reporting. This exemption is in place to reduce the burden on small warehouse operations with only a small volume of truck trips to their warehouse.

Third, there may be rare instances when a warehouse operator invests in new technology to comply with PR 2305. If that equipment malfunctions through no fault of the operator, then they may apply for an exemption from the portion of their WPCO for which that action applies. An example could include a warehouse operator who purchases a ZE or NZE truck that experiences a significant manufacturer's defect that renders the truck inoperable for an extended period of time. Applications for this exemption should be submitted to waire-program@aqmd.gov. Applications should include a description of the investment that has the defect, relevant details about the defect, and the number of WAIRE Points anticipated during the current compliance period from that investment for which the operator is seeking an exemption. The warehouse operator's WPCO should not be assumed to be reduced unless South Coast AQMD staff submits an approval of the exemption in writing or email. The application will be reviewed based on evidence provided by the applicant that the vehicle or equipment had defects caused by the manufacturer of the vehicle or equipment, or a defect in the installation of equipment following manufacturer-approved methods. Further, the applicant must demonstrate that they made a good faith effort to have the equipment or vehicle repaired but was unable to do so or do so in a timely manner.

COMPLIANCE PROGRAM

South Coast AQMD will periodically conduct both desktop and field audits for compliance with the WAIRE Program. The South Coast AQMD staff may contact warehouse owners and operators to request further documentation or clarification on submitted WAIRE Program reports. Additionally, South Coast AQMD inspectors may conduct field visits of the warehouse facilities. South Coast AQMD inspections are generally unannounced, and a South Coast AQMD inspector may visit a warehouse facility any time during regular business hours to verify a facility is following recordkeeping requirements and other applicable requirements. Upon arrival, the South Coast AQMD inspector will present proper South Coast AQMD identification and inform a facility representative of the purpose and scope of the inspection. Most inspections are conducted to verify the information submitted on the required WAIRE Program reports. An inspector may also request a tour of the facility to verify the onsite presence of any equipment related to WAIRE Program compliance. It is helpful if a facility representative familiar with the WAIRE Program assist with the inspection, and that an organized collection of the WAIRE Program related documents be readily available either as a hardcopy or digitally.

Some of the records that a South Coast AQMD inspector could inquire about include:

- Current contact information of warehouse operator
- Truck trip count records
- WPCO calculation and plans to earn WAIRE Points
- Copy of Initial Site Information Report
- Copies Annual WAIRE Report(s)
- Copy of any approved Custom WAIRE Plan(s)
- Fleet data (invoices, vehicle registration, model year, fuel type, license plate numbers)
- Information about any onsite energy generation equipment
- Information about any onsite alternative fueling station(s)
- Information about any onsite yard truck(s)
- Information on any air filter systems or filters installed or replaced for the surrounding community

- Copies of exemption documentation
- Copies of lease agreement

If South Coast AQMD staff identify a discrepancy in the warehouse operator's WAIRE Program reporting such as a an issue with the truck trip counts, the reporting metrics submitted, or similar differences, the South Coast AQMD inspector will discuss the issue(s) with the warehouse operator to determine the cause of the issue(s) or require further documentation and enforcement action may be taken. For example, if the warehouse operator submits in the Annual WAIRE Report that there were 100 ZE tractor visits for the compliance period, and if after verifying the 100 tractor VINs the South Coast AQMD staff determines that only 50 of the truck visits were actually ZE tractors, more detail on the truck visits may be required or a further review of the method for accounting for ZE trucks would be needed. If sufficient proof cannot be provided to support the 100 ZE tractor visits reported, then the warehouse operator may need to obtain more WAIRE Points to satisfy their WPCO. Frequently updating and tabulating reporting metrics would limit discrepancies and provide more documentation to support submitted WAIRE Program reports.

Appendix B: WAIRE MENU TECHNICAL REPORT

DRAFT WAIRE Menu Technical Report

OVERVIEW

This technical report describes the methodology used to determine how WAIRE Points are attributed to each of the actions on the WAIRE Menu provided in PR 2305. Section 1 of this report presents an overview of how the Points are determined within the Menu, while all subsequent sections presents detailed methodologies for each Menu item.

***SECTION 1)* WAIRE Points Calculation Methodology**

This section describes the general methodology used to determine how WAIRE Points are attributed to each of the actions on the WAIRE Menu. While this methodology is used to determine the value of each WAIRE Menu action during the rulemaking process, warehouse operators and/or owners will not need to use this calculation methodology document to determine how to comply with the rule. For compliance, warehouse operators (and in some cases owners if they choose to comply on behalf of their operator) will only need to consult the WAIRE Menu itself to determine how many actions, or how much of each action to complete for compliance.

WAIRE Points may be earned in two ways, through the purchase of near-zero (NZE) and zero emission (ZE) equipment or equipment that facilitates its use, and through the usage of NZE and ZE equipment. WAIRE Points are assigned based on three key parameters, cost, regional emissions reductions, and local emissions reduction. The cost parameter is based on the incrementally higher cost a warehouse operator faces when choosing to purchase NZE/ZE equipment (compared to conventional diesel technology). The regional emissions reduction parameter is based on the reduction in nitrogen oxides (NOx) emissions from using ZE/NZE equipment. The local emissions reduction parameter is based on the reduction in Diesel Particulate Matter (DPM)[1] from using ZE/NZE equipment.

In practice, the actual costs and emission reductions of each implemented action will likely vary for each warehouse operator. Calculating these unique values on a case-by-case basis would impose a considerable administrative burden to both the regulated community and to South Coast AQMD. In order to simplify compliance and administration of PR 2305, WAIRE Points for each Menu action are determined using representative default values described in the calculation methodology summaries that follow.

Section 1a) WAIRE MENU ANNUALIZED UNITARY METRICS AND BINS

WAIRE Points values in the WAIRE Menu are determined for each action based on a single Annualized Unitary Metric (AUM). The AUM is the default level of implementation used for

[1] DPM is both a component of the criteria pollutants PM10 and PM2.5, and a toxic air contaminant. Emissions of DPM from warehouse indirect sources can contribute to high-level, localized pollutant concentrations that can significantly affect air quality and public health for populations near warehouses.

calculating each WAIRE Menu action's Points. For example, the AUM for the truck acquisition WAIRE Menu action is one truck acquired during the compliance year. The cost and regional and local emissions reductions are calculated for acquiring one truck and used to determine the default WAIRE Point value for that Menu action. Warehouse operators use these default Point values in the WAIRE Menu to determine how many Points they earned in total depending on their level of implementation. For example, the default Point value in the Menu for acquiring one ZE class 8 truck is 126 Points. If a warehouse operator acquired five ZE trucks, they would earn a total of 630 Points (126 Points for each truck acquisition). Similarly, for ZE class 8 truck visits, the AUM of 365 visits per year (one per day on average) yields 27 Points in the WAIRE Menu. If a warehouse operator only has 100 ZE class 8 truck visits during a compliance year, they would earn a total of 7.4 Points[2] [(100 ÷ 365) × 27 = 7.4]. The AUM's for each WAIRE Menu action are described in the individual calculation methodology summaries that follow.

WAIRE Points are also calculated using a point binning system to simplify the merging of the cost, regional emission reduction, and local emissions reduction parameters. For the AUM, Points are earned for each $25,000 incremental cost, 25-pound NOx regional emission reduction, and 0.25-pound DPM local emission reduction. Once these three parameters are calculated, their binned points are summed to yield the total default WAIRE Points earned for that action.

Section 1b) COSTS:

The costs for each WAIRE Menu action are based on the annualized incremental costs difference between the new ZE/NZE technology and the costs of the conventional diesel equivalent. Due to existing statutory or regulatory prohibitions, most state incentive funding programs used to offset the higher purchase price of ZE/NZE vehicles and equipment cannot be used to aid in complying with state or federal law or South Coast AQMD rules or regulations[3], and incentive funds are not considered in these costs. However, WAIRE Points may be earned from the <u>usage</u> of incentivized vehicles/equipment. For example, if a warehouse operator owns a fleet of trucks, and they want to purchase a ZE or NZE truck, they will need to decide among two options. First, they could purchase the truck at full price and receive WAIRE Points for that action. Second, they could instead choose to receive incentive funding for that purchase but not earn any WAIRE Points for the truck purchase. In both instances, they would be allowed to receive WAIRE Points for the visits that this truck makes to their warehouse.

[2] WAIRE Points are calculated to no more than one decimal place.

[3] California Health and Safety Codes 44281(b), 44391.4(a), 44271(c), CCR Title 13, Ch. 8.2 Sec. 2353 (c)(4), Moyer Guidelines Ch. 2, CA Beneficiary Mitigation Plan

Section 1c) REGIONAL EMISSION REDUCTIONS:

Regional emission reductions are calculated in two ways. First, NOx reductions are calculated from using ZE/NZE vehicles and equipment for activities associated with the warehouse. Second, regional NOx emission reduction Points are calculated for WAIRE Menu items affiliated with the acquisition of ZE/NZE vehicles/equipment at a rate of $100,000 per ton of NOx. This is the cost effectiveness threshold that South Coast AQMD utilizes in its Carl Moyer incentive funding program. These regional emission reduction Points are assigned to these acquisition Menu items because if a facility chose to pay that level of funding as a mitigation fee, South Coast AQMD would likely spend the funds using the same cost effectiveness threshold.

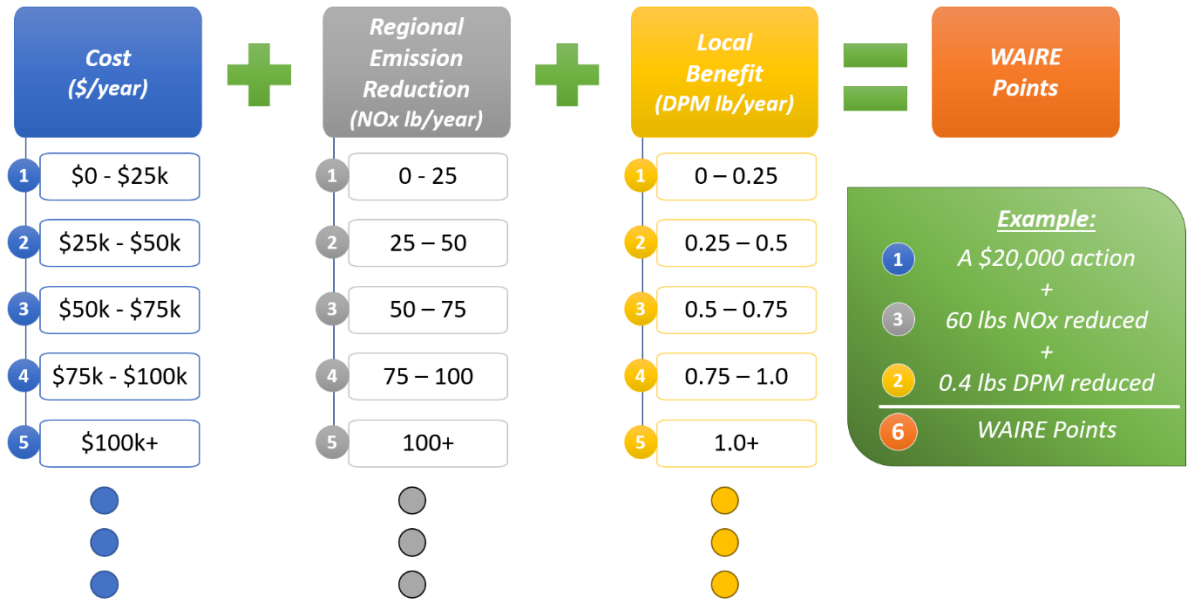
Section 1d) LOCAL EMISSION REDUCTIONS:

Local emission reductions are calculated in a similar manner as regional emission reductions, except that Diesel Particulate Matter (DPM) is used instead of NOx.

Section 1e) EXAMPLE:

Figure 1, below, presents one example of how the calculation methods discussed above would yield the total WAIRE Points earned. In this example, an AUM would cost $20,000 and result in a 60 lbs/year NOx reduction, and a 0.4 lbs/year DPM reduction. Combining the three together would result in a total of 6 WAIRE Points. Specific calculations for each WAIRE Menu action are included in the following sections.

Figure 1: WAIRE Points Calculation



***SECTION 2)* Zero and Near-Zero Emission Truck Visits and Truck Acquisitions**

Description: Two key factors affect the analysis of ZE and NZE trucks – the definitions of ZE and NZE, and the truck class. In the context of PR 2305, the definition of a ZE truck is the same as CARB's Advanced Clean Trucks Regulation definition. At the time of this writing, CARB's draft definition for ZE truck is one *"with a drivetrain that produces zero exhaust emission of any criteria pollutant (or precursor pollutant) or greenhouse gas under any possible operational modes or conditions."* For PR 2305 a NZE truck is one in which the engine meets CARB's lowest Optional Low NOx standard at the time of manufacture, which is currently 0.02 g/hp-hr NOx.

In addition to drivetrain technology, trucks are commonly classified based on their Gross Vehicle Weight Rating (GVWR). Throughout this document Class 2b-7 refers to heavy duty trucks with GVWR of 8,501 – 33,000 lbs and Class 8 trucks with GVWR of greater than 33,000 lbs. Table 1 below presents truck classifications.

Table 1. Truck Classes

Truck Class	GVWR (lbs)
Class 2b	8,501 – 10,000
Class 3	10,001 – 14,000
Class 4	14,001 – 16,000
Class 5	16,001 – 19,500
Class 6	19,501 – 26,000
Class 7	26,001 – 33,000
Class 8	33,001 & over

Commercial Availability: The ZE truck market is beginning to grow rapidly with many models entering the commercial market today and many major manufacturers announcing plans for future commercialization of battery-electric and hydrogen fuel cell electric trucks.[4] Some notable manufacturer announcements include: Daimler Class 8 eCascadia, Navistar battery-electric Class 8, Volvo battery-electric VNR Class 8, Tesla's long range battery-electric tractor, BYD's battery-electric Class 6 and 8, Nikola's and Kenworth (in conjunction with Toyota) hydrogen fuel cell tractors, Sea Electric Class 4-8 battery-electric trucks, Lion Electric's Class 6-8 battery-electric trucks, Amazon's order of 100,000 Rivian's battery electric trucks, etc. NZE engines are currently available in two sizes – 11.9 liter and 8.9 liter. Major truck manufacturers offer these engines in different truck classes, including for class 8 regional haul and/or drayage truck operations.

Operation: Trucks that visit warehouses may be owned by the warehouse operator, or by a motor carrier not affiliated with that warehouse. Arrangements for truck visits to the site to deliver or pick up goods is typically made by the owner of the goods, or someone acting on their behalf. As such, each individual truck visiting a warehouse can have a unique operating profile that may not be shared by any other truck visiting that site. One truck may travel 30 miles on the inbound trip, and only two miles on the outbound trip. Another truck may be loaded with goods from multiple warehouses or stores, and determining what portion of a trip to attribute to each warehouse would be impractical. Finally, trucks may idle their engines for short periods while at the

[4] A useful reference is the online ZETI tool. https://globaldrivetozero.org/tools/zero-emission-technology-inventory/

warehouse before or after the trailer is dropped off/picked up. For the emissions and cost analyses presented below, input parameters are meant to be broadly applicable and may not reflect any one individual truck trip or truck acquisition.

SECTION 2a) ZE/NZE Truck Acquisitions[5]

ZE/NZE Truck Purchase Prices: Several key references were consulted to estimate incremental purchase prices for NZE and ZE trucks relative to conventional diesel trucks including: CARB's Advanced Clean Truck Regulation (ACT), Standardized Regulatory Impact Assessment (SRIA)[6] and Total Cost of Ownership Discussion Documents[7], California Energy Commission's Revised Transportation Demand Forecast[8], the Ports' Feasibility Study[9], ICF's Intensive Literature Review for Medium and Heavy-Duty Electrification in California[10], NACFE's TCO Calculator[11], as well as data from South Coast AQMD's Carl Moyer Grant Program and CARB's HVIP program. While cost estimates vary somewhat among these references, the single point estimates shown in Table 2 below are consistent with these previous analyses.

Table 2. Incremental Costs for NZE and ZE Truck Purchases

WAIRE Menu Item		Annualized Unitary Metric	Incremental Cost ($/metric)
Class 8 Truck	NZE	1 truck purchased	$65,000
Class 4-7 Truck			$30,000
Class 8 Truck	ZE		$150,000
Class 4-7 Truck			$80,000
Class 2b-3 Truck			$16,000

WAIRE Points for ZE/NZE Truck Acquisitions: Acquisition of NZE Class 8 and Class 4-7 trucks earns 3 and 2 WAIRE Points, respectively. Similarly, the acquisition of ZE Class 8, Class 4-7, and Class 2b-3 trucks earns 6, 4, and 1 WAIRE Points, respectively. In addition, using a cost-effectiveness of $100,000 per ton of NOx, WAIRE Points for regional emission reductions for Class 8 and 4-7 NZE truck acquisitions are 52 and 24 WAIRE Points, respectively. For ZE truck acquisitions, Class 8, 4-7, and 2b-3 earns 120, 64, and 13 WAIRE Points, respectively.

[5] WAIRE Points can be earned from either truck purchases or truck leases. Points are calculated assuming trucks are purchased.
[6] https://ww3.arb.ca.gov/regact/2019/act2019/appc.pdf
[7] https://ww3.arb.ca.gov/regact/2019/act2019/apph.pdf
[8] https://efiling.energy.ca.gov/GetDocument.aspx?tn=230885&DocumentContentId=62525
[9] https://cleanairactionplan.org/documents/final-drayage-truck-feasibility-assessment.pdf/
[10] https://caletc.com/wp-content/uploads/2019/01/Literature-Review_Final_December_2018.pdf
[11] https://nacfe.org/future-technology/medium-duty-electric-trucks-cost-of-ownership/

SECTION 2b) Truck Visits

Regional and Local Emission Reductions from ZE/NZE Truck Visits: Key parameters that can affect the emissions estimate from any one individual trip include: trip length, truck class, vehicle powertrain, and vehicle speed. Collecting all the necessary information to calculate precise emissions estimates for each trip is not feasible as it would require 1) instrumenting all trucks with telematics systems that report uniform data, 2) requiring detailed information reporting about truck loads (e.g., how much of the goods in each truck trailer is being transported to each location), and 3) conducting substantial data analysis to determine the emissions associated with each truck trip. Because of these challenges, various models are used to estimate emissions from trucking activity. In particular, CARB's EMFAC model and SCAG's Heavy-Duty Truck Regional Travel Demand model provide emissions estimates in the South Coast AQMD.

EMFAC2017 provides activity and emission rates for on-road vehicles that operate within California. EMFAC categories[12] and their relationship to truck class are shown in Table 3 below. EMFAC categorizes all truck types that are on the road, however the analysis presented here is limited to those categories that are most likely to deliver goods to and from warehouses.

Table 3. EMFAC Truck Categories

EMFAC Category	Description	Truck Class
LHD1 - DSL	Light-Heavy-Duty Trucks (GVWR 8,501-10,000 lbs)	Class 2b-3
LHD1 - GAS		
LHD2 - DSL	Light-Heavy-Duty Trucks (GVWR 8,501-10,000 lbs)	
LHD2 - GAS		
T6 CAIRP Small	Light-Heavy-Duty Trucks (GVWR 10,001-14,000 lbs)	Class 4-6
T6 Instate Small	Medium-Heavy Duty Diesel Instate Truck with GVWR<=26,000 lbs	
T6 OOS Small	Medium-Heavy Duty Diesel Out-of-State Truck with GVWR<=26,000 lbs	
T6 CAIRP Heavy	Medium-Heavy Duty Diesel CA International Registration Plan Truck with GVWR>26,000 lbs	Class 7
T6 Instate Heavy	Medium-Heavy Duty Diesel Instate Truck with GVWR>26,000 lbs	
T6 OOS Heavy	Medium-Heavy Duty Diesel Out-of-State Truck with GVWR>26,000 lbs	
T7 CAIRP	Heavy-Heavy Duty Diesel CA International Registration Plan Truck with GVWR>33,000 lbs	Class 8
T7 NNOOS	Heavy-Heavy Duty Diesel Non-Neighboring Out-of-State Truck with GVWR>33,000 lbs	
T7 NOOS	Heavy-Heavy Duty Diesel Neighboring Out-of-State Truck with GVWR>33,000 lbs	
T7 POLA	Heavy-Heavy Duty Diesel Drayage Truck in South Coast with GVWR>33,000 lbs	
T7 Tractor	Heavy-Heavy Duty Diesel Tractor Truck with GVWR>33,000 lbs	

[12] https://ww3.arb.ca.gov/msei/downloads/emfac2017-volume-iii-technical-documentation.pdf (Table 6.1-1)

Baseline weighted averages of NOx and PM10 emission rates[13] for calendar year 2023 for running exhaust (RUNEX), exhaust from engine startups (STREX), and idling exhaust (IDLEX) of the above-mentioned truck categories are presented below.

Table 4. Weighted average emission rates (g/mi for RUNEX, g/trip for STREX, g/vehicle/day for IDLEX)

Truck Class	NOx			DPM			Mile/trip[14]	Trip/ day/ truck[15]
	RUNEX	IDLEX	STREX	RUNEX	IDLEX	STREX		
Class 2b-3	0.727	0.888	0.290	0.008	0.013	0	15.3	1.3
Class 4-7	1.079	2.855	2.117	0.007	0.001	0	14.2	5.9
Class 8	2.372	76.203	2.028	0.020	0.027	0	39.9	5.2

The regional and local emission reductions achieved by switching to ZE trucks relative to baseline emissions are calculated using Equation 1 below. While regional emission reductions from switching to NZE trucks is assumed to equal 90% of the reduction compared to ZE trucks, local emission reductions are assumed to be the same between ZE and NZE as NZE trucks are fueled by natural gas and do not emit DPM.

Equation [1]:

$$Emission\ Reduction\ \left(\frac{lb}{trip}\right) = \left[\left(RUNEX\ \left(\frac{g}{mi}\right) \times \frac{mi}{trip}\right) + \left(STREX\ \left(\frac{g}{trip}\right)\right) + \left(\frac{IDLEX\ \left(\frac{g}{day.truck}\right)}{\frac{trip}{day.truck}}\right)\right] \times \frac{1\ lb}{453.592\ g}$$

Results of the calculation for the two truck class categories are presented in Table 5 below.

Table 5. NOx and DPM emission reductions for a single truck trip

Truck Class	ZE Truck		NZE Truck	
	NOx lb/trip	DPM lb/trip	NOx lb/trip	DPM lb/trip
Class 2b-3	0.027	0.0003	N/A	N/A
Class 4-7	0.040	0.0002	0.036	0.0002
Class 8	0.247	0.002	0.222	0.002

[13] VMT-weighted, population-weighted and number of starts-weighted averages were computed to equalize the frequency of the values for RUNEX, IDLEX and STREX emission rates, respectively, in the data set by multiplication of each truck category emission rates to its corresponding VMT, population or number of starts and then dividing by the sum of total VMT, population or number of starts.

[14] SCAG 2016 RTP mileage rates for medium-heavy (Class 4-7) and heavy-heavy trucks (Class 8)

[15] Truck populations from EMFAC and trips/day from SCAG 2016 RTP. A trip is a one-way trip, while a 'visit' to a warehouse includes the incoming trip and the outgoing trip.

Table 6 below illustrates the method used in determining point values based on regional and local emissions reductions using results in Table 5.

Table 6. NOx and DPM emission reductions for the Annualized Unitary Metric

WAIRE Menu Item		Annualized Unitary Metric (AUM)	Annualized Regional Emission Reductions (lb NOx/AUM)	Annualized Local Emission Reductions (lb DPM/AUM)
Class 8 Truck	NZE	365 truck visits	0.9 × 180.3 = 162.3	1.3
Class 4-7 Truck	NZE		0.9 × 29.2 = 26.3	0.1
Class 8 Truck	ZE		0.247 × 2 × 365 = 180.3	0.002 × 2 × 365 = 1.3
Class 4-7 Truck	ZE		0.040 × 2 × 365 = 29.2	0.0002 × 2 × 365 = 0.1
Class 2b-3	ZE		0.027 × 2 × 365 = 19.7	0.0003 × 2 × 365 = 0.2

WAIRE Points from ZE/NZE Truck Visit Emission Reductions: For the annualized regional NOx emission reductions, 365 truck visits from Class 8 ZE and NZE trucks will earn 8 and 7 WAIRE Points. Similarly, Class 4-7 ZE and NZE will earn 2 WAIRE Points, and Class 2b-3 ZE will earn 1 WAIRE Point. The associated local DPM emission reductions will earn 6 WAIRE Points for both ZE and NZE Class 8 truck visits, 1 WAIRE Point for both ZE and NZE Class 4-7 truck visits, and 1 WAIRE Point for ZE Class 2b-3.

Costs from ZE/NZE Truck Visits: The incremental cost of a truck visit used in the WAIRE Menu is based on the total cost of ownership of a ZE or NZE truck compared to an equivalent conventional diesel truck, taking into account the estimated total number of trips that truck will take in its useful life. The total cost of ownership (TCO), assuming a 12-year life, for Class 3, 4, 6 and 8 conventional diesel, battery electric, and hydrogen fuel cell trucks were obtained from CARB's Advanced Clean Truck Total Cost of Ownership Discussion Documents. The key components of the TCO include:

(1) Capital cost: vehicle capital cost, taxes associated with the vehicle purchase, financing costs for the vehicle
(2) Fuel cost[16]: The cost of the fuel
(3) Other cost: maintenance costs, midlife costs[17], vehicle registration, and residual values at the end of the truck's operating life

Tables 7, 8, 9, and 10 below present the base TCO data used in this analysis for Class 3, 4, 6, and 8 diesel, battery-electric, and hydrogen fuel cell trucks. The total cost of ownership for Class 6

[16] Low Carbon Fuel Standard credits were not included in the analysis presented here.
[17] Midlife costs are the cost of rebuilding or replacing major propulsion components due to wear or deterioration. For diesel vehicles, this would be a midlife engine rebuild, for battery-electric vehicles this would be a battery replacement, and for a hydrogen fuel-cell vehicle this would be a fuel cell stack refurbishment.

CNG shown in Table 8 was estimated using a similar approach as Table 9, with modifications made to the incremental purchase cost, fuel cost[18] and fuel economy[19,20]. Maintenance cost of natural gas vehicles were assumed to be about one to two cents per mile greater than for diesel vehicles due to more frequent oil changes and inspections, and higher replacement costs for spark plugs and injectors[21]. A summary of the analyses in Tables 7, 8, 9, and 10 is shown in Table 11.

Table 7. Base TCO data for Class 3 trucks[22]

	Diesel	Battery Electric	Hydrogen Fuel Cell	Natural Gas NZE
Annual Miles	15,000	15,000	15,000	TCO information was not found in the literature (Most NZE trucks in this Class are conversions)
Operating Years	12	12	12	
Energy Storage	-	38 kWh	10 kWh/10 kg	
Total Capital Cost	**$53,110**	**$86,568**	**$306,673**	
Average Fuel Cost	$3.74/gal	$0.18/kWh	$8.00/kg	
Average Fuel Economy	23.2 mpg	1.79 mi/kWh	58 mi/kg	
Total Fuel Cost	**$20,817**	**$13,142**	**$25,986**	
Lifetime Maintenance Cost	$23,731	$17,779	$23,731	
Midlife Cost	$0	$0	$42,982	
Registration Fees	$8,331	$7,509	$13,919	
Residual Values	($8,207)	($4,104)	($2,052)	
Total Other Cost	**$23,855**	**$21,204**	**$78,580**	
Total	***$97,782***	***$113,657***	**$410,258**	

[18] https://nacfe.org/future-technology/medium-duty-electric-trucks-cost-of-ownership/
[19] https://afdc.energy.gov/files/u/publication/ng_regional_transport_trucks.pdf (Figure 5)
[20] https://www.energy.gov/sites/prod/files/2014/03/f8/deer12_kargul.pdf
[21] https://ww3.arb.ca.gov/msprog/tech/techreport/ng_tech_report.pdf
[22] https://nacfe.org/future-technology/medium-duty-electric-trucks-cost-of-ownership/

Table 8. Base TCO data for Class 4 trucks[23]

	Diesel	Battery Electric	Hydrogen Fuel Cell	Natural Gas NZE
Annual Miles	15,000	15,000	Class 4 H2 trucks are not expected in the near future	TCO information was not found in the literature
Operating Years	12	12		
Energy Storage	-	120 kWh		
Total Capital Cost	**50,000**	**100,000**		
Average Fuel Cost	$3.74/gal	$0.17/kWh		
Average Fuel Economy	10 mpg			
Total Fuel Cost				
Lifetime Maintenance Cost				
Midlife Cost				
Registration Fees				
Residual Values	$500	$5,000		
Total Other Cost				
Total	***$124,229***	***$177,345***		

Table 9. Base TCO data for Class 6 trucks[24]

	Diesel	Battery Electric	Hydrogen Fuel Cell	Natural Gas NZE
Annual Miles	24,000	24,000	24,000	24,000
Operating Years	12	12	12	12
Energy Storage	-	104 kWh	50 kWh/20 kg	-
Total Capital Cost	**$88,705**	**$172,225**	**$330,967**	**$118,705**
Interest Rate	5%			
Financed Period	5 years			
Average Fuel Cost	$3.74/gal	$0.17/kWh	$8.00/kg	$2.42/GGE
Average Fuel Economy	7.4 mpg	1.04 mi/kWh	14.1 mi/kg	6.3 mpg
Total Fuel Cost	**$104,349**	**$33,472**	**$171,398**	**$110,629**
Lifetime Maintenance Cost	$49,138	$36,853	$49,138	$54,898
Midlife Cost	$0	$0	$32,237	$0
Registration Fees	$11,592	$10,860	$15,482	$11,000
Residual Values	($10,477)	($5,239)	($2,619)	($10,477)
Total Other Cost	**$50,252**	**$42,474**	**$94,237**	**$55,421**
Total	***$243,306***	***$248,171***	***$596,603***	***$340,176***

[23] https://nacfe.org/future-technology/medium-duty-electric-trucks-cost-of-ownership/
[24] https://nacfe.org/future-technology/medium-duty-electric-trucks-cost-of-ownership/

Table 10. Base TCO data for Class 8 trucks[25]

	Diesel	Battery Electric	Hydrogen Fuel Cell	Natural Gas NZE
Annual Miles	54,000	54,000	54,000	68,383
Operating Years	12	12	12	12
Energy Storage	-	510 kWh	10 kWh/10 kg	-
Total Capital Cost	**$167,500**	**$593,662**	**$786,486**	**$192,710**
Interest Rate	5%			12.5%
Financed Period	5 years			
Average Fuel Cost	$3.74/gal	$0.15/kWh	$8.00/kg	$2.92/DGE
Average Fuel Economy	5.9 mpg	0.48	11.2 mi/kg	5.1 mi/DGE
Total Fuel Cost	**$296.381**	**$152,074**	**$486.820**	**$469,831**
Lifetime Maintenance Cost	$95,484	$71,613	$95,484	
Midlife Cost	$0	$42,949	$94,023	
Registration Fees	$27,545	$21,472	$26,548	
Residual Values	($15,453)	($7,727)	($3,863)	
Total Other Cost	**$107,576**	**$128,308**	**$212,192**	
Total	***$571,456***	***$874,044***	***$1,485,498***	***$624,925***

Table 11. Summary of TCO Analyses from Literature Review

Truck Class	Ownership period	Annual Mileage	Diesel	Low-NOx CNG	Battery-Electric	Hydrogen Fuel Cell
Class 3	12	15,000	$97,782		$113,657	$410,258
Class 4	12	15,000	$124,229[1]		$177,345[1]	
Class 6	12	24,000	$243,306[2]	$340,176	$248,171[2]	$596,603[2]
Class 8 (Ports Study)	12	68,383	$598,122[3]	$624,925[3]	$1,063,000[3]	
Class 8 (CARB TCO)	12	54,000	$571,456[2]		$874,044[2]	$1,485,498[2]

1. https://nacfe.org/future-technology/medium-duty-electric-trucks-cost-of-ownership/
2. https://ww3.arb.ca.gov/regact/2019/act2019/apph.pdf
3. https://cleanairactionplan.org/documents/final-drayage-truck-feasibility-assessment.pdf/

Using the reported annual mileages shown in Table 11, costs were calculated on a dollar per mile basis, as shown in Equation 2.

[25] https://nacfe.org/future-technology/medium-duty-electric-trucks-cost-of-ownership/

Equation [2]:

$$TCO\ \left(\frac{\$}{mi}\right) = \frac{TCO\ (\$)}{12\ (yr) * Anual\ Mileage\ \left(\frac{mi}{yr}\right)}$$

Table 12. Total Cost of Ownership calculated as $/mi

Truck Class	Diesel	Low-NOx CNG	Battery-Electric	Hydrogen Fuel Cell
Class 3	0.54		0.67	2.28
Class 4	0.69		0.99	
Class 6	0.84	1.18	0.86	2.07
Class 8 (Ports Study)	0.73	0.76	1.30	
Class 8 (CARB TCO)	0.88		1.35	2.29

SCAG's Heavy-Duty Truck Regional Travel Demand model provides an estimate of heavy-duty truck activities within South Coast Air Basin. TCO values on a dollar per trip basis are estimated using SCAG's VMT and trip rates in Table 13.

Table 13. Truck activity data from SCAG's Heavy-Duty Truck Regional Travel Demand Model

Truck Class	VMT (mi/day)	Trips (trip/day)	Mile/trip
Class 2b-3	7,456,000	488,000	15.3
Class 4-7	7,744,000	544,000	14.2
Class 8	12,060,000	302,000	39.9

Equation 3 below illustrates the method used to determine TCOs on a dollar per trip basis using the TCOs ($/mi) in Table 12 and SCAG's mileage rates in Table 13, with results shown in Table 13 equation [3]:

$$TCO\ \left(\frac{\$}{trip}\right) = TCO\ \left(\frac{\$}{mi}\right) \times \frac{mi}{trip}$$

Table 14. Total Cost of Ownership ($/trip)

Truck Class	Diesel	Low-NOx CNG	Battery-Electric	Hydrogen Fuel Cell
Class 3	8.31		10.28	34.96
Class 4	9.80		13.99	
Class 6	12.00	16.77	12.24	29.42
Class 8 (Ports Study)	29.08	30.39	51.69	
Class 8 (CARB TCO)	35.19		53.82	91.47

Although the TCO analyses above assume a 12-year useful life for a truck, motor carriers may require shorter periods over which they absorb the incrementally higher costs of ZE or NZE trucks compared to diesel. The analysis here therefore assumes that this incremental cost is absorbed over a 3-year period, instead of the full 12-year useful life. The incremental cost is therefore multiplied by four (12 ÷ 3 = 4) to determine the default cost for truck visits.

Table 15. Annualized Incremental Costs

Truck Class		Annualized Unitary Metric	Annualized Incremental Cost ($/metric)
Class 8	NZE	365 truck visits**	($30.39 - $29.08) × 4 × 2 × 365 = $3,825
Class 4-7*			($16.77 - $12.00) × 4 × 2 × 365 = $13,928
Class 8	ZE		($53.82 - $35.19) × 4 × 2 × 365 = $54,400
Class 4-7*			($12.24 - $12.00) × 4 × 2 × 365 = $701
Class 2b-3			($10.28 - $8.31) × 4 × 2 × 365 = $5,752

*In this analysis, Class 6 TCOs were used for the Class 4-7 category in the WAIRE Menu
** One visit equals two one-way trips

WAIRE Points for ZE/NZE Truck Visit Costs: Based on the costs presented in Table 15, the number of WAIRE Points earned for ZE Class 8, Class 4-7, and Class 2b-3 truck visits are 3, 1, and 1, respectively. One WAIRE Point is earned for both NZE Class 8 and Class 4-7 truck visits.

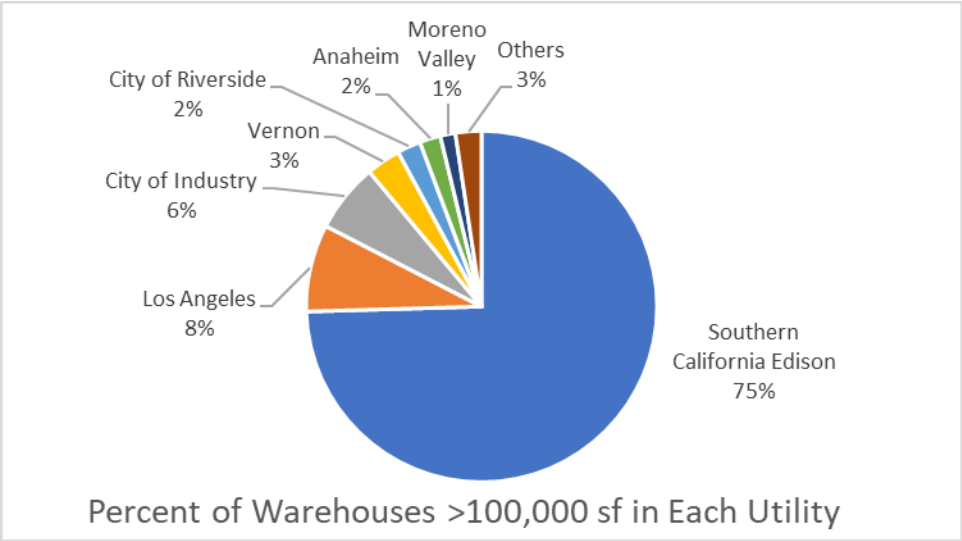
Total WAIRE Points for ZE/NZE Truck Visits: The total WAIRE Points for truck visits includes Points from the cost, regional emission reductions, and local emission reductions. In addition, because most of the emissions associated with warehouses comes from trucks visits, a multiplier of three is applied to the summed Points to encourage operators to choose this option, and to promote a more rapid return on investment for the purchase of ZE/NZE trucks. For example, for 365 class 8 ZE truck visits, a warehouse would earn: 8 Points for regional, 6 Points for Local, and 3 Points for cost, with a sub-total of 17 Points. The final total for this Menu item would by 51 Points (17 × 3).

SECTION 3) **Electric Charger Usage and Installation**

Description: ZE battery electric trucks require specialized charging infrastructure. Installing this infrastructure can require facility electrical upgrades, dedication of space for electrical equipment and vehicle parking, permitting with local authorities, and plans to optimize charger usage. The charging stations themselves range in size and are typically rated based on the amount of kW that can be dispensed. Higher powered charging stations (>=350 kW) are just now entering the market, and may require significant construction. On the usage side, the cost of the electricity can vary depending on the time of day when trucks are charged, the kW charging level, and the level of demand charges. Utilities are introducing new rate structures for the use of these stations to address this new market need. Trucks that would use charging infrastructure at a warehouse are likely to travel to destinations unrelated to the warehouse itself, and providing this infrastructure can facilitate greater usage of ZE trucks.

Commercial Availability: Several different manufacturers sell EVSE at a variety of power levels (e.g., Level 2, higher rate chargers, etc.), including with optional power management software that govern how trucks are charged. At the current early stage of commercialization and demonstration of electric trucks, the higher power chargers used for heavy duty vehicle charging have not yet followed a common standard, and proprietary charging systems are commonly tailored to each vehicle. This is expected to change in the near future with the development of a common High Power Charging for Commercial Vehicles standard by the CharIN[26] organization. In addition, local utilities and land use agencies are developing programs specifically focused on charging infrastructure upgrades. Notable examples include the Charge Ready Transport program from Southern California Edison (SCE)[27], the Commercial EV Charging Station Rebate Program from the Los Angeles Department of Water and Power (LADWP)[28], and permit streamlining efforts from many local permitting agencies[29]. SCE and LADWP collectively provide power to >80% of warehouses that may be included in PR 2305 (see chart).

[26] http://www.charinev.org/hpccv - CharIN members include most major vehicle manufacturers as well as many major energy and charging infrastructure companies.
[27] https://www.sce.com/business/electric-cars/charge-ready-transport
[28] www.ladwp.com/ladwp/faces/ladwp/commercial/c-savemoney/c-sm-rebatesandprograms/c-sm-rp-commevstation
[29] http://www.business.ca.gov/ZEVReadiness



SECTION 3a) Charger Usage

Emissions: While charging infrastructure on its own does not reduce emissions, this equipment does facilitate emissions reductions by providing additional locations for electric vehicles to obtain power and making it possible for their increased use. However, similar to the calculations for truck acquisitions, regional emission WAIRE Points are earned at a $100,000 per ton of NOx cost effectiveness level. Both regional and local emission reductions Points are earned when charging stations are used. The amount of regional NO_x emissions reductions is tied to the total amount of dispensed electricity, using default electric vehicle efficiencies and emission rates. The amount of local DPM emissions reductions is set equal to six miles of travel for every charging event[30]. The Annualized Unitary Metric (AUM) is set at 165,000 kWh, equal to about 450 kWh per day, or enough for five separate two hour-long charging events per day on a 50 kW charger, or to recharge one truck with a 500 kWh battery.
The tables and equations below illustrate the methods used to determine Point values based on regional and local emissions reductions.

Table 16. Electric Vehicle Efficiencies[31], Emission Rates[32], and Emissions Reductions

Truck Category	Efficiency	Emission Rate		Emissions Reductions	
	mile/kWh	NOx g/mile	DPM g/mile	lb NOx/kWh	lb DPM/kWh
Class 4-5	1.26	1.08	0.007	0.003	0.00002
Class 6-7	0.8	1.08	0.007	0.002	0.00001
Class 8	0.62	2.37	0.02	0.003	0.00003

[31] CARB Advanced Clean Truck – Draft Standardized Regulatory Impact Assessment (SRIA), 8/8/2019 https://ww3.arb.ca.gov/regact/2019/act2019/appc.pdf
[32] https://www.arb.ca.gov/emfac/2017/, emission rates are from calendar year 2023

Equation [4]: NOx reductions = (mile/kWh) × (g/mile) × 165,000 kWh/yr ÷ 453.59 (g/lb)

Equation 1 (Class 4-5): 1.26 × 1.08 × 165,000 ÷ 453.59 = 495 lb NOx
Equation 1 (Class 6-7): 0.8 × 1.08 × 165,000 ÷ 453.59 = 314 lb NOx
Equation 1 (Class 8): 0.62 × 2.37 × 165,000 ÷ 453.59 = 535 lb NOx

Equation [5]: DPM reductions = (mile/kWh) × (g/mile) × 165,000 kWh/yr ÷ 453.59 (g/lb)

Equation 2 (Class 4-5): 1.26 × 0.007 × 165,000 ÷ *453.59* = 3.2 lb DPM
Equation 2 (Class 6-7): 0.8 × 0.007 × 165,000 ÷ *453.59* = 2.0 lb DPM
Equation 2 (Class 8): 0.62 × 0.02 × 165,000 ÷ *453.59* = 4.5 lb DPM

WAIRE Points from Charging Station Usage Emission Reductions: Emission reductions vary for each class of truck. For the WAIRE Menu, the regional and local emission reductions from class 8 trucks are used. Regional emission reductions therefore result in 22 WAIRE Points, while local emission reductions result in 18 WAIRE Points.

Costs of Using Charging Stations: Over the past year staff worked closely with multiple utilities to understand their new commercial EV charging rate structures and developed estimates of the average cost of electricity per kWh. As noted above, about three quarters of all warehouses potentially subject to the rule are located within SCE's jurisdiction. For this analysis, multiple scenarios were evaluated for a five concurrent two hour long charging events per day on a 50 kW chargers. Table 17 reflects the expected charging rate and the average electricity rate for two most appropriate SCE rate schedule for heavy-duty EV charging. The average cost assumes an equal amount of charging in each time window.

Table 17. Annual Average Cost of Electricity* – Two Key SCE Rate Schedules for Charging Stations South Coast AQMD Staff Analysis

Charging Window	SCE TOU-EV-9	SCE TOU-8-RTP
	$/kWh *	$/kWh **
On-Peak	**0.34**	**0.28**
Mid-peak	**0.16**	**0.25**
Off-peak	**0.14**	**0.23**

* Demand charges and voltage discount are zero for TOU-EV-9
**Demand charges contributes to 40% of total annual electricity cost – Voltage discount included
***These costs do not account for any LCFS revenue that a facility may receive. The LCFS value may vary depending on market conditions but can be more than $0.10/kWh.[33]

In LADWP jurisdiction the electricity rate can range between $0.11-0.3 $/kWh for charging heavy-duty vehicles depending on load factor, daily charging hours, and charging capacity. The provided range by LADWP staff is consistent with the rates provided in Table 5.
Using the $0.21 $/kWh rate above, and AUM of 165,000 kWh per year for a charging station, the total annual cost of electricity for the warehouse is $34,650, equal to two WAIRE Points.

[33] https://ww3.arb.ca.gov/regact/2019/act2019/appc.pdf

SECTION 3b) Charger Installation

Costs to Install Charging Stations: Charging infrastructure costs can vary greatly from site to site. The analysis presented here was informed by staff discussions with charger providers, utilities, other industry stakeholders, data from current South Coast AQMD funded projects, and multiple studies (referenced below). Table 18 presents a summary of the range of costs for purchasing and installing different EVSEs.

Electrification projects require site-specific planning and sometimes can take more than one year to implement. Because of this potentially extended period, the charging infrastructure installation WAIRE Menu item includes project milestones to allow warehouses to earn Points for partial completion of charger installation during a compliance year. Three milestones that are common to all charging station projects include purchasing the Electric Vehicle Supply Equipment (EVSE), construction mobilization, and final permit sign off & charger energization. In order to account for splitting charger installations into two separate milestones, it is assumed that the construction mobilization milestone will require up to $10,000 of the total installation cost, and the remaining cost is incurred during construction and prior to final permit sign-off.

Table 18. Charging Infrastructure Installation Cost Ranges, and Key Incentives/Rebates Programs

Charging Installation Activity	Charger Ranges	Cost Range [A-D]
		$ per charger
EVSE Purchase	150-350 kW	60,000 – 140,000
	51-149 kW	30,000 – 60,000
	19.2-50 kW	10,000 – 30,000
	Up to 19.2 kW	3,000 – 5,000
Charger Installation[1]	19.2-350 kW	10,000 – 80,000
	Level 2	5,000 – 10,000

Notes:

1. Installation cost for one charger includes electrical service extension, permitting, labor costs, and trenching to lay cables

References:

A. Charging the Future: Challenges and Opportunities for Electric Vehicle Adoption, Henry Lee and Alex Clark, August 2018
B. Estimating Electric Vehicle Charging Infrastructure Costs across Major U.S. Metropolitan Areas. Michael Nicolas, August 2019
C. Rocky Mountain Institute Report, https://www.greenbiz.com/blog/2014/05/07/rmi-whats-true-cost-ev-charging-stations, 2019
D. CARB Advanced Clean Truck - Standardized Regulatory Impact Assessment (SRIA), August 2019

WAIRE Points from Charging Station Installations: Table 19 below summarizes the Points that a warehouse would earn for purchasing an EVSE and installing it. Similar to truck acquisitions, regional emission Points are assigned at a $100,000 per ton of NOx cost effectiveness.

Table 19. Summary of WAIRE Points Earned for Installing Charging Infrastructure

Charger Installation Activity	Cost Points	Regional Emissions Points	Total WAIRE Points
1 EVSE Purchased	6	112	118
	3	48	51
	2	24	26
	1	4	5
1 construction project/ Construction Mobilization	1	8	9
	1	48	5
1 construction project/ Final Permit Sign Off & Charger Energization	3	56	59
	1	48	59

SECTION 4) **Hydrogen Fueling Station Installation and Usage**

Description: Hydrogen refueling stations (HRS) are used to supply fuel to vehicles with hydrogen fuel cell drivetrains. An HRS is composed of storage and dispensing units and can sometimes include a production unit if the hydrogen is produced on site. If the hydrogen is produced on site or delivered to the station at an intermediary pressure or in liquid state, intermediary storage is also needed along with a compression system.

Commercial Availability: While construction of hydrogen fueling stations has been increasing, with 43 now operating in the state[34], they are primarily focused on the light duty vehicle market, or in some cases for transit buses. However, some Class 8 truck manufacturers are actively pursuing the development and commercialization of hydrogen fuel cell trucks over the next few years, including Toyota, Kenworth, Hyundai, and Nikola. Fueling infrastructure will be a critical component to facilitate these new ZE trucks.

Hydrogen Station Installation Costs: Hydrogen prices are influenced by the cost of production, distribution, and sales, among other factors. In addition to AB 8 and CARB's Scoping Plan, the recently-updated Low Carbon Fuel Standard, Executive Orders B-16-2012 and B-48-18 provide strong policy drivers for accelerating commercialization of fuel cell vehicles and their associated hydrogen fuel station network.

Table 20 below presents a summary of costs associated with developing a hydrogen fueling station from literature review and discussion with stakeholders. In this context, total capital cost includes site design and engineering, permitting, equipment, project management, and labor costs.

[34] www.veloz.org

Table 20. Hydrogen Fueling Station Costs

	Capacity (kg/day)	Cost ($)	$/Capacity ($/kg/day)	Source
			5000-10,000	CARB Total Cost of ownership Discussion Documents[35]
Gaseous H2 LDV fueling system at 700 bar	250	1,725,000	6,900	Moyer Granted Project for Sunline Transit- EPC Design
Gaseous H2 Station- 700 bar Cascade dispensing	700	3,065,724	4,380	Argonne National Lab Heavy Duty Refueling Model, (2016 Dollar)[36]
Gaseous H2 Station- 700 bar Booster compressor	700	3,140,211	4,486	
Gaseous H2 Station- 350 bar Cascade dispensing	700	2,029,488	2,899	
Liquid H2 Station- 700 bar via vaporization/compression	700	2,421,134	3,459	Argonne National Lab Heavy Duty Refueling Station Model, (2016 Dollars)[2]
Liquid H2 Station- 350 bar via vaporization/compression	700	1,430,748	2,044	
Liquid H2 Station- 700 bar via LH2 pump/vaporization	700	1,541,243	2,202	
Liquid H2 Station- 350 bar via LH2 pump/vaporization	700	1,145,634	1,637	
Onsite H2 Production	7257.5	16,500,000	2,274	Industry stakeholder input
Onsite H2 Production	600	5,000,000	8,333	Industry stakeholder input

WAIRE Points for Hydrogen Station Installation: For the WAIRE Menu an onsite hydrogen fueling station with a capacity of 700kg/day with delivered hydrogen was assumed to cost $2 million. This would yield 80 WAIRE Points. At a cost effectiveness of $100,000 per ton of NOx, an additional 1600 Points are earned for regional emissions.

Emission Reductions from Hydrogen Usage: Annualized regional NOx emission reductions and local DPM emission reductions were set to be same as the reductions achieved by usage of onsite electric charger stations at 535 lb NOx/yr and 4.5 lb DPM/yr. Details of the calculation can be found in Section 3 of this report.

Hydrogen Fuel Costs: To determine the annualized unitary metric (AUM) for dispensed hydrogen, a back calculation was conducted based on the amount of regional NOx emissions:
Equation [6]:

$$Total\ kg\ of\ Dispensed\ H_2 = 535\ \left(\frac{lb}{yr}\right) \times 453.59\ \left(\frac{gr}{lb}\right) \times \frac{1}{2.372\ \left(\frac{g}{mi}\right) \times 16.63\ \left(\frac{mi}{kg\ H_2}\right)}$$

$$= 6{,}152\,\frac{kg}{yr}$$

Where, 2.372 (g/mi) is the VMT weighted average of NOx running exhaust emission rate of Class 8 trucks considered in this analysis including T7 CAIRP, T7 NNOOS, T7 NOOS, T7 POLA and

[35] https://ww3.arb.ca.gov/regact/2019/act2019/apph.pdf
[36] https://hdsam.es.anl.gov/index.php?content=hdrsam

T7 Tractor. 16.63 (mi/kg) is the reported fuel economy for a class 8 fuel cell truck[37]. Given the total kg of dispensed hydrogen calculated above and a retail price of $10/kg, the annual cost will be $61,520.

WAIRE Points for Dispensed Hydrogen: Based on the emission reductions stated above, 22 and 18 Points are earned respectively for regional NOx and local DPM. Cost Points would contribute another 3 Points, for a total of 43 Points for 6,152 kg of H_2 dispensed.

[37] https://ww3.arb.ca.gov/regact/2019/act2019/appc.pdf

***SECTION 5)* Zero Emissions Yard Truck Acquisition and Usage**

Description: Yard trucks (also called yard tractors, terminal trucks, hostlers, yard jockeys, or yard goats) move trailers and containers around warehouse facilities. Most yard trucks at warehouse facilities are diesel fueled and emit NOx, DPM, and other pollutants. Duty cycles for yard trucks vary depending on use, with heavier use at railyards and port facilities and lighter use typically at warehouses and manufacturing plants, as defined by hours of use and diesel consumption rates. CARB has limited population data for about 1,100 yard tractors operating statewide through its DOORS reporting program for off-road vehicles, but it is unclear how many of these operate at warehouses in South Coast AQMD. In addition, many yard tractors can be on-road vehicles, which are not required to be reported through the DOORS system. For example, about two thirds of the roughly 1,600 yard tractors at the ports of Los Angeles and Long Beach are on-road vehicles.

Commercial Availability: Many battery-electric yard tractor demonstration projects have taken place in the past several years, including in the South Coast AQMD. Following these efforts, multiple manufacturers have begun offering battery-electric ZE yard trucks for sale commercially including OrangeEV, Kalmar Ottawa, and BYD.

Operation: Operation of yard trucks can be tracked by hours of use, with hourly usage varying from <1,000 hours/year up to 6,000 hours/year. The diesel reductions were calculated by using the horse power, hours of use, the load factor, and the pollutant emission factor.

SECTION 5a) ZE Yard Truck Acquisition

WAIRE Points from ZE Yard Truck Acquisition: ZE yard trucks currently cost about $310,000 while their diesel equivalent costs about $100,000[38]. This incremental cost of $210,000 would earn nine WAIRE Points per ZE yard truck purchased. Similar to the methods used for on-road truck acquisitions, at $100,000 per ton cost effectiveness, a ZE yard truck acquisition would earn 168 Points for regional emission reductions.

SECTION 5b) ZE Yard Truck Usage

Emissions: From the DOORS data, the most common yard trucks operate a 175 hp, Tier 3 engine. Table 21 below shows the emission factors from the Carl Moyer Guidelines[39] for this type of yard truck. Assuming that this type of yard truck operates 1,000 hours per year, and has operated for ten years, the emission reductions from switching to a ZE yard truck are shown in Equation 7 below.

Table 21. Emission Factors for a Tier 3 Yard Truck

Pollutant	Emission Factor (EF) g/hp-hr	Deterioration Rate (DR) g/hp-hr-hr	Load Factor (LF)
NOx	2.32	0.00003	0.39
DPM	0.088	0.0000044	

[38] https://cleanairactionplan.org/documents/final-cargo-handling-equipment-che-feasibility-assessment.pdf/
[39] https://ww3.arb.ca.gov/msprog/moyer/guidelines/current.htm

Equation [7]

$$Emissions = (hp) \times (LF) \times \left[\left((total\ hrs\ of\ use) \times (DR)\right) + (EF)\right] \times (hrs\ of\ use) \div 453.59\left(\frac{g}{lb}\right)$$

Equation 7 NOx: 175 × 0.39 × [((10 × 1,000) × 0.00003) + 2.32] × 1,000 ÷ 453.59 = 394 lbs
Equation 7 DPM: 175 × 0.39 × [((10 × 1,000) × 0.0000044) + 0.088] × 1,000 ÷ 453.59 = 19.9 lbs

Costs: Although purchase prices for ZE yard trucks are higher than their diesel equivalent, once purchased the operational costs are expected to be lower. An analysis by the ports of Long Beach and Los Angeles evaluated the Total Cost of Ownership (TCO) for battery-electric ZE yard trucks in comparison to diesel[40]. This analysis found a TCO for ZE yard trucks to be about $450,000 (not including infrastructure costs) while equivalent diesel had a TCO of about $375,000. Assuming a ~12,000 useful life of a yard truck, the annual incremental cost of operating a ZE yard truck for 1,000 hours is shown in Equation 8.

Equation [8]: ($450,000 - $375,000) × 1,000 hrs ÷ 12,000 hrs = $6,250

WAIRE Points from Using ZE Yard Trucks: Following the results from Equation 6, using a ZE yard truck would earn 16 Points for regional emission reductions and 80 Points for local emission reductions. One cost Point would be earned following the results of Equation 7. Similar to the approach for on-road truck visits, a multiplier of three is applied to the sum of cost, regional, and local Points. Therefore the total Points for 1,000 hours of ZE yard truck usage is: (16 + 80 + 1) × 3 = 291 Points.

[40] https://cleanairactionplan.org/documents/final-cargo-handling-equipment-che-feasibility-assessment.pdf/

SECTION 6) **Transport Refrigeration Unit Plug (TRU) Acquisition and Usage**

Description:
TRUs are truck or trailer installed refrigeration systems used at cold storage and distribution center warehouses to transport and temporarily store perishable goods and products. Most of the 7,400 truck and 166,000 trailer TRUs that operate in California are powered by diesel-fueled internal combustion engines (ICEs)[41] which emit about 5.5 tons of NOx and 0.2 tons of diesel particulate matter (DPM) daily[42]. Newer TRU technology allow zero emission operations by plugging hybrid and battery electric models into TRU charging infrastructure at warehouses and other destinations. CARB is currently developing a new truck TRU regulation as well as a separate trailer TRU regulation which, among other requirements, could mandate:

- installation of charging infrastructure, and
- truck TRU fleets to annually turn over a portion of their fleet to full ZE technology.

WAIRE Points may only be earned for actions beyond any adopted rules and regulations from U.S. EPA, CARB, or South Coast AQMD. If CARB's previously proposed truck TRU regulation is adopted in the coming years,[43] WAIRE Points could only be earned for the installation of TRU plug infrastructure and TRU plug usage beyond CARB requirements, or potentially through a Custom WAIRE Plan thereafter that would demonstrate how actions taken go beyond CARB rules.

Commercial Availability:
Current zero emission operation capable TRUs are: plug-in and hybrid (eTRU); battery-electric; cryogenic; and hydrogen fuel cell. All except the hydrogen fuel cell technologies are commercially available, and are offered for sale commercially by such manufacturers as Advanced Energy Machines, Air Liquide, Boreas, Carrier, Electric Reefer Solutions, and Thermo King. Additionally, there are manufacturers and firms that focus solely on the electric plug-in infrastructure such CleanFutures and Shorepower Technologies[44].

Operation: Electric zero emission trailer TRUs and truck TRUs operate using an onboard battery, or via power from the electrical grid if they are plugged into a charger. Hybrid trailer TRUs may operate via a diesel engine when in transit, and in zero emissions mode while plugged into a charger. Charger operators may claim LCFS credits for the electricity dispensed for TRUs, potentially at a level that fully offsets the cost of electricity.[45] Charger operators are therefore expected to track the total amount of kWh of charger usage for TRUs when they obtain LCFS credits. Plug usage can be tracked by hours of use, 1,460 hours of annual usage or approximately 4 hours per day of TRU plug usage was determined from the 2023 baseline of the TRU ATCM. The 4 hour average use is attributed to truck dwell time at warehouses or delivery destinations.

[41] https://ww2.arb.ca.gov/sites/default/files/classic//cc/cold-storage/documents/slidesworkshop82019.pdf
[42] https://ww2.arb.ca.gov/resources/documents/2020-mobile-source-strategy
[43] CARB has proposed bifurcating the TRU regulation, with rulemaking in 2021 focusing on TRU trucks, and new emission standards, and later rulemaking focusing on ZE trailers.
[44] https://ww2.arb.ca.gov/sites/default/files/classic//cc/cold-storage/documents/clean_tru_technology_webinar_slides_handout.pdf
[45] https://ww2.arb.ca.gov/sites/default/files/2020-08/Preliminary%20TRU%20Cost%20Doc%2008202020.pdf

Diesel emission reductions were ~~be~~ calculated by using the horse power, annual hours of use, the load factor, and the pollutant emission factor[46].

SECTION 6a) TRU Plug Acquisition and Installation

WAIRE Points from TRU Plug Acquisition and Installation: A TRU plug installation costs approximately $13,600 which includes a Level 2 charger, equipment, design, construction, and installation costs[47]. Using a similar methodology as is described for installing chargers for vehicles in this document, acquisition and installation of a single TRU plug could earn a total of 15 WAIRE Points, with 1 Point for each TRU plug purchased, beginning construction, and receiving final permit sign-off/charger energization. Similar to truck acquisitions, regional emission Points are assigned at a $100,000 per ton of NOx cost effectiveness, resulting in an additional 12 Points.

SECTION 6b) TRU Plug Usage

Emissions: The 2023 calendar year weighted average emission factors for the South Coast AQMD was used in Equation 1, to calculate the default annual NOx and DPM emission reductions from trailer and truck eTRUs plugging in. The AUM is set at 10,658 kWh, equal to an eTRU plugged in 4 hours per day for 365 days and drawing 7.3 kW of power.[48]

Equation [1]

$$Emissions = (annual\ hours\ of\ use) \times (Pollutant\ Emission\ factor) \div 453.59(\frac{g}{lb})$$

Equation 1 NOx: 1,460 × 12.60 ÷ 453.59 = 40.6 lbs
Equation 1 DPM: 1,460 × 0.53 ÷ 453.59 = 1.7 lbs

Costs: Using the AUM of 10,658 kWh, and the $0.18/kWh rate for electricity calculated for charging station usage in this document (and not considering any potential offset from LCFS credits), the average annual cost to operate a TRU plug is shown in Equation 2.
Equation [2]: ($0.21 /kWh) × 10,658 kWh = $2,238.18

WAIRE Points from Using ZE TRUs: Following the results from Equation 1, using a TRU plug would earn 2 Points for regional emission reductions and 7 Points for local emission reductions. One cost Point would be earned following the results of Equation 2. Similar to the approach for other WAIRE action usage or visits, for replacing diesel-fueled equipment/vehicles, a multiplier of three is applied to the sum of cost, regional, and local Points. Therefore, the total Points for 10,658 kWh from TRU charging is: (2 + 7 + 1) = 10 Points.

[46] https://ww2.arb.ca.gov/sites/default/files/classic//cc/cold-storage/documents/tru_healthanalysisslidesworkshop10312019.pdf
[47] https://ww2.arb.ca.gov/sites/default/files/2020-08/Preliminary%20TRU%20Cost%20Doc%2008202020.pdf
[48] https://ww2.arb.ca.gov/sites/default/files/2020-08/Preliminary%20TRU%20Cost%20Doc%2008202020.pdf

***SECTION 7)* Solar Panel System Acquisition and Usage**

Description:
Solar panel systems are electric energy generation systems that are composed of the solar panels which collect and convert solar radiation to direct current (DC) power, the racking system which mount the panels and equipment to a rooftop or carport, and the inverter which convert the DC power to alternating current (AC) power. The installations of solar panel systems on warehouse rooftops and carports is an increasing trend which provide renewable power for both warehouse usage and for sale back to the grid. Many commercial buildings with significant rooftop or parking area spaces are incorporating solar panel systems into their operations for financial savings. California is leading the nation with over 600,000 commercial buildings being equipped with solar panel systems, with a solar market penetration of about 2.5%[49]. In the last several years, there have been many technology advancements in solar panels that have made them lighter, more efficient, and more flexible which allows for them to be installed in more applications that have led to a decrease in overall installation costs.

Commercial Availability:
Solar panel systems have wide commercially available throughout California with hundreds of manufacturers and installers who offer a range options for system sizes and component configurations.

Operation:
To analyze the installation and use of solar panel systems, the median solar panel system size was set at 100 kW based on a literature review of Lawrence Berkeley National Laboratory's (LBNL) annual Tracking the Sun Report[50]. The 100 kW solar system parameter was inputted into the National Renewable Energy Laboratory's (NREL) PVWatts[51] calculator specifying a region in the South Coast AQMD jurisdiction which resulted in an annual estimated electrical generation of 165,000 kWh. The 100 kW solar panel system and the 165,000 kWh estimated electrical generation serve as the annual unitary metric (AUM) for solar panel system installation and usage, respectively.

SECTION 7a) Solar Panel System Acquisition and Installation

WAIRE Points from Solar Panel System Acquisition and Installation: Based on LBNL's Tracking the Sun study[52] the price per kW for a rooftop solar panel system was $2.60 per kW and a carport solar panel system was estimated to cost $3.74[53]. Carport solar panel systems have higher costs due to structural costs to elevate the solar panels to provide the carport or truck shade structure. WAIRE Points are calculated based on the total cost of the installation of the 100 kW solar panel system. Applying the $2.60 per Watt costs for rooftop installation for the 100 kW solar panel system results in a total acquisition and installation cost of $260,000. For carport solar panel system installation, the $3.74 per Watt for carport solar panel system installation for the 100 kW

[49] https://emp.lbl.gov/webinar/commercial-rooftop-solar-energy-market
[50] https://emp.lbl.gov/tracking-the-sun
[51] https://pvwatts.nrel.gov/
[52] https://eta-publications.lbl.gov/sites/default/files/tracking_the_sun_2018_briefing.pdf
[53] Based on a confidential data obtained from industry source that requested non-attribution.

solar panel system which results in a total acquisition and installation cost of $374,000. Using a similar methodology as is described for installing chargers for vehicles in this document, acquisition and installation of a rooftop solar panel system could earn 15 WAIRE Points for a 100 kW rooftop solar panel system, and 19 WAIRE Points for a 100 kW carport solar panel systems.

SECTION 7b) Solar Panel System Usage

Emissions: Using emissions data from local power plants which potentially provide power to warehouses within the South Coast AQMD jurisdiction, a peak rate NOx emission factor of 0.087 lbs/MWh was calculated[54]. The combustion of natural gas at the local power plants do not generate DPM so only NOx is considered in this analysis. The calculated NOx emission factor is used with the AUM of the estimated generation of 165,000 kWh for a 100 kW solar panel system installed on a structure in the South Coast AQMD jurisdiction. Equation 1 shows the calculated the default annual NOx emission reductions from solar panel system usage.

Equation [1]

$$Emissions = (Power\ Plant\ NOx\ Emission\ Factor\ lbs/MWh) \times (Total\ Estimated\ KWh\ generated)/1{,}000$$

Equation 1 NOx: $0.087 \times 165{,}000 \div 1{,}000 = 14.3$ lbs

Costs: No cost is considered for the operation of the solar panel system. After the initial installation costs, the minimal maintenance costs are negligible considering the cost saving from solar electric power generation in comparison to purchasing grid power.

WAIRE Points from Solar Panel System Usage: Following the results from Equation 1, using a solar panel system would earn 1 Point for regional emission reductions. There are no cost or local benefit WAIRE Points contributions.

[54] Power plant emission calculations were derived from CEMS, eGRID, and EIA data to calculate for the South Coast AQMD jurisdiction

SECTION 8) **Installation of Air Filter Systems or Air Filters in Community Facilities**

Description:
The installation of air filter systems or the installation/replacement of air filters is provided on the WAIRE Menu to provide a community benefit in reducing exposure for the communities near warehouses. Air filters have been shown to successfully remove black carbon (BC) and particulate matter (PM) which include ultrafine particles (UFP) (particles with a diameter < 0.1μm), diesel particulate matter (DPM), PM2.5 (particles with a diameter < 2.5μm), and PM10 (particles with a diameter < 10μm) of outdoor particles formed from the combustion of fossil fuels that permeate into the indoors.[55] Exposure to PM contaminants may lead to potential health hazards such as asthma, lung inflammation allergies, and other respiratory or cardiovascular problems[56]. DPM is an air toxin and classified human carcinogen which account for more than 80% of the total cancer risk from air toxics in the south coast air basin (SCAB)[57]. Air filters can be integrated to a heating, ventilation, and air conditioning (HVAC) system or standalone, where the use of high-performance panel filters (HP-PF) resulted in up to 90% removal or UFP, DPM, PM2.5, and PM10, where HP-PF used were minimum efficiency reporting value 16 (MERV 16) filters[58]. The American Society of Heating, Refrigerating, and Air-Conditioning Engineers defines MERV 16 as filters used for HVAC units that remove at least 95% of particles 0.3 microns or larger.

Commercial Availability:
Air filter systems and air filters have wide commercially available throughout California with numerous manufacturers and installers who offer a range options for system sizes and air filter types.

Operation:
Air filters can be installed on existing HVAC units or as standalone units at residences, schools, daycares, hospitals, community centers, and other community locations. The integration of air filters with HVAC units does lead to a decrease in the HVAC pressure as caused by the increased resistance of the filters that captures particles. In time the air filter media becomes saturated with particles leading to further HVAC pressure decreases and decreased particle capture efficiency. For standalone systems that uses its own fan the energy demand to operate at top speed is 100 watts/hr or about 5 kWh for 10 hours of operation for a 5 day week[59]. General service maintenance on the air filters involves replacement, on a set interval period or depending on the activity at the location the filters are installed.

[55] Polidori A, Fine PM, White V, Kwon PS. Pilot study of high-performance air filtration for classroom applications. Indoor Air. 2013
[56] Liu, L., Poon, R., Chen, L., Frescura, A.M., Montuschi, P., Ciabattoni, G., Wheeler, A. and Dales, R. (2009) Acute Effects of Air Pollution on Pulmonary Function, Airway Inflammation, and Oxidative Stress in Asthmatic Children, Environ. Health Perspect., 117, 668–674.
[57] MATES III Study; South Coast Air Quality Management District, 2008
[58] Polidori A, Fine PM, White V, Kwon PS. Pilot study of high-performance air filtration for classroom applications. Indoor Air. 2013
[59] Energy draw is based on a vendor estimate for a school installation (Email dated October 11, 2019 to Victor Juan)

WAIRE Points from Air Filter or Air Filter System Installation:
With the emission reductions from the installation of air filter systems or the replacement of air filters being much less than the emission reductions associated with truck purchase, the regional WAIRE Points are related the cost effort considering the same cost effectiveness. The annual metric for the number of air filter systems with MERV 16 air filters installed is 25 systems, and the annual metric for the replacement of air filters is 200 MERV 16 air filters. With the annual metrics and the estimated emission reduction, the installation of 25 air filter systems with MERV 16 air filters equates to 55 WAIRE Points, and the installation/replacement of 200 MERV 16 air filters equates to 51 WAIRE Points.

Costs: The costs for air filter systems with MERV 16 air filters were obtained from vendors and contractors that South Coast AQMD has worked with to install air filter systems and air filters at schools and other facilities as part of mitigation and settlement projects. The estimated costs analyzed for the installation of 25 air filter systems with MERV 16 air filters is $65,000 and cost for the replacement/installation of 200 MERV 16 air filters is $60,000. Using the $0.21 $/kWh electricity rate that is used in other WAIRE Menu actions and assuming 10 hours of use each day for 365 days, the estimated electricity costs for a standalone air filter system for 365 kWh would be $76.65.

Appendix C: WAREHOUSE POPULATION METHODOLOGY

The analysis of the population of warehouses subject to PR 2305 was compiled between February 2020 – October 2020. Sources for this population of PR 2305 warehouses include the datasets of: CoStar; Dun & Bradstreet (DNB); Fleetseek; InfoUSA; and Leonard's List, as well as a visual review with Google Maps. CoStar was the primary dataset used to compile the population of PR 2305 warehouses;[1] this CoStar dataset was cross-referenced against the other datasets listed above, which offered additional warehouse information.

The population of PR 2305 warehouses described in this methodology is a snapshot in time, and is expected to update over time to adjust to changes such as warehouse operators moving in and out of warehouse facilities, operational changes, new warehouses construction, etc. Reporting requirements from PR 2305 will provide more detailed information about warehouse properties, operations, and their characteristics upon the adoption of PR 2305. Although there may be some differences between the statistics determined here and actual warehouse operations at every site, the analysis presented below is believed to provide a representative portrayal of the operators subject to PR 2305 and PR 316. The reporting requirements within PR 2305 will ensure that information used to ensure compliance is up to date and more accurate than can be provided from solely relying on third party commercial data products. The list of warehouses potentially subject to PR 2305 and PR 316 are included in the table following this methodology write-up. This list should not be considered exhaustive, as there may be a small number of additional warehouses that are subject to the requirements of PR 2305 that were not identified in this rulemaking analysis.

Total Population (3,320 warehouses are anticipated to submit a Warehouse Operations Notification Report)

CoStar is a subscription online database for commercial real estate information. According to CoStar data, the total number of industrial facilities potentially covered by PR 2305 could be up to 52,000 facilities, though the actual number that would be classified as warehouses is unclear. CoStar allows the user to utilize a search function to find properties, either through their "Property" search database or their "Tenant" search database. The dataset was exported from CoStar using the "Property" search. CoStar's search function utilizes filters to help find properties or tenants with specific characteristics. The CoStar filters used to define the characteristics of warehouse facilities applicable to PR 2305's warehouse inventory are: "Property Type" (industrial and flex), "Building Status" (existing and under renovation), Rentable Building Area, or "RBA" (greater than or equal to 100,000 square feet), "Secondary Type" (distribution, light distribution, light manufacturing, manufacturing, refrigeration/cold storage, truck terminal, and warehouse), and "Market Name" (Inland Empire (California), Orange County (California), and Los Angeles). The submarkets of Mojave River Valley, San Bernardino Outlying, Antelope Valley Industrial, East Los Angeles County Outlying Industrial, and North East Los Angeles County Outlying Industrial were excluded from the property search as they fall outside of South Coast AQMD's jurisdiction.

[1] All CoStar data contained herein speaks only as of the date referenced, may have materially changed since such date, and was provided "as is" with no guarantee or warranty of any kind. CoStar has no obligation to update or verify any of the CoStar data contained herein. None of the CoStar data contained herein should be construed as investment, tax, accounting or legal advice from CoStar.

Tenants

The CoStar Tenant dataset was exported from CoStar using the "Tenant" search. This dataset was exported to assist in identifying operators at the 3,320 warehouses applicable to PR 2305. Filters used from CoStar to define the characteristics are the same as those selected for the "Property" search, as described above, for consistency. To the extent possible, the Tenant and Property datasets were cross-referenced with each other via the property address. Due to discrepancies and missing information (data provided in CoStar is based on reporting from brokers and researchers), not all the data from these two datasets were able to be matched.

Warehouse Operator Names

The warehouse operators for the 3,320 warehouses were derived from several data sources as each dataset provides different information on tenants, owners, businesses, and companies that differ in definition:

- "Owner Name", "Property ID", "Property Address", "Property Name", "Company Name", "City", and "Zip" from CoStar.
- "Company" from InfoUSA. This dataset is cross-referenced using property addresses.
- "Business Name" from DNB. This dataset is cross-referenced using property addresses.
- "Company" from Leonard's List. This dataset is cross-referenced using property addresses.

Datasets were refined using the criteria below:

1. If CoStar had data for a property tenant, this was considered to be the correct operator name.
2. If CoStar did not have data for a property, multiple matches between InfoUSA, DNB, and Leonard's List would be considered the correct operator name.
3. Absent CoStar property tenant data, and no matching data as described in step 2., InfoUSA, DNB, and Leonard's List were considered the correct operator name in that order of priority.
4. CoStar "Owner Name" was considered the correct operator name if the above steps did not result in an operator.
5. If steps 1-4 did not yield an operator name, or yielded an operator name that appeared to not be a name for a company that would engage in warehousing activities (such as the name of a church), Staff used Google Maps to do a visual verification using Google Maps' street view to determine an operator name by searching for signage with the operator name on the addressed property or building. If the Google Maps visual verification showed that the property was not for warehouse use (through the name of the property operator or the nature of the property itself, or was a vacant lot), this was considered a potentially inapplicable property for earning WAIRE Points and likely only subject to PR 2305 reporting.

Note that because this dataset was created in order to identify the single most correct operator for each warehouse, this process results in one warehouse operator identified per warehouse. Some warehouses may have multiple operators; identifying warehouses with multiple operators is discussed below.

Facilities Potentially Only Subject to Reporting Under PR 2305 (418 facilities from the total population of 3,320 warehouses)

247 facilities are expected to only need to satisfy PR 2305 reporting requirements because these facilities have less than 100,000 square feet of warehouse space in a single building after excluding CoStar-reported office space. An additional 171 facilities potentially may only be subject to reporting requirements in PR 2305 as visual review with Google Maps indicated that they may not conduct warehousing activities. For example, some facilities were considered inapplicable if they appeared to be mostly used for manufacturing, and unlikely to have 100,000 square feet dedicated to warehouse use.

To aid in this evaluation, only facilities with the "Secondary Type" column designation of "Manufacturing" and "Light Manufacturing" from CoStar were analyzed in this step. Buildings with less than one dock door per 10,000 square feet of building area were further screened out. These facilities with less than one loading docks per 10,000 square feet were visually reviewed with Google Maps to look for visual cues of warehousing use (such as dock doors) or lack thereof (such as manufacturing equipment taking up the majority of the site) to determine if on site warehousing use would be potentially applicable to PR 2305.

From the additional analysis described below, all applicable warehouse statistics considerations are out of the 2,902 applicable warehouses, unless stated otherwise.

Warehouses That Potentially Have Multiple Operators (1,093 warehouses)

CoStar identified the tenancy of warehouses as single, multiple, or unknown number of operators, and also in many cases identifies the last known tenant. However, the accuracy of the businesses identified as tenants within CoStar was not always considered reliable, as historical tenant data could not always be distinguished from multiple current tenants. Based on a review of all available information within CoStar, out of 2,902 warehouses potentially required to earn WAIRE Points, staff identified 1,093 warehouses that potentially have multiple operators, 1,777 potentially have single operators, and 32 are unknown.

Warehouses Whose Operators Potentially Own a Fleet (1,313 warehouses)

Staff identified 1,313 warehouses with operators that potentially own their own truck fleets. To determine this information, staff cross-referenced the warehouse operator names determined above with "Fleet Name" data from the Fleetseek dataset. Because the names of operators and fleets did not exactly match across the two datasets, a fuzzy lookup tool[2] was used that showed the similarity between operator name and fleet seek name. Operators' potential fleet ownership was further verified by using data from the Federal Motor Carrier Safety Administration Company Snapshot tool[3] and information from company websites. Examples of potential fleet matches that were excluded from the final tally include small fleets (e.g., <3 trucks) that are registered on the east coast who may only share a name with an operator of a warehouse, or fleets who carry cargo not considered likely for warehousing activities under PR 2305 (e.g., refuse).

Although this analysis shows that perhaps ~40% of warehouse operators own a fleet, it is not possible to determine the extent to which any operator's fleet serves a particular warehouse. The

[2] Source: https://www.microsoft.com/en-us/download/details.aspx?id=15011
[3] https://safer.fmcsa.dot.gov/CompanySnapshot.aspx

reporting requirements under PR 2305 will provide additional information about warehouse operators who own or lease trucks that serve that warehouse.

Warehouses within Phases of Rule Implementation

PR 2305 would be implemented in three phases: warehouses larger than or equal to 250,000 square feet will be required to comply with PR 2305 in Phase 1; warehouses larger than or equal to 150,000 square feet and less than 250,000 square feet will be added in Phase 2; and warehouses larger than or equal to 100,000 square feet and less than 150,000 square feet will be added in Phase 3. Using the Rentable Building Area data from CoStar, of the 2,902 warehouses potentially required to earn WAIRE Points, 919 warehouses are in Phase 1, 931 warehouses are in Phase 2, and 1,052 warehouses are in Phase 3. For the 418 facilities that are potentially only subject to PR 2305 reporting requirements there are 37 warehouses in Phase 1, 57 warehouses in Phase 2, and 324 warehouses in Phase 3.

Owner-Operators (515 warehouses)

There are 515 warehouses potentially operated by the owners of the warehouse. The applicable warehouse operated by the owners was determined by cross-referencing CoStar warehouse "Owner Name" data with DNB's "Business Name" data for that same address.

Warehouses Near Ports (202 warehouses)

Staff identified 202 warehouses that are located near the Ports of Los Angeles and Long Beach. Warehouses determined to be Warehouses Near Ports were designated on "Submarket Name" column of the CoStar property dataset as: Carson Industrial; Long Beach South East Industrial; Long Beach South West Industrial; Rancho Dominguez Industrial; San Pedro Industrial; and Wilmington Industrial.

Warehouses with Existing Solar Panels (214 warehouses)

Staff identified 214 applicable warehouses with solar panel systems installed. Google Maps satellite view was used to identify which applicable warehouses that had solar panels systems installed. "Property Address" data from the CoStar property search were searched in Google Maps to complete a visual review of each property to determine the presence of solar panel systems.

Facilities by Secondary Type

The CoStar property search data set provided a secondary industry type designation. These designations are provided under the "Secondary Type" column in the property search dataset. The following breakdown shows the "Secondary Type" designations for the 2,902 warehouses potentially required to earn WAIRE Points under PR 2305: Distribution: 824 facilities; Light Distribution: 5 facilities; Light Manufacturing: 13 facilities; Manufacturing: 419 facilities; Refrigeration/Cold Storage: 42 facilities; Truck Terminal: 33 facilities; and Warehouse: 1,566 facilities.[4]

[4] These 'Secondary Types' were one of the parameters used by IEc in their study of warehouses that may relocate with PR 2305 (**"**Assessment of Warehouse Relocations Associated with the South Coast Air Quality Management District Warehouse Indirect Source Rule"). That study analyzed 2,638 warehouses that were considered most likely to relocate. The Technical Memorandum on Real Estate Markets Neighboring the South Coast AQMD Region from that study describes the methodology it used relative to these datasets.

Low Floor Area Ratio (FAR) (870 warehouses)

Staff identified 870 warehouses with FARs less than 0.45. The FAR describes the ratio of indoor floor area relative to the total square footage of a property. For single story buildings, lower FARs indicate a large outdoor area, which in the case of warehouses typically indicates a large yard for truck and trailer parking. The lower the FAR, the more likely it is that space could be identified onsite for larger scale ZE charging/fueling infrastructure installations. Warehouses with FARs <0.45 were identified as this is a common value used by local land use agencies for new warehouse developments. The FAR alone is not the sole determinant if a facility can install ZE charging/fueling infrastructure. Facilities with FARs higher than 0.45 may also have the ability to install ZE charging/fueling infrastructure, and conversely some facilities with FARs <0.45 may not have sufficient access to electrical utility infrastructure connections onsite or nearby.

List of Warehouse Addresses Potentially Subject to PR 2305

Property Address	City	State	Zip	Property Address	City	State	Zip
6100 S Wilmington Ave	Huntington Park	CA	90001	140 N Orange	City of Industry	CA	91744
914 E 59th St	Los Angeles	CA	90001	155 N Orange Ave	City Of Industry	CA	91744
1853 E 65th St	Los Angeles	CA	90001	15350 E Stafford St	City Of Industry	CA	91744
1016 E 59th St	Los Angeles	CA	90001	14736 Nelson Ave	City Of Industry	CA	91744
1711 E 58th Pl	Los Angeles	CA	90001	16195 E Stephens St	City Of Industry	CA	91745
8122 Maie Ave	Los Angeles	CA	90001	14625 E Clark Ave	City of Industry	CA	91745
7314 Maie Ave	Los Angeles	CA	90001	16639 E Gale Ave	City Of Industry	CA	91745
5901 Central Ave	Los Angeles	CA	90001	15541 E Gale Ave	City Of Industry	CA	91745
8801 S Alameda St	Los Angeles	CA	90002	16555 Gale Ave	City of Industry	CA	91745
5867 S Los Angeles St	Los Angeles	CA	90003	14425 E Clark Ave	City of Industry	CA	91745
5930 S Wall St	Los Angeles	CA	90003	16900 Chestnut St	Hacienda Heights	CA	91745
3401 S Grand Ave	Los Angeles	CA	90007	360 Parriott Pl W	City Of Industry	CA	91745
3751 S Hill St	Los Angeles	CA	90007	16040 Stephens St	City of Industry	CA	91745
3333 S Grand Ave	Los Angeles	CA	90007	918 S Stimson Ave	City of Industry	CA	91745
2250 Maple Ave	Los Angeles	CA	90011	16049 E Stephens St	City of Industry	CA	91745
900 E 29th St	Los Angeles	CA	90011	16150 E Stephens St	City of Industry	CA	91745
1100 N Main St	Los Angeles	CA	90012	333 S Turnbull Canyon Rd	City of Industry	CA	91745
900 E 3rd St	Los Angeles	CA	90013	15530 E Salt Lake Ave	City of Industry	CA	91745
500 S Central Ave	Los Angeles	CA	90013	15650 Salt Lake Ave	City of Industry	CA	91745
754 Wall St	Los Angeles	CA	90014	768 Turnbull Canyon Rd	City of Industry	CA	91745
808 Wall St	Los Angeles	CA	90014	15615 E Gale Ave	City of Industry	CA	91745
421 E 6th St	Los Angeles	CA	90014	17009 Green Dr	Hacienda Heights	CA	91745
1057 S San Pedro St	Los Angeles	CA	90015	15241 Don Julian Rd	City Of Industry	CA	91745
1816 Oak St	Los Angeles	CA	90015	620 S Hacienda Blvd	City of Industry	CA	91745
401 E Pico Blvd	Los Angeles	CA	90015	16950 Chestnut St	Hacienda Heights	CA	91745
940 W Washington Blvd	Los Angeles	CA	90015	218 S Turnbull Canyon Rd	City of Industry	CA	91745
1525 S Broadway	Los Angeles	CA	90015	17009 E Green Dr	City Of Industry	CA	91745
2340 S Fairfax Ave	Los Angeles	CA	90016	15343 E Proctor Ave	City of Industry	CA	91745
5716 W Jefferson Blvd	Los Angeles	CA	90016	14455 E Clark Ave	City Of Industry	CA	91745
799 Towne Ave	Los Angeles	CA	90021	16425 E Gale Ave	City of Industry	CA	91745
2415 E 15th St	Los Angeles	CA	90021	15450 E Salt Lake Ave	City of Industry	CA	91745
1340 E 6th St	Los Angeles	CA	90021	800 Turnbull Canyon Rd	City of Industry	CA	91745
2000 E 8th St	Los Angeles	CA	90021	15381 E Proctor Ave	City of Industry	CA	91745
1900 Sacramento St	Los Angeles	CA	90021	16253 Gale Ave	City of Industry	CA	91745
921 E Pico Blvd	Los Angeles	CA	90021	500 S Hacienda Blvd	City of Industry	CA	91745
1205 Wholesale St	Los Angeles	CA	90021	16175 E Stephens St	City Of Industry	CA	91745
1334 S Central Ave	Los Angeles	CA	90021	425 Turnbull Canyon Rd	Hacienda Heights	CA	91745
1226 Stanford Ave	Los Angeles	CA	90021	13285 E Temple Ave	City Of Industry	CA	91746
1050 S Stanford Ave	Los Angeles	CA	90021	14300 E Bonelli St	City Of Industry	CA	91746
2415 E 15th St	Los Angeles	CA	90021	14730 Don Julian Rd	City of Industry	CA	91746
1206 E 6th St	Los Angeles	CA	90021	220 S 6th Ave	City Of Industry	CA	91746
1800 Essex St	Los Angeles	CA	90021	14955 E Salt Lake Ave	City Of Industry	CA	91746
1208 Stanford Ave	Los Angeles	CA	90021	15110 E Don Julian Rd	La Puente	CA	91746
801 E 7th St	Los Angeles	CA	90021	13400 E Nelson Ave	City of Industry	CA	91746
1515 E 15th St	Los Angeles	CA	90021	320 S 6th Ave	City of Industry	CA	91746
1701 Bay St	Los Angeles	CA	90021	13170 E Temple Ave	City of Industry	CA	91746
2260 E 15th St	Los Angeles	CA	90021	14923 E Proctor Ave	City of Industry	CA	91746
1396 E 7th St	Los Angeles	CA	90021	14551 Bonelli St	City Of Industry	CA	91746
2045 E Washington Blvd	Los Angeles	CA	90021	13000 Temple Ave	City Of Industry	CA	91746
750 S Alameda St	Los Angeles	CA	90021	440 N Baldwin Park Blvd	City of Industry	CA	91746
1735 S Santa Fe Ave	Los Angeles	CA	90021	13890 E Nelson Ave	City of Industry	CA	91746
1601 E Olympic Blvd	Los Angeles	CA	90021	665 N Baldwin Park Blvd	City of Industry	CA	91746
670 Mesquit St	Los Angeles	CA	90021	13060 E Temple Ave	City of Industry	CA	91746
1444 S Alameda St	Los Angeles	CA	90021	14350 Lomitas Ave	City Of Industry	CA	91746
1807 E Olympic Blvd	Los Angeles	CA	90021	15125 Proctor Ave	City of Industry	CA	91746
800 McGarry St	Los Angeles	CA	90021	14829 Salt Lake Ave	City of Industry	CA	91746
5550 Ferguson Dr	Commerce	CA	90022	13085 E Temple Ave	City of Industry	CA	91746
5500 E Olympic Blvd	Commerce	CA	90022	415 S 7th Ave	City of Industry	CA	91746
5500 Ferguson Dr	Commerce	CA	90022	730 Baldwin Park Blvd	City of Industry	CA	91746
5605 Union Pacific Ave	Commerce	CA	90022	13111 E Temple Ave	City of Industry	CA	91746
5610 Union Pacific Ave	Commerce	CA	90022	15025 Proctor Ave	City of Industry	CA	91746

Property Address	City	State	Zip	Property Address	City	State	Zip
5000 Triggs St	Commerce	CA	90022	505 S 7th Ave	City Of Industry	CA	91746
5750 Grace Pl	Commerce	CA	90022	14438 E Don Julian Rd	City Of Industry	CA	91746
5631 Ferguson Dr	Commerce	CA	90022	14841 Don Julian Rd	City of Industry	CA	91746
5555 E Olympic Blvd	Commerce	CA	90022	200 N Willow Ave	City of Industry	CA	91746
5500 Union Pacific Ave	Commerce	CA	90022	14317 Don Julian Rd	City Of Industry	CA	91746
5600 E Olympic Blvd	Commerce	CA	90022	355 N Vineland Ave	City of Industry	CA	91746
4944 Triggs St	Commerce	CA	90022	705 N Baldwin Park Blvd	City of Industry	CA	91746
5510 Grace Pl	Commerce	CA	90022	14528 Bonelli Ave	City of Industry	CA	91746
5471 Ferguson Dr	Commerce	CA	90022	550 S 7th Ave	City Of Industry	CA	91746
2233 Jesse St	Los Angeles	CA	90023	245 N Baldwin Park Blvd	City of Industry	CA	91746
1400 Los Palos St	Los Angeles	CA	90023	315 S 7th Ave	City of Industry	CA	91746
1401 S Hicks Ave	Los Angeles	CA	90023	14850 E Don Julian Rd	City of Industry	CA	91746
1439 S Herbert Ave	Commerce	CA	90023	166 N Baldwin Park Blvd	City of Industry	CA	91746
1815 S Soto St	Los Angeles	CA	90023	14777 Don Julian Rd	City of Industry	CA	91746
2155 E 7th St	Los Angeles	CA	90023	15010 Don Julian Rd	City Of Industry	CA	91746
3600 E Olympic Blvd	Los Angeles	CA	90023	420 S 6th Ave	La Puente	CA	91746
2555 E Olympic Blvd	Los Angeles	CA	90023	14237 E Don Julian Rd	City Of Industry	CA	91746
1363 S Bonnie Beach Pl	Commerce	CA	90023	245 N Vineland Ave	City of Industry	CA	91746
3040 E 12th St	Los Angeles	CA	90023	14641 E Don Julian Rd	City of Industry	CA	91746
4209 E Noakes St	Commerce	CA	90023	14840 E Proctor Ave	City of Industry	CA	91746
4000 Union Pacific Ave	Commerce	CA	90023	300 N Baldwin Park Blvd	City Of Industry	CA	91746
4422 Dunham St	Los Angeles	CA	90023	14255 Lomitas Ave	City of Industry	CA	91746
3170 E Washington Blvd	Los Angeles	CA	90023	13155 E Railroad Ave	City of Industry	CA	91746
2901 E 12th St	Los Angeles	CA	90023	13255 E Amar Rd	City of Industry	CA	91746
3686 E Olympic Blvd	Los Angeles	CA	90023	13500 E Nelson Ave	City of Industry	CA	91746
1151 S Boyle Ave	Los Angeles	CA	90023	120 Puente Ave	City Of Industry	CA	91746
3700 E Olympic Blvd	Los Angeles	CA	90023	14505 E Proctor Ave	City of Industry	CA	91746
3900 Union Pacific Ave	Los Angeles	CA	90023	14840 Don Julian Rd	City Of Industry	CA	91746
1430 S Eastman Ave	Los Angeles	CA	90023	325 N Baldwin Park Blvd	City of Industry	CA	91746
3100 E Washington Blvd	Los Angeles	CA	90023	321 Vineland Ave	City Of Industry	CA	91746
3888 E Washington Blvd	Vernon	CA	90023	13007 Crossroads Parkway South	City Of Industry	CA	91746
4130 Noakes St	Commerce	CA	90023	14421 E Bonelli St	City Of Industry	CA	91746
2824 E 12th St	Los Angeles	CA	90023	14724 Proctor Ave	City of Industry	CA	91746
342 N San Fernando Rd	Los Angeles	CA	90031	111 N Baldwin Park Blvd	City of Industry	CA	91746
3880 N Mission Rd	Los Angeles	CA	90031	13110 Louden Ln	City of Industry	CA	91746
210 N Ave. 21	Los Angeles	CA	90031	18111 E Railroad St	City of Industry	CA	91748
300 W Avenue 33	Los Angeles	CA	90031	19395 E Walnut Dr N	City of Industry	CA	91748
1731 Workman St	Los Angeles	CA	90031	717 S Nogales St	City Of Industry	CA	91748
1919 Vineburn Ave	Los Angeles	CA	90032	18669 San Jose Ave	City Of Industry	CA	91748
4121 Valley Blvd	Los Angeles	CA	90032	18401 E Arenth Ave	City Of Industry	CA	91748
2011 N Soto St	Los Angeles	CA	90032	18501 E San Jose Ave	City Of Industry	CA	91748
4335 Valley Blvd	Los Angeles	CA	90032	18215 E Rowland St	City of Industry	CA	91748
210 S Anderson St	Los Angeles	CA	90033	18400 E Gale Ave	City of Industry	CA	91748
5831 Santa Monica Blvd	Los Angeles	CA	90038	17531 Railroad St	City of Industry	CA	91748
4563 Colorado Blvd	Los Angeles	CA	90039	18901 E Railroad St	City of Industry	CA	91748
5067 W San Fernando Rd	Los Angeles	CA	90039	1110 S Fullerton Rd	City of Industry	CA	91748
4841 W San Fernando Rd	Los Angeles	CA	90039	18895 Arenth Ave	City Of Industry	CA	91748
2800 Casitas Ave	Los Angeles	CA	90039	1177 S Jellick Ave	City Of Industry	CA	91748
5431 W San Fernando Rd	Los Angeles	CA	90039	1070 Samuelson St	City Of Industry	CA	91748
5375 W San Fernando Rd	Los Angeles	CA	90039	888 S Azusa Ave	City Of Industry	CA	91748
4561 Colorado Blvd	Los Angeles	CA	90039	18505 E Gale Ave	City of Industry	CA	91748
4690 Colorado Blvd	Los Angeles	CA	90039	18383 E Railroad St	City of Industry	CA	91748
4841 W San Fernando Rd	Los Angeles	CA	90039	18175 E Rowland St	City Of Industry	CA	91748
1801 Blake Ave	Los Angeles	CA	90039	19101 E Walnut Dr N	City Of Industry	CA	91748
7261 E Slauson Ave	Commerce	CA	90040	18945 San Jose Ave	City of Industry	CA	91748
6100 S Malt Ave	Commerce	CA	90040	19545 San Jose Ave	La Puente	CA	91748
6100 Bandini Blvd	Commerce	CA	90040	17528 E Rowland St	City of Industry	CA	91748
5991 Bandini Blvd	Bell	CA	90040	19555 E Arenth Ave	City of Industry	CA	91748
2340 S Eastern Ave	Commerce	CA	90040	888 Kearn Creek Ct	City of Industry	CA	91748
5900 E Slauson Ave	Commerce	CA	90040	18051 E Arenth Ave	City of Industry	CA	91748
5300 Harbor St	Commerce	CA	90040	19317 E Arenth Ave	City of Industry	CA	91748
6605 Flotilla St	Commerce	CA	90040	17355 E Railroad St	City of Industry	CA	91748
6315 Bandini Blvd	Commerce	CA	90040	18501 E Arenth Ave	City of Industry	CA	91748

Property Address	City	State	Zip	Property Address	City	State	Zip
6000 Rickenbacker Rd	Commerce	CA	90040	16610 E Chestnut St	City of Industry	CA	91748
2131 Garfield Ave	Commerce	CA	90040	780 Nogales St	City of Industry	CA	91748
6000 Bandini Blvd	Commerce	CA	90040	19161 E Walnut Dr N	City Of Industry	CA	91748
2600 Commerce Way	Commerce	CA	90040	17708 Rowland St	City Of Industry	CA	91748
5835 S Eastern Ave	Commerce	CA	90040	17400 E Chestnut St	City of Industry	CA	91748
6393 E Washington Blvd	Commerce	CA	90040	18537 E Gale Ave	City Of Industry	CA	91748
6000 E Slauson Ave	Commerce	CA	90040	18689 Arenth Ave	Rowland Heights	CA	91748
6108 Peachtree St	Commerce	CA	90040	18551 E Arenth Ave	City of Industry	CA	91748
6453 Bandini Blvd	Commerce	CA	90040	18275 E Arenth Ave	City of Industry	CA	91748
2400 Yates Ave	Commerce	CA	90040	17560 Rowland St	City Of Industry	CA	91748
5500 Sheila St	Commerce	CA	90040	875 S Azusa Ave	City Of Industry	CA	91748
6027 Eastern Ave	Commerce	CA	90040	18045 E Rowland St	City of Industry	CA	91748
2930 Vail Ave	Commerce	CA	90040	17300 Chestnut St	City Of Industry	CA	91748
5424 E Slauson Ave	Commerce	CA	90040	825 Ajax Ave	City Of Industry	CA	91748
5811 E 61st St	Commerce	CA	90040	18835 E San Jose Ave	City of Industry	CA	91748
6505 Gayhart St	Commerce	CA	90040	801 Sentous St	City of Industry	CA	91748
6289 E Slauson Ave	Commerce	CA	90040	19430 E Arenth Ave	City of Industry	CA	91748
6443 E Slauson Ave	Commerce	CA	90040	18825 E San Jose Ave	City of Industry	CA	91748
6121 Randolph St	Commerce	CA	90040	918 Radecki Ct	Los Angeles	CA	91748
6001 Slauson Ave	Commerce	CA	90040	18639 Railroad St	City of Industry	CA	91748
6051 Telegraph Rd	Commerce	CA	90040	19545 San Jose Ave	City Of Industry	CA	91748
6541 E Washington Blvd	Commerce	CA	90040	18910 E San Jose Ave	City Of Industry	CA	91748
2501 Malt Ave	Commerce	CA	90040	880 S Azusa Ave	City Of Industry	CA	91748
3217 S Garfield Ave	Commerce	CA	90040	19301 E Walnut Dr	City of Industry	CA	91748
7400 Bandini Blvd	Commerce	CA	90040	18305 San Jose Ave	City of Industry	CA	91748
2500 S Atlantic Blvd	Commerce	CA	90040	2321 Arrow Hwy	La Verne	CA	91750
6213 Randolph St	Commerce	CA	90040	3401 Etiwanda Ave	Jurupa Valley	CA	91752
4901 Zambrano St	Commerce	CA	90040	3355 Dulles Dr	Jurupa Valley	CA	91752
5890 Sheila St	Commerce	CA	90040	11180 Cantu Galleano Ranch St	Jurupa Valley	CA	91752
6608 E 26th St	Commerce	CA	90040	11296 Harrell St	Jurupa Valley	CA	91752
2638 Yates Ave	Commerce	CA	90040	11600 Philadelphia St	Jurupa Valley	CA	91752
5560 E Slauson Ave	Commerce	CA	90040	12471 Riverside Dr	Eastvale	CA	91752
5945 S Malt Ave	Commerce	CA	90040	11041 Inland Ave	Jurupa Valley	CA	91752
6000 E Sheila St	Commerce	CA	90040	10900 San Sevaine Way	Jurupa Valley	CA	91752
2187 S Garfield Ave	Commerce	CA	90040	10980 Inland Ave	Jurupa Valley	CA	91752
6550 Washington Blvd	Commerce	CA	90040	4420 Serrano Dr	Jurupa Valley	CA	91752
6111 Bandini Blvd	Los Angeles	CA	90040	4560 Hamner Ave	Eastvale	CA	91752
5815 Smithway St	Commerce	CA	90040	4325 Etiwanda Ave	Jurupa Valley	CA	91752
2727 Malt Ave	Commerce	CA	90040	3401 Etiwanda Ave	Jurupa Valley	CA	91752
6687 Flotilla St	Commerce	CA	90040	4000 Hamner Ave	Eastvale	CA	91752
5353 Jillson St	Commerce	CA	90040	12087 Landon Dr	Jurupa Valley	CA	91752
4501 E Washington Blvd	Commerce	CA	90040	3650 Dulles Dr	Jurupa Valley	CA	91752
4901 Alexander Rd	Commerce	CA	90040	4250 Hamner Ave	Eastvale	CA	91752
2601 S Malt Ave	Commerce	CA	90040	3155 Universe Dr	Jurupa Valley	CA	91752
2425 S Malt Ave	Commerce	CA	90040	11600 Iberia St	Jurupa Valley	CA	91752
6015 Randolph St	Commerce	CA	90040	3790 De Forest Cir	Jurupa Valley	CA	91752
2600 Garfield Ave	Commerce	CA	90040	3810 Wabash Dr	Jurupa Valley	CA	91752
6130 E Sheila St	Commerce	CA	90040	12300 Riverside Dr	Eastvale	CA	91752
5959 Randolph St	Commerce	CA	90040	4345 Parkhurst St	Jurupa Valley	CA	91752
5500 E Slauson Ave	Commerce	CA	90040	5250 Goodman Way	Eastvale	CA	91752
3364 Garfield Ave	Commerce	CA	90040	11600 Riverside Dr	Jurupa Valley	CA	91752
6021 S Malt Ave	Commerce	CA	90040	11500 Philadelphia St	Jurupa Valley	CA	91752
3412 Garfield Ave	Commerce	CA	90040	3251 De Forest St	Jurupa Valley	CA	91752
5777 Smithway St	Commerce	CA	90040	11905 Landon Dr	Jurupa Valley	CA	91752
6100 Garfield Ave	Commerce	CA	90040	3401 Etiwanda Ave	Jurupa Valley	CA	91752
6150 Sheila St	Commerce	CA	90040	11888 Mission Blvd	Jurupa Valley	CA	91752
6100 E Slauson Ave	Commerce	CA	90040	4450 Wineville Ave	Jurupa Valley	CA	91752
6250 Bandini Blvd	Commerce	CA	90040	10800 San Sevaine Way	Jurupa Valley	CA	91752
5999 Bandini Blvd	Los Angeles	CA	90040	14909 Summit Dr	Eastvale	CA	91752
6300 Slauson Ave	Commerce	CA	90040	4550 Wineville Ave	Jurupa Valley	CA	91752
6141 Randolph St	Commerce	CA	90040	12510 Micro	Eastvale	CA	91752
7208 E Gage	Commerce	CA	90040	4100 Hamner Ave	Eastvale	CA	91752
6201 Randolph St	Commerce	CA	90040	3950 Hamner Ave	Eastvale	CA	91752
2100 Yates Ave	Commerce	CA	90040	12100 Riverside Dr	Jurupa Valley	CA	91752

Property Address	City	State	Zip	Property Address	City	State	Zip
2300 Yates Ave	Commerce	CA	90040	3100 Milliken Ave	Mira Loma	CA	91752
4542 Dunham St	Commerce	CA	90040	4950 Goodman Way	Eastvale	CA	91752
6430 E Slauson Ave	Commerce	CA	90040	12450 Philadelphia St	Eastvale	CA	91752
5770 Peachtree St	Commerce	CA	90040	11850 Riverside Dr	Jurupa Valley	CA	91752
7400 E Slauson Ave	Commerce	CA	90040	10888 San Sevaine Way	Jurupa Valley	CA	91752
4900 Alexander St	Commerce	CA	90040	5055 Goodman Way	Eastvale	CA	91752
5300 Sheila St	Commerce	CA	90040	11310 Harrell St	Jurupa Valley	CA	91752
2855 Vail Ave	Commerce	CA	90040	10220 San Sevaine Way	Jurupa Valley	CA	91752
4940 Sheila St	Commerce	CA	90040	3401 Etiwanda Ave	Jurupa Valley	CA	91752
7101 E Slauson Ave	Commerce	CA	90040	3401 Etiwanda Ave	Jurupa Valley	CA	91752
6446 E Washington Blvd	Commerce	CA	90040	12455 Harvest Dr	Eastvale	CA	91752
2222 Davie Ave	Commerce	CA	90040	4740 Hamner Ave	Eastvale	CA	91752
3525 S Garfield Ave	Commerce	CA	90040	11350 Riverside Dr	Mira Loma	CA	91752
6817 E Acco St	Commerce	CA	90040	3401 Etiwanda Ave	Jurupa Valley	CA	91752
1935 Tubeway Ave	Commerce	CA	90040	12400 Riverside Dr	Eastvale	CA	91752
7026 E Slauson Ave	Commerce	CA	90040	11640 Harrell St	Jurupa Valley	CA	91752
2200 Saybrook Ave	Commerce	CA	90040	3401 Etiwanda Ave	Jurupa Valley	CA	91752
2220 S Gaspar Ave	Commerce	CA	90040	11010 Hopkins St	Jurupa Valley	CA	91752
2211 S Tubeway Ave	Commerce	CA	90040	3590 De Forest Cir	Jurupa Valley	CA	91752
6000 Bandini Blvd	Commerce	CA	90040	11811 Landon Dr	Jurupa Valley	CA	91752
5804 E Slauson Ave	Commerce	CA	90040	11040 Inland Ave	Jurupa Valley	CA	91752
2650 Commerce Way	Commerce	CA	90040	4388 Serrano Dr	Jurupa Valley	CA	91752
3423 S Garfield Ave	Commerce	CA	90040	11280 Riverside Dr	Jurupa Valley	CA	91752
6400 E Washington Blvd	Commerce	CA	90040	11310 Cantu Galleano Ranch Rd	Jurupa Valley	CA	91752
6321 Chalet Dr	Commerce	CA	90040	12100 Riverside Dr	Jurupa Valley	CA	91752
6241 Telegraph Rd	Commerce	CA	90040	3450 Dulles Dr	Jurupa Valley	CA	91752
6101 Peachtree St	Commerce	CA	90040	11015 Hopkins St	Jurupa Valley	CA	91752
6501 Flotilla St	Commerce	CA	90040	3900 Hamner Ave	Eastvale	CA	91752
6023 Garfield Ave	Commerce	CA	90040	10225 San Sevaine Way	Jurupa Valley	CA	91752
6666 E Washington Blvd	Commerce	CA	90040	3198 Dulles Dr	Jurupa Valley	CA	91752
6349 E Slauson Ave	Commerce	CA	90040	3325 Space Center Ct	Jurupa Valley	CA	91752
6281 E Slauson Ave	Commerce	CA	90040	10395 Nobel Ct	Jurupa Valley	CA	91752
6033 Bandini Blvd	Los Angeles	CA	90040	4225 Etiwanda Ave	Jurupa Valley	CA	91752
4900 Zambrano St	Commerce	CA	90040	11145 Inland Ave	Jurupa Valley	CA	91752
4500 York Blvd	Los Angeles	CA	90041	11650 Venture Dr	Jurupa Valley	CA	91752
5758 W Century Blvd	Los Angeles	CA	90045	3401 Etiwanda Ave	Jurupa Valley	CA	91752
11101 Aviation Blvd	Los Angeles	CA	90045	11625 Venture Dr	Jurupa Valley	CA	91752
5600 W Century Blvd	Los Angeles	CA	90045	3401 Etiwanda Ave	Jurupa Valley	CA	91752
5353 W Imperial Hwy	Los Angeles	CA	90045	11900 Riverside Dr	Jurupa Valley	CA	91752
11201 Aviation Blvd	Los Angeles	CA	90045	10995 Inland Ave	Jurupa Valley	CA	91752
5720 Avion Dr	Los Angeles	CA	90045	11991 Landon Dr	Jurupa Valley	CA	91752
5343 W Imperial Hwy	Los Angeles	CA	90045	15640 Cantu-Galleano Ranch Rd	Eastvale	CA	91752
6041 W Imperial Hwy	Los Angeles	CA	90045	11450 Philadelphia St	Jurupa Valley	CA	91752
6040 Avion Dr	Los Angeles	CA	90045	12350 Philadelphia St	Eastvale	CA	91752
6007 S St Andrews Pl	Los Angeles	CA	90047	11455 Cantu Galleano Ranch Rd	Jurupa Valley	CA	91752
6100 S Gramercy Pl	Los Angeles	CA	90047	11865 Cantu-Galleano Ranch Rd	Jurupa Valley	CA	91752
4455 Fruitland Ave	Vernon	CA	90058	11290 Cantu Galleano Ranch Rd	Jurupa Valley	CA	91752
2957 46th St	Vernon	CA	90058	12400 Philadelphia St	Mira Loma	CA	91752
2700 Fruitland Ave	Vernon	CA	90058	3401 Etiwanda Ave	Jurupa Valley	CA	91752
3900 E 26th St	Los Angeles	CA	90058	11201 Iberia St	Jurupa Valley	CA	91752
3840 E 26th St	Vernon	CA	90058	11555 Iberia St	Jurupa Valley	CA	91752
1925 E Vernon Ave	Vernon	CA	90058	10810 Inland Ave	Jurupa Valley	CA	91752
2761 Fruitland Ave	Vernon	CA	90058	1700 S Baker Ave	Ontario	CA	91761
3333 Downey Rd	Los Angeles	CA	90058	2151 S Turner Ave	Ontario	CA	91761
2800 Sierra Pine Ave	Vernon	CA	90058	2151 Proforma Ave	Ontario	CA	91761
3280 E 26th St	Vernon	CA	90058	3655 E Philadelphia St	Ontario	CA	91761
2503 E Vernon Ave	Vernon	CA	90058	2551 E Philadelphia St	Ontario	CA	91761
2263 E Vernon Ave	Vernon	CA	90058	1801 S Archibald Ave	Ontario	CA	91761
3359 E 50th St	Vernon	CA	90058	1651 S Archibald Ave	Ontario	CA	91761
4100 Bandini Blvd	Vernon	CA	90058	3351 E Philadelphia St	Ontario	CA	91761
2200 E 55th St	Los Angeles	CA	90058	1510 Auto Center Dr	Ontario	CA	91761
4890 S Alameda St	Vernon	CA	90058	4651 E Francis St	Ontario	CA	91761
5215 S Boyle Ave	Vernon	CA	90058	5101 Airport Dr	Ontario	CA	91761
2050 E 49th St	Vernon	CA	90058	5815 Clark St	Ontario	CA	91761

Property Address	City	State	Zip	Property Address	City	State	Zip
2230 E 38th St	Los Angeles	CA	90058	3371 E Francis St	Ontario	CA	91761
4375 Bandini Blvd	Los Angeles	CA	90058	1000 S Cucamonga Ave	Ontario	CA	91761
3368 E Vernon Ave	Vernon	CA	90058	4250 Greystone Ave	Ontario	CA	91761
4380 Ayers Ave	Los Angeles	CA	90058	1550 S Archibald Ave	Ontario	CA	91761
2665 Leonis Blvd	Vernon	CA	90058	1175 E Francis St	Ontario	CA	91761
4700 S Boyle Ave	Vernon	CA	90058	5300 E Jurupa St	Ontario	CA	91761
4415 Bandini Blvd	Vernon	CA	90058	3790 E Jurupa St	Ontario	CA	91761
2025 E 55th St	Vernon	CA	90058	1150 S Milliken Ave	Ontario	CA	91761
4633 Downey Rd	Vernon	CA	90058	5351 Jurupa St	Ontario	CA	91761
5370 S Boyle Ave	Vernon	CA	90058	1670 Champagne Ave	Ontario	CA	91761
1901 E 55th St	Vernon	CA	90058	5590 E Francis St	Ontario	CA	91761
2900 Fruitland Ave	Los Angeles	CA	90058	2950 E Jurupa Ave	Ontario	CA	91761
6023 Alcoa Ave	Vernon	CA	90058	821 S Rockefeller Ave	Ontario	CA	91761
1791 E Martin Luther King Jr Blvd	Los Angeles	CA	90058	1500 S Dupont St	Ontario	CA	91761
3751 Seville Ave	Vernon	CA	90058	1990 S Vintage Ave	Ontario	CA	91761
4900 S Santa Fe Ave	Vernon	CA	90058	1391 S Vintage Ave	Ontario	CA	91761
3049 E Vernon Ave	Vernon	CA	90058	1750 S Archibald Ave	Ontario	CA	91761
5000 E District Blvd	Vernon	CA	90058	3855 E Jurupa St	Ontario	CA	91761
3155 Bandini Blvd	Los Angeles	CA	90058	1991 S Cucamonga Ave	Ontario	CA	91761
2522 S Soto St	Vernon	CA	90058	500 S Dupont Ave	Ontario	CA	91761
4170 Bandini Blvd	Los Angeles	CA	90058	5400 Shea Center Dr	Ontario	CA	91761
3200 E Slauson Ave	Vernon	CA	90058	5401 E Jurupa St	Ontario	CA	91761
4955 Maywood Ave	Vernon	CA	90058	5141 Santa Ana St	Ontario	CA	91761
6174 Boyle Ave	Vernon	CA	90058	1405 E Locust St	Ontario	CA	91761
3001 Sierra Pine Ave	Los Angeles	CA	90058	5600 E Francis St	Ontario	CA	91761
2221 E 49th St	Vernon	CA	90058	5772 Jurupa St	Ontario	CA	91761
2610 E 37th St	Vernon	CA	90058	4652 E Brickell St	Ontario	CA	91761
2045 E Vernon Ave	Vernon	CA	90058	5120 Santa Ana Ave	Ontario	CA	91761
4510 S Alameda St	Vernon	CA	90058	1600 S Baker Ave	Ontario	CA	91761
2380 E 57th St	Vernon	CA	90058	1801 S Carlos Ave	Ontario	CA	91761
4701 S Santa Fe Ave	Vernon	CA	90058	3800 E Philadelphia St	Ontario	CA	91761
2901 Fruitland Ave	Vernon	CA	90058	1643 S Parco Ave	Ontario	CA	91761
2640 E 45th St	Vernon	CA	90058	3550 E Francis Ave	Ontario	CA	91761
5008 S Boyle Ave	Vernon	CA	90058	3690 Jurupa St	Ontario	CA	91761
5685 Alcoa Ave	Los Angeles	CA	90058	5555 Jurupa St	Ontario	CA	91761
2600 S Soto St	Los Angeles	CA	90058	2090 S Etiwanda Ave	Ontario	CA	91761
2931 S Alameda St	Los Angeles	CA	90058	5750 Francis St	Ontario	CA	91761
4460 Pacific Blvd	Los Angeles	CA	90058	2110 S Parco Ave	Ontario	CA	91761
4270 S Maywood Ave	Vernon	CA	90058	3000 E Philadelphia St	Ontario	CA	91761
2801 S Santa Fe Ave	Vernon	CA	90058	1751 S Pointe St	Ontario	CA	91761
2001 S Alameda St	Los Angeles	CA	90058	5801 E Airport Dr	Ontario	CA	91761
1861 E 55th St	Los Angeles	CA	90058	5153 E Philadelphia St	Ontario	CA	91761
3305 Bandini Blvd	Vernon	CA	90058	1651 S Carlos Ave	Ontario	CA	91761
5175 S Soto St	Vernon	CA	90058	2041 S Turner Ave	Ontario	CA	91761
2050 E 55th St	Vernon	CA	90058	2151 S Vintage Ave	Ontario	CA	91761
2537 E 27th St	Vernon	CA	90058	989 S Cucamonga Ave	Ontario	CA	91761
2838 S Alameda St	Vernon	CA	90058	4641 E Guasti Rd	Ontario	CA	91761
4605 S Alameda St	Los Angeles	CA	90058	1310 S Cucamonga Ave	Ontario	CA	91761
6152 Boyle Ave	Vernon	CA	90058	2530 E Lindsay Privado	Ontario	CA	91761
2283 E 49th St	Vernon	CA	90058	102 S Wanamaker Ave	Ontario	CA	91761
5990 Malburg Way	Vernon	CA	90058	930 S Rockefeller Ave	Ontario	CA	91761
5119 District Blvd	Vernon	CA	90058	1041 S Mildred St	Ontario	CA	91761
4505 Bandini Blvd	Vernon	CA	90058	1150 Etiwanda Ave	Ontario	CA	91761
6250 S Boyle Ave	Los Angeles	CA	90058	2900 E Jurupa St	Ontario	CA	91761
5233 Alcoa Ave	Vernon	CA	90058	4455 E Philadelphia St	Ontario	CA	91761
4215 Exchange Ave	Vernon	CA	90058	2950 E Philadelphia St	Ontario	CA	91761
2707 S Alameda St	Los Angeles	CA	90058	1755 E Acacia St	Ontario	CA	91761
2801 E Vernon Ave	Vernon	CA	90058	3355 E Cedar St	Ontario	CA	91761
2034 E 27th St	Vernon	CA	90058	3625 Jurupa St	Ontario	CA	91761
4160 Bandini Blvd	Los Angeles	CA	90058	2191 S Burgundy Pl	Ontario	CA	91761
2890 E 54th St	Vernon	CA	90058	5100 Shea Center Dr	Ontario	CA	91761
4050 E 26th St	Los Angeles	CA	90058	1251 S Rockefeller Ave	Ontario	CA	91761
1820 E 27th St	Vernon	CA	90058	1455 E Francis St	Ontario	CA	91761

Property Address	City	State	Zip	Property Address	City	State	Zip
4177 Bandini Blvd	Los Angeles	CA	90058	5300 Shea Center Dr	Ontario	CA	91761
3033 Bandini Blvd	Los Angeles	CA	90058	2060 S Wineville Ave	Ontario	CA	91761
2300 E Vernon Ave	Vernon	CA	90058	1900 Lynx Pl	Ontario	CA	91761
2254 E 49th St	Vernon	CA	90058	3550 E Jurupa St	Ontario	CA	91761
5001 S Soto St	Vernon	CA	90058	4070 E Greystone Dr	Ontario	CA	91761
4400 Pacific Blvd	Vernon	CA	90058	1545 E Locust St	Ontario	CA	91761
2825 S Santa Fe Ave	Vernon	CA	90058	2650 E Lindsay Privado	Ontario	CA	91761
5401 S Soto St	Vernon	CA	90058	602 S Rockefeller Ave	Ontario	CA	91761
3260 E 26th St	Vernon	CA	90058	1950 S Vintage Ave	Ontario	CA	91761
5000 Long Beach Ave	Los Angeles	CA	90058	1950 Sterling Ave	Ontario	CA	91761
1938 E 46th St	Los Angeles	CA	90058	5110 E Jurupa St	Ontario	CA	91761
1937 E Vernon Ave	Vernon	CA	90058	200 E Main St	Ontario	CA	91761
4310 Bandini Blvd	Los Angeles	CA	90058	2600 E Francis St	Ontario	CA	91761
2726 Fruitland Ave	Vernon	CA	90058	701 Malaga Pl	Ontario	CA	91761
2825 E 44th St	Vernon	CA	90058	1290 E Elm St	Ontario	CA	91761
4440 E 26th St	Los Angeles	CA	90058	100 E Main St	Ontario	CA	91761
4651 Bandini Blvd	Los Angeles	CA	90058	1650 S Vintage Ave	Ontario	CA	91761
3663 Bandini Blvd	Vernon	CA	90058	2021 S Archibald Ave	Ontario	CA	91761
3163 E Vernon Ave	Vernon	CA	90058	1015 S Vintage Ave	Ontario	CA	91761
4900 Boyle Ave	Vernon	CA	90058	4000 E Mission Blvd	Ontario	CA	91761
2801 E 46th St	Vernon	CA	90058	820 S Vintage Ave	Ontario	CA	91761
5801 S 2nd St	Los Angeles	CA	90058	1460 S Hofer Ranch Rd	Ontario	CA	91761
4240 Bandini Blvd	Los Angeles	CA	90058	5650 E Santa Ana St	Ontario	CA	91761
4444 Ayers Ave	Los Angeles	CA	90058	1560 S Baker Ave	Ontario	CA	91761
2311 E 48th St	Vernon	CA	90058	5400 Shea Center Dr	Ontario	CA	91761
5525 S Soto St	Vernon	CA	90058	2095 S Archibald Ave	Ontario	CA	91761
2834 46th St	Vernon	CA	90058	3980 E Earlstone Dr	Ontario	CA	91761
3100 E 44th St	Vernon	CA	90058	1505 S Dupont Ave	Ontario	CA	91761
5215 S Boyle Ave	Vernon	CA	90058	1671 S Champagne Ave	Ontario	CA	91761
3001 Bandini Blvd	Los Angeles	CA	90058	4060 E Jurupa St	Ontario	CA	91761
2100 E 38th St	Vernon	CA	90058	3601 Jurupa St	Ontario	CA	91761
3425 E Vernon Ave	Vernon	CA	90058	3950 Airport Dr	Ontario	CA	91761
5700 Bickett St	Los Angeles	CA	90058	4450 E Lowell St	Ontario	CA	91761
3250 E 26th St	Vernon	CA	90058	601 Rockefeller Ave	Ontario	CA	91761
3851 S Santa Fe Ave	Vernon	CA	90058	5140 Santa Ana St	Ontario	CA	91761
4851 S Alameda St	Los Angeles	CA	90058	1900 S Rochester Ave	Ontario	CA	91761
2652 Long Beach Ave	Los Angeles	CA	90058	1851 S Cucamonga Ave	Ontario	CA	91761
2900 Fruitland Ave	Los Angeles	CA	90058	3940 Earlstone St	Ontario	CA	91761
3215 E Slauson Ave	Vernon	CA	90058	5490 E Francis St	Ontario	CA	91761
2131 E 52nd St	Vernon	CA	90058	2800 E Philadelphia St	Ontario	CA	91761
3030 S Atlantic Blvd	Vernon	CA	90058	4755 Zinfandel Ct	Ontario	CA	91761
1995 E 20th St	Los Angeles	CA	90058	3510 E Francis Ave	Ontario	CA	91761
5300 S Boyle Ave	Vernon	CA	90058	1923 E Avion St	Ontario	CA	91761
2825 E 54th St	Los Angeles	CA	90058	4001 Santa Ana St	Ontario	CA	91761
6062 Alcoa Ave	Vernon	CA	90058	2500 E Francis St	Ontario	CA	91761
2615 S Bonnie Beach Pl	Los Angeles	CA	90058	2539 E Philadelphia St	Ontario	CA	91761
5500 S Boyle Ave	Vernon	CA	90058	1400 S Campus Ave	Ontario	CA	91761
4715 S Alameda St	Vernon	CA	90058	5725 E Jurupa St	Ontario	CA	91761
5383 Alcoa Ave	Vernon	CA	90058	1040 S Vintage Ave	Ontario	CA	91761
5000 Pacific Blvd	Vernon	CA	90058	1521 E Francis St	Ontario	CA	91761
4507 Maywood Ave	Vernon	CA	90058	2155 S Excise Ave	Ontario	CA	91761
1801 E 50th St	Los Angeles	CA	90058	1392 Sarah Pl	Ontario	CA	91761
4900 E 50th St	Vernon	CA	90058	1600 Proforma Ave	Ontario	CA	91761
2501 W Rosecrans Ave	Los Angeles	CA	90059	1930 S Rochester Ave	Ontario	CA	91761
1430 N McKinley Ave	Los Angeles	CA	90059	2001 Burgundy Pl	Ontario	CA	91761
740 E 111th Pl	Los Angeles	CA	90059	1450 E Mission Blvd	Ontario	CA	91761
13344 S Main St	Los Angeles	CA	90061	1260 S Vintage Ave	Ontario	CA	91761
13900 S Broadway	Los Angeles	CA	90061	1425 Toyota Way	Ontario	CA	91761
13809 S Figueroa St	Gardena	CA	90061	2001 S Hellman Ave	Ontario	CA	91761
13217 S Figueroa St	Los Angeles	CA	90061	717 E State St	Ontario	CA	91761
13500 S Figueroa St	Los Angeles	CA	90061	225 S Wineville Ave	Ontario	CA	91761
13255 S Broadway	Los Angeles	CA	90061	3781 E Airport Dr	Ontario	CA	91761
12822 S Main St	Los Angeles	CA	90061	3095 E Cedar St	Ontario	CA	91761
13301 S Main St	Los Angeles	CA	90061	2019 S Business Pky	Ontario	CA	91761

Property Address	City	State	Zip	Property Address	City	State	Zip
4540 Worth St	Los Angeles	CA	90063	1051 S Rockefeller Ave	Ontario	CA	91761
1506 N Knowles Ave	Los Angeles	CA	90063	1000 S Etiwanda Ave	Ontario	CA	91761
3424 N San Fernando Rd	Los Angeles	CA	90065	5440 E Francis St	Ontario	CA	91761
2000 N San Fernando Rd	Los Angeles	CA	90065	5491 E Francis St	Ontario	CA	91761
12800 Culver Blvd	Los Angeles	CA	90066	1600 Milliken Ave	Ontario	CA	91761
12655 Beatrice St	Los Angeles	CA	90066	1500 S Hellman Ave	Ontario	CA	91761
5553 Bandini Blvd	Bell	CA	90201	2925 Jurupa St	Ontario	CA	91761
6511 Salt Lake Ave	Bell	CA	90201	1595 S Dupont Ave	Ontario	CA	91761
5350 Lindbergh Ln	Bell	CA	90201	1151 S Mildred St	Ontario	CA	91761
5391 Rickenbacker Rd	Bell	CA	90201	2501 E Guasti Rd	Ontario	CA	91761
5630 Bandini Blvd	Bell	CA	90201	2690 E Cedar St	Ontario	CA	91761
5555 Bandini Blvd	Bell Gardens	CA	90201	3140 Jurupa St	Ontario	CA	91761
8457 S Eastern Ave	Bell Gardens	CA	90201	2880 Jurupa St	Ontario	CA	91761
5400 Lindbergh Ln	Bell	CA	90201	4100 E Mission Blvd	Ontario	CA	91761
5300 Lindbergh Ln	Bell	CA	90201	2600 S Stanford Ave	Ontario	CA	91761
4700 Eastern Ave	Bell	CA	90201	4000 E Airport Dr	Ontario	CA	91761
5600 Lindbergh Ln	Bell	CA	90201	4750 Zinfandel Ct	Ontario	CA	91761
5500 Lindbergh Ln	Bell	CA	90201	1800 S Wineville Ave	Ontario	CA	91761
5651 Rickenbacker Rd	Bell	CA	90201	5005 E Philadelphia St	Ontario	CA	91761
4901 Bandini Blvd	Bell	CA	90201	2830 E Philadelphia St	Ontario	CA	91761
5630 Rickenbacker Rd	Bell	CA	90201	1930 S Parco Ave	Ontario	CA	91761
4900 Cecelia St	Cudahy	CA	90201	4850 E Airport Dr	Ontario	CA	91761
250 W Apra St	Compton	CA	90220	5151 E Philadelphia St	Ontario	CA	91761
1620 S Wilmington Ave	Compton	CA	90220	290 S Milliken Ave	Ontario	CA	91761
2101 E Via Arado	Rancho Dominguez	CA	90220	2055 S Haven Ave	Ontario	CA	91761
350 W Manville St	Compton	CA	90220	700 Malaga Pl	Ontario	CA	91761
500 W Victoria St	Compton	CA	90220	1100 S Etiwanda Ave	Ontario	CA	91761
18511 S Broadwick St	Rancho Dominguez	CA	90220	1495 E Francis St	Ontario	CA	91761
255 W Manville St	Compton	CA	90220	1790 Champagne Ave	Ontario	CA	91761
300 W Artesia Blvd	Compton	CA	90220	2030 S Lynx Pl	Ontario	CA	91761
355 W Carob St	Compton	CA	90220	1110 S Mildred Ave	Ontario	CA	91761
1200 W Artesia Blvd	Compton	CA	90220	1521 S Hellman Ave	Ontario	CA	91761
20212 S Rancho Way	Rancho Dominguez	CA	90220	5721 Santa Ana St	Ontario	CA	91761
2917 W Rosecrans Ave	Compton	CA	90220	4774 E Airport Dr	Ontario	CA	91761
18924 Laurel Park Rd	Rancho Dominguez	CA	90220	3971 Airport Dr	Ontario	CA	91761
1965 E Vista Bella Way	Rancho Dominguez	CA	90220	5700 E Airport Dr	Ontario	CA	91761
2301 E Pacifica Pl	Rancho Dominguez	CA	90220	5491 E Philadelphia St	Ontario	CA	91761
1931 E Vista Bella Way	Rancho Dominguez	CA	90220	715 E California St	Ontario	CA	91761
18553 Dominguez Hills Dr	Rancho Dominguez	CA	90220	5450 E Francis St	Ontario	CA	91761
2060 Via Arado	Rancho Dominguez	CA	90220	1710 E Cedar St	Ontario	CA	91761
601 W Walnut St	Compton	CA	90220	1375 E Locust St	Ontario	CA	91761
220 W Manville St	Compton	CA	90220	752 Campus Ave	Ontario	CA	91761
201 W Carob St	Compton	CA	90220	1670 Etiwanda Ave	Ontario	CA	91761
700 W Artesia Blvd	Compton	CA	90220	3120 E Mission Blvd	Ontario	CA	91761
20001 S Rancho Way	Rancho Dominguez	CA	90220	620 Wanamaker Ave	Ontario	CA	91761
1420 N Mckinley Ave	Compton	CA	90220	4083 E Airport Dr	Ontario	CA	91761
1825 Acacia Ave	Compton	CA	90220	5601 Santa Ana St	Ontario	CA	91761
2500 Edison Way	Compton	CA	90220	5431 E Philadelphia St	Ontario	CA	91761
2141 E Paulhan St	Rancho Dominguez	CA	90220	3100 E Cedar St	Ontario	CA	91761
220 W Victoria St	Compton	CA	90220	3070 E Cedar St	Ontario	CA	91761
201 W Manville St	Compton	CA	90220	5200 Shea Center Dr	Ontario	CA	91761
741 W Artesia Blvd	Compton	CA	90220	1555 S Dupont Ave	Ontario	CA	91761
775 W Manville St	Compton	CA	90220	1777 S Vintage Ave	Ontario	CA	91761
2140 E University Dr	Rancho Dominguez	CA	90220	4710 E Guasti Rd	Ontario	CA	91761
921 W Artesia Blvd	Compton	CA	90220	601 Kettering Dr	Ontario	CA	91761
1650 S Central Ave	Compton	CA	90220	2285 S Ponderosa Ave	Ontario	CA	91761
1860 Acacia Ave	Compton	CA	90220	1520 E Mission Blvd	Ontario	CA	91761
200 E Stanley St	Compton	CA	90220	4305 E Jurupa St	Ontario	CA	91761
350 W Apra St	Compton	CA	90220	1700 S Hellman Ave	Ontario	CA	91761
1707 W Compton Blvd	Compton	CA	90220	1900 S Proforma Ave	Ontario	CA	91761
18450 S Wilmington Ave	Rancho Dominguez	CA	90220	5500 E Francis St	Ontario	CA	91761
400 W Artesia Blvd	Compton	CA	90220	1990 S Cucamonga Ave	Ontario	CA	91761
1701 S Central Ave	Compton	CA	90220	1050 S Dupont Ave	Ontario	CA	91761

Property Address	City	State	Zip	Property Address	City	State	Zip
18615 S Ferris Pl	Rancho Dominguez	CA	90220	1001 Doubleday Ave	Ontario	CA	91761
19640 S Rancho Way	Compton	CA	90220	3655 E Airport Dr	Ontario	CA	91761
250 W Manville St	Compton	CA	90220	1650 S Archibald Ave	Ontario	CA	91761
711 W Walnut St	Compton	CA	90220	2560 E Philadelphia St	Ontario	CA	91761
15650 S Avalon Blvd	Compton	CA	90220	3551 E Francis St	Ontario	CA	91761
415 W Walnut St	Compton	CA	90220	1425 S Campus Ave	Ontario	CA	91761
18301 Broadwick St	Rancho Dominguez	CA	90220	3645 E Philadelphia St	Ontario	CA	91761
18410 S Broadwick St	Compton	CA	90220	3350 E Cedar St	Ontario	CA	91761
2576 E Victoria St	Compton	CA	90220	1090 E Belmont St	Ontario	CA	91761
18735 Ferris Pl	Rancho Dominguez	CA	90220	1900 Burgundy Pl	Ontario	CA	91761
660 W Artesia Blvd	Compton	CA	90220	4501 E Wall St	Ontario	CA	91761
2456 E Del Amo Blvd	Compton	CA	90220	900 S Dupont Ave	Ontario	CA	91761
1714 S Anderson Ave	Compton	CA	90220	5600 E Airport Dr	Ontario	CA	91761
675 W Manville St	Compton	CA	90220	4061 E Francis St	Ontario	CA	91761
19914 Via Baron	Rancho Dominguez	CA	90220	2521 E Francis St	Ontario	CA	91761
525 W Manville St	Compton	CA	90220	4060 E Francis St	Ontario	CA	91761
301 W Walnut St	Compton	CA	90220	13610 S Archibald Ave	Ontario	CA	91761
601 W Carob St	Compton	CA	90220	1291 S Vintage Ave	Ontario	CA	91761
303 W Artesia Blvd	Compton	CA	90220	4502 Airport Dr	Ontario	CA	91761
2511 S Edison Way	Compton	CA	90220	5400 E Francis St	Ontario	CA	91761
1055 W Victoria St	Compton	CA	90220	425 S Rockefeller Ave	Ontario	CA	91761
2331 E Pacifica Pl	Rancho Dominguez	CA	90220	5461 Santa Ana St	Ontario	CA	91761
18600 Broadwick St	Rancho Dominguez	CA	90220	1000 Sarah Pl	Ontario	CA	91761
2035 E Vista Bella Way	Rancho Dominguez	CA	90220	1901 Vineyard Ave	Ontario	CA	91761
175 E Manville St	Compton	CA	90220	1625 S Proforma Ave	Ontario	CA	91761
1935 Via Arado	Rancho Dominguez	CA	90220	2401 E Philadelphia St	Ontario	CA	91761
399 W Artesia Blvd	Compton	CA	90220	2825 Jurupa St	Ontario	CA	91761
550 W Artesia Blvd	Compton	CA	90220	820 S Wanamaker Ave	Ontario	CA	91761
19840 S Rancho Way	Compton	CA	90220	1540 Acacia Ct	Ontario	CA	91761
801 W Artesia Blvd	Compton	CA	90220	2590 E Lindsay Privado	Ontario	CA	91761
2361 E Pacifica Pl	Rancho Dominguez	CA	90220	1505 S Haven Ave	Ontario	CA	91761
425 W Carob St	Compton	CA	90220	4551 E Philadelphia St	Ontario	CA	91761
1600 S Anderson Ave	Compton	CA	90220	5501 Santa Ana St	Ontario	CA	91761
3000 E Via Mondo	Compton	CA	90221	5691 E Philadelphia St	Ontario	CA	91761
2960 E Victoria St	Rancho Dominguez	CA	90221	3951 E Earlstone St	Ontario	CA	91761
2850 E Del Amo Blvd	Carson	CA	90221	4290 E Brickell St	Ontario	CA	91761
2626 Vista Industria	Compton	CA	90221	1320 S Baker Ave	Ontario	CA	91761
18554 S Susana Rd	Rancho Dominguez	CA	90221	2400 E Francis St	Ontario	CA	91761
19067 S Reyes Ave	Rancho Dominguez	CA	90221	1930 S Vineyard Ave	Ontario	CA	91761
18626 S Reyes Ave	Compton	CA	90221	4495 E Wall St	Ontario	CA	91761
3104 E Ana St	Rancho Dominguez	CA	90221	2150 S Parco Ave	Ontario	CA	91761
3015 E Ana St	Compton	CA	90221	1495 E Locust St	Ontario	CA	91761
19201 S Reyes Ave	Compton	CA	90221	2260 S Haven Ave	Ontario	CA	91761
17707 S Santa Fe Ave	Compton	CA	90221	4651 E Brickell St	Ontario	CA	91761
19200 S Reyes Ave	Compton	CA	90221	4652 E Guasti Rd	Ontario	CA	91761
3040 E Ana St	Compton	CA	90221	1661 S Vintage Ave	Ontario	CA	91761
3136 E Victoria St	Compton	CA	90221	1220 S Baker Ave	Ontario	CA	91761
19119 S Reyes Ave	Compton	CA	90221	3900 E Philadelphia St	Ontario	CA	91761
19600 S Alameda St	Rancho Dominguez	CA	90221	5200 E Airport Dr	Ontario	CA	91761
19201 S Susana Rd	Compton	CA	90221	611 S Palmetto Ave	Ontario	CA	91762
2966 E Victoria St	Compton	CA	90221	5161 Richton Rd	Montclair	CA	91763
19007 S Reyes Ave	Rancho Dominguez	CA	90221	4545 Brooks St	Montclair	CA	91763
18111 S Santa Fe Ave	Rancho Dominguez	CA	90221	1050 N Vineyard Ave	Ontario	CA	91764
17707 S Santa Fe Ave	Compton	CA	90221	950 Barrington Ave	Ontario	CA	91764
20250 S Alameda St	Compton	CA	90221	5350 Ontario Mills Pky	Ontario	CA	91764
2910 Pacific Commerce Dr	Rancho Dominguez	CA	90221	853 Qvc Way	Ontario	CA	91764
2640 E Del Amo Blvd	Compton	CA	90221	751 Vintage Ave	Ontario	CA	91764
3025 Victoria St	Rancho Dominguez	CA	90221	5100 Ontario Mills Pkwy	Ontario	CA	91764
3020 E Victoria St	Compton	CA	90221	1051 N Wineville Ave	Ontario	CA	91764
2661 E Del Amo Blvd	Rancho Dominguez	CA	90221	5678 Concours	Ontario	CA	91764
18201 S Santa Fe Ave	Compton	CA	90221	990 Barrington Ave	Ontario	CA	91764
18221 S Susana Rd	Compton	CA	90221	5505 E Concours	Ontario	CA	91764
19615 S Susana Rd	Compton	CA	90221	5798 E Ontario Mills Pky	Ontario	CA	91764

Property Address	City	State	Zip	Property Address	City	State	Zip
2902 Val Verde Ct	Rancho Dominguez	CA	90221	5250 Ontario Mills Pky	Ontario	CA	91764
20100 S Alameda St	Rancho Dominguez	CA	90221	5400 Ontario Mills Pky	Ontario	CA	91764
2883 E Victoria St	Rancho Dominguez	CA	90221	2203 Jay St	Ontario	CA	91764
19801 S Santa Fe Ave	Rancho Dominguez	CA	90221	2004 Jay St	Ontario	CA	91764
2660 E Del Amo Blvd	Carson	CA	90221	4105 Inland Empire Blvd	Ontario	CA	91764
2300 N Alameda St	Compton	CA	90222	5576 Ontario Mills Pky	Ontario	CA	91764
419 E Euclid Ave	Compton	CA	90222	905 Wineville Ave	Ontario	CA	91764
1501 N Tamarind Ave	Compton	CA	90222	5300 E Concours St	Ontario	CA	91764
1700 N Alameda St	Compton	CA	90222	5125 Ontario Mills Pky	Ontario	CA	91764
12021 Woodruff Ave	Downey	CA	90241	2104 Jay St	Ontario	CA	91764
9300 Hall Rd	Downey	CA	90241	2053 E Jay St	Ontario	CA	91764
11634 Patton Rd	Downey	CA	90241	1904 Jay St	Ontario	CA	91764
9220 Hall Rd	Downey	CA	90241	740 Vintage Ave	Ontario	CA	91764
9400 Hall Rd	Downey	CA	90241	5200 Ontario Mills Pky	Ontario	CA	91764
7475 Flores St	Downey	CA	90242	5642 Ontario Mills Pky	Ontario	CA	91764
9151 Imperial Hwy	Downey	CA	90242	951 Etiwanda Ave	Ontario	CA	91764
7500 Amigos Ave	Downey	CA	90242	5678 Ontario Mills Pky	Ontario	CA	91764
7300 Flores Ave	Downey	CA	90242	5540 4th St	Ontario	CA	91764
200 N Nash St	El Segundo	CA	90245	800 Barrington Ave	Ontario	CA	91764
901 N Nash St	El Segundo	CA	90245	1060 S Wineville Ave	Ontario	CA	91764
2000 E Imperial Hwy	El Segundo	CA	90245	5525 E Concours	Ontario	CA	91764
202 N Nash St	El Segundo	CA	90245	5300 Ontario Mills Pky	Ontario	CA	91764
815 Lapham St	El Segundo	CA	90245	1315 E 3rd St	Pomona	CA	91766
2000 E El Segundo Blvd	El Segundo	CA	90245	1335 Philadelphia St	Pomona	CA	91766
268 Gardena Blvd	Carson	CA	90248	1201 E Lexington Ave	Pomona	CA	91766
14702 S Maple St	Gardena	CA	90248	1889 W Mission Blvd	Pomona	CA	91766
14439 S Avalon Blvd	Gardena	CA	90248	2849 Ficus St	Pomona	CA	91766
17110 S Main St	Gardena	CA	90248	1585 W Mission Blvd	Pomona	CA	91766
15913 S Main St	Gardena	CA	90248	2200 Reservoir St	Pomona	CA	91766
16920 S Main St	Gardena	CA	90248	2750 S Towne Ave	Pomona	CA	91766
14800 S Figueroa St	Gardena	CA	90248	1325 E Franklin Ave	Pomona	CA	91766
18620 S Broadway St	Carson	CA	90248	2801 S Towne Ave	Pomona	CA	91766
14527 S San Pedro St	Gardena	CA	90248	1040 Walnut Ave	Pomona	CA	91766
240 E Rosecrans Ave	Gardena	CA	90248	1301 E Lexington Ave	Pomona	CA	91766
100 W Alondra Blvd	Carson	CA	90248	1395 E Lexington Ave	Pomona	CA	91766
15100 S Figueroa St	Gardena	CA	90248	2800 S Reservoir St	Pomona	CA	91766
15100 S San Pedro St	Gardena	CA	90248	1885 W Mission Blvd	Pomona	CA	91766
261 E Redondo Beach Blvd	Gardena	CA	90248	1601 W Mission Blvd	Pomona	CA	91766
200 E Alondra Blvd	Gardena	CA	90248	1768 W 2nd St	Pomona	CA	91766
331 W Victoria St	Gardena	CA	90248	1350 E Lexington Ave	Pomona	CA	91766
17529 S Main St	Gardena	CA	90248	2855 S Reservoir St	Pomona	CA	91766
17226 S Main St	Gardena	CA	90248	1589 E 9th St	Pomona	CA	91766
151 W Rosecrans Ave	Gardena	CA	90248	1937 W Mission Blvd	Pomona	CA	91766
14725 S Broadway	Gardena	CA	90248	2200 S Reservoir St	Pomona	CA	91766
14300 S Main St	Gardena	CA	90248	2540 Fulton Rd	Pomona	CA	91767
17006 S Figueroa St	Gardena	CA	90248	159 San Antonio Ave	Pomona	CA	91767
15700 S Main St	Gardena	CA	90248	855 Towne Center Dr	Pomona	CA	91767
1855 W 139th St	Gardena	CA	90249	280 W Bonita Ave	Pomona	CA	91767
1720 W 135th St	Gardena	CA	90249	2655 Pine St	Pomona	CA	91767
1700 W 132nd St	Gardena	CA	90249	2743 Thompson Creek Rd	Pomona	CA	91767
1930 W 139th St	Gardena	CA	90249	1800 W Holt Ave	Pomona	CA	91768
1639 W Rosecrans Ave	Gardena	CA	90249	2205 Mt Vernon Ave	Pomona	CA	91768
2001 W Rosecrans Ave	Gardena	CA	90249	2883 Surveyor St	Pomona	CA	91768
1600 135th St	Gardena	CA	90249	3200 Pomona Blvd	Pomona	CA	91768
2002 W 139th St	Gardena	CA	90249	2875 Pomona Blvd	Pomona	CA	91768
13720 S Western Ave	Gardena	CA	90249	2303 Mount Vernon Ave	Pomona	CA	91768
12651 Crenshaw Blvd	Hawthorne	CA	90250	2887 Surveyor St	Pomona	CA	91768
12200 Wilkie Way	Hawthorne	CA	90250	1338 W Holt Ave	Pomona	CA	91768
2815 W El Segundo Blvd	Hawthorne	CA	90250	1320 W Holt Ave	Pomona	CA	91768
12525 Daphne Ave	Hawthorne	CA	90250	3255 Pomona Blvd	Pomona	CA	91768
5422 W Rosecrans Ave	Hawthorne	CA	90250	300 Enterprise Pl	Pomona	CA	91768
12600 Prairie Ave	Hawthorne	CA	90250	462 S Humane Way	Pomona	CA	91768
4926 Rosecrans Ave	Hawthorne	CA	90250	2861 Surveyor St	Pomona	CA	91768

Property Address	City	State	Zip	Property Address	City	State	Zip
12250 Crenshaw Blvd	Hawthorne	CA	90250	300 E Arrow Hwy	San Dimas	CA	91773
3901 Jack Northrop Ave	Hawthorne	CA	90250	420 E Arrow Hwy	San Dimas	CA	91773
1 Rocket Rd	Hawthorne	CA	90250	321 W Covina Blvd	San Dimas	CA	91773
2701 W El Segundo Blvd	Hawthorne	CA	90250	430 E 19th St	Upland	CA	91784
3901 Jack Northrop Ave	Hawthorne	CA	90250	1225 W 9th St	Upland	CA	91786
2805 W El Segundo Blvd	Hawthorne	CA	90250	2022 W 11th St	Upland	CA	91786
12524 Cerise Ave	Hawthorne	CA	90250	19705 Business Pky	City Of Industry	CA	91789
2040 Randolph St	Huntington Park	CA	90255	21908 Valley Blvd	Walnut	CA	91789
2224 E Slauson Ave	Huntington Park	CA	90255	21301 Ferrero Pky	City Of Industry	CA	91789
6230 S Alameda St	Huntington Park	CA	90255	433 Cheryl Ln	City Of Industry	CA	91789
2700 E Imperial Hwy	Lynwood	CA	90262	3880 Valley Blvd	Walnut	CA	91789
11840 Alameda St	Lynwood	CA	90262	21535 Baker Pky	City Of Industry	CA	91789
11852 Alameda St	Lynwood	CA	90262	408 Brea Canyon Rd	City of Industry	CA	91789
2588 Industry Way	Lynwood	CA	90262	20701 Currier Rd	Walnut	CA	91789
11600 Alameda St	Lynwood	CA	90262	368 Cheryl Ln	Walnut	CA	91789
2820 Butler Ave	Lynwood	CA	90262	611 Reyes Dr	City Of Industry	CA	91789
2520 Industry Way	Lynwood	CA	90262	22067 Ferrero	City of Industry	CA	91789
10650 S Alameda St	Lynwood	CA	90262	21700 Baker Pky	City Of Industry	CA	91789
11711 S Alameda St	Lynwood	CA	90262	168 Brea Canyon Rd	City Of Industry	CA	91789
12150 S Alameda St	Lynwood	CA	90262	20301 E Walnut Dr N	Walnut	CA	91789
4020 Redondo Beach Ave	Redondo Beach	CA	90278	21733 Baker Pky	City Of Industry	CA	91789
4000 Redondo Beach Ave	Redondo Beach	CA	90278	20300 E Business Pky	Walnut	CA	91789
2819 182nd St	Redondo Beach	CA	90278	19465 E Walnut Dr N	City Of Industry	CA	91789
2425 Manhattan Beach Blvd	Redondo Beach	CA	90278	21481 Ferrero Pky	City of Industry	CA	91789
2411 Santa Fe Ave	Redondo Beach	CA	90278	318 Brea Canyon Rd	City Of Industry	CA	91789
3650 Redondo Beach Ave	Redondo Beach	CA	90278	20415 E Walnut Dr	Diamond Bar	CA	91789
2420 Santa Fe Ave	Redondo Beach	CA	90278	280 Machlin Ct	City Of Industry	CA	91789
4231 Liberty Blvd	South Gate	CA	90280	425 S Lemon Ave	City of Industry	CA	91789
4301 E Firestone Blvd	South Gate	CA	90280	21901 Ferrero Pky	City of Industry	CA	91789
2680 Sequoia Dr	South Gate	CA	90280	21415 Baker Pky	City Of Industry	CA	91789
2401 Firestone Blvd	South Gate	CA	90280	4200 W Valley Blvd	Walnut	CA	91789
8751 Rayo Ave	South Gate	CA	90280	19700 Business Pky	Walnut	CA	91789
4570 Ardine St	South Gate	CA	90280	179 S Grand Ave	City Of Industry	CA	91789
5321 E Firestone Blvd	South Gate	CA	90280	383 S Cheryl Ln	City Of Industry	CA	91789
9350 Rayo Ave	South Gate	CA	90280	20002 E Business Pky	City Of Industry	CA	91789
2601 Sequoia Dr	South Gate	CA	90280	19515 E Walnut Dr N	City Of Industry	CA	91789
4452 Ardine St	South Gate	CA	90280	3900 Valley Blvd	Walnut	CA	91789
5037 Patata St	South Gate	CA	90280	218 Machlin Ct	City of Industry	CA	91789
2323 Firestone Blvd	South Gate	CA	90280	223 Brea Canyon Rd	City of Industry	CA	91789
5625 E Firestone Blvd	South Gate	CA	90280	501 Cheryl Ln	City Of Industry	CA	91789
10240 Alameda St	South Gate	CA	90280	19850 E Business Pky	Walnut	CA	91789
4500 Ardine St	South Gate	CA	90280	21508 Baker Pky	City Of Industry	CA	91789
2610 Wisconsin Ave	South Gate	CA	90280	381 Brea Canyon Rd	City of Industry	CA	91789
8621 S Rayo Ave	South Gate	CA	90280	200 Old Ranch Rd	Walnut	CA	91789
5011 Firestone Pl	South Gate	CA	90280	108 S Mayo Ave	City Of Industry	CA	91789
4100 Ardmore Ave	South Gate	CA	90280	20275 Business Pky	Walnut	CA	91789
8616 Otis St	South Gate	CA	90280	20470 E Business Pky	City of Industry	CA	91789
2741 Seminole Dr	South Gate	CA	90280	21558 Ferrero Pky	City of Industry	CA	91789
9700 E Frontage Ave	South Gate	CA	90280	20595 Business Pky	Walnut	CA	91789
8990 S Atlantic Ave	South Gate	CA	90280	455 Brea Canyon Rd	City Of Industry	CA	91789
9301 S Garfield Ave	South Gate	CA	90280	19635 E Walnut Dr N	City Of Industry	CA	91789
4361 E Firestone Blvd	South Gate	CA	90280	535 S Brea Canyon Rd	Walnut	CA	91789
2641 Seminole Dr	South Gate	CA	90280	20435 E Business Pky	Walnut	CA	91789
8685 Bowers Ave	South Gate	CA	90280	680 S Lemon Ave	City Of Industry	CA	91789
261 W Beach Ave	Inglewood	CA	90302	515 S Lemon Ave	City of Industry	CA	91789
540 N Oak St	Inglewood	CA	90302	19901 Harrison Ave	City Of Industry	CA	91789
687 N Eucalyptus Ave	Inglewood	CA	90302	20405 Business Pky	Walnut	CA	91789
490 N Oak St	Inglewood	CA	90302	21003 Commerce Pointe Dr	City Of Industry	CA	91789
1100 Colorado Blvd	Santa Monica	CA	90401	21490 Baker Pky	City Of Industry	CA	91789
1540 Francisco St	Torrance	CA	90501	21508 Ferrero Pky	City Of Industry	CA	91789
19600 S Western Ave	Torrance	CA	90501	222 N Vincent Ave	West Covina	CA	91790
19321 S Harborgate Way	Torrance	CA	90501	2801 W Mission Rd	Alhambra	CA	91803
2012 Abalone Ave	Torrance	CA	90501	1000 Meridian Ave	Alhambra	CA	91803

Property Address	City	State	Zip
1331 W Torrance Blvd	Torrance	CA	90501
19145 Gramercy Pl	Torrance	CA	90501
19400 S Western Ave	Torrance	CA	90501
1452 W Knox St	Torrance	CA	90501
19400 Harborgate Way	Torrance	CA	90501
20263 S Western Ave	Torrance	CA	90501
1540 W 190th St	Torrance	CA	90501
19200 S Western Ave	Torrance	CA	90501
19800 Van Ness Ave	Torrance	CA	90501
1451 Knox St	Torrance	CA	90501
1450 W 228th St	Torrance	CA	90501
19001 S Western Ave	Torrance	CA	90501
20100 S Western Ave	Torrance	CA	90501
2027 Harpers Way	Torrance	CA	90501
19001 Harborgate Way	Torrance	CA	90501
1580 Francisco St	Torrance	CA	90501
19900 Van Ness Ave	Torrance	CA	90501
1640 W 190th St	Torrance	CA	90501
501 Van Ness Ave	Torrance	CA	90501
19561 Harborgate Way	Torrance	CA	90501
19600 Van Ness Ave	Torrance	CA	90501
2300 Crenshaw Blvd	Torrance	CA	90501
19700 Van Ness Ave	Torrance	CA	90501
20000 S Western Ave	Torrance	CA	90501
20100 S Vermont Ave	Torrance	CA	90502
19901 Hamilton Ave	Torrance	CA	90502
19900 S Vermont Ave	Torrance	CA	90502
19310 Pacific Gateway Dr	Torrance	CA	90502
1000 190th St	Torrance	CA	90502
20051 S Vermont Ave	Torrance	CA	90502
19681 Pacific Gateway Dr	Torrance	CA	90502
19875 Pacific Gateway Dr	Torrance	CA	90502
19780 Pacific Gateway Dr	Torrance	CA	90502
1000 Francisco St	Torrance	CA	90502
19301 Pacific Gateway Dr	Torrance	CA	90502
19500 S Vermont Ave	Torrance	CA	90502
970 Francisco St	Torrance	CA	90502
20333 Normandie Ave	Torrance	CA	90502
2727 Maricopa St	Torrance	CA	90503
301 Crenshaw Blvd	Torrance	CA	90503
2925 California St	Torrance	CA	90503
2700 California St	Torrance	CA	90503
538 Crenshaw Blvd	Torrance	CA	90503
19200 Hawthorne Blvd	Torrance	CA	90503
588 Crenshaw Blvd	Torrance	CA	90503
525 Maple Ave	Torrance	CA	90503
2610 Columbia St	Torrance	CA	90503
4100 W 190th St	Torrance	CA	90504
4240 W 190th St	Torrance	CA	90504
4302 W 190th St	Torrance	CA	90504
18700 Crenshaw Blvd	Torrance	CA	90504
2525 W 190th St	Torrance	CA	90504
3000 W Lomita Blvd	Torrance	CA	90505
23540 Telo Ave	Torrance	CA	90505
2600 Skypark Dr	Torrance	CA	90505
2901 Airport Dr	Torrance	CA	90505
23215 Early Ave	Torrance	CA	90505
3963 Workman Mill Rd	City Of Industry	CA	90601
3777 Workman Mill Rd	City Of Industry	CA	90601
2645 Pacific Park Dr	Whittier	CA	90601
2680 S Pellissier Pl	City Of Industry	CA	90601
3931 Workman Mill Rd	City Of Industry	CA	90601
2727 S Workman Mill Rd	City of Industry	CA	90601
2300 Pellissier Pl	City of Industry	CA	90601
3201 W Mission Rd	Alhambra	CA	91803
905 Westminster Ave	Alhambra	CA	91803
82851 Avenue 45	Indio	CA	92201
82585 Showcase Pky	Indio	CA	92203
1777 W Lincoln St	Banning	CA	92220
533 E 3rd St	Beaumont	CA	92223
415 Nicholas Rd	Beaumont	CA	92223
862 W 4th St	Beaumont	CA	92223
630 Nicholas Rd	Beaumont	CA	92223
1010 W 4th St	Beaumont	CA	92223
920 W 4th St	Beaumont	CA	92223
1020 Prosperity Way	Beaumont	CA	92223
52200 Industrial Way	Coachella	CA	92236
85901 Avenue 53	Coachella	CA	92236
85810 Peter Rabbit Ln	Coachella	CA	92236
Two Bunch Palms Trail	Desert Hot Springs	CA	92240
411 W Garnet Ave	Palm Springs	CA	92263
54895 Fillmore St	Thermal	CA	92274
87500 Airport Blvd	Thermal	CA	92274
22069 Van Buren St	Grand Terrace	CA	92313
3255 S Cactus Ave	Bloomington	CA	92316
1551 S Lilac Ave	Bloomington	CA	92316
11260 Cedar Ave	Bloomington	CA	92316
18244 Valley Blvd	Bloomington	CA	92316
305 W Resource Dr	Rialto	CA	92316
315 W Resource Dr	Bloomington	CA	92316
18750 Orange St	Bloomington	CA	92316
3520 S Cactus Ave	Bloomington	CA	92316
12050 Agua Mansa Rd	Bloomington	CA	92316
3370 Enterprise Dr	Bloomington	CA	92316
1409 S Lilac Ave	Bloomington	CA	92316
3375 Enterprise Dr	Bloomington	CA	92316
330 Resource Dr	Bloomington	CA	92316
18012 Slover Ave	Bloomington	CA	92316
3350 S Enterprise Ave	Bloomington	CA	92316
17820 Slover Ave	Bloomington	CA	92316
18298 Slover Ave	Bloomington	CA	92316
127 W Jurupa Ave	Rialto	CA	92316
3994 S Riverside Ave	Colton	CA	92324
2245 W Valley Blvd	Colton	CA	92324
1801 E Cooley Dr	Colton	CA	92324
330 W Citrus Ave	Colton	CA	92324
280 De Berry St	Colton	CA	92324
12249 Holly St	Colton	CA	92324
3996 S Riverside Ave	Colton	CA	92324
2063 W Bustamante Pky	Colton	CA	92324
225 W Acacia Ave	Colton	CA	92324
3700 S Riverside Ave	Colton	CA	92324
1501 Cooley Dr	Colton	CA	92324
1601 E Steel Rd	Colton	CA	92324
1601 Fairway Dr	Colton	CA	92324
2163 S Riverside Ave	Colton	CA	92324
1600 W Agua Mansa Rd	Colton	CA	92324
1601 E Cooley Dr	Colton	CA	92324
2036 Miguel Bustamante Pky	Colton	CA	92324
1603 Steel Rd	Colton	CA	92324
311 W Citrus St	Colton	CA	92324
21700 Barton Rd	Colton	CA	92324
2053 Miguel Bustamante Pky	Colton	CA	92324
1601 Ashley Way	Colton	CA	92324
10917 Cherry Ave	Fontana	CA	92331
13048 Valley Blvd	Fontana	CA	92335
10288 Calabash Ave	Fontana	CA	92335
13450 Napa St	Fontana	CA	92335

Property Address	City	State	Zip	Property Address	City	State	Zip
2225 Workman Mill Rd	City of Industry	CA	90601	13373 Napa St	Fontana	CA	92335
12031 Philadelphia St	Whittier	CA	90601	13232 Valley Blvd	Fontana	CA	92335
3737 Capitol Ave	City of Industry	CA	90601	13053 San Bernardino Ave	Fontana	CA	92335
3735 Workman Mill Rd	City Of Industry	CA	90601	9950 Calabash Ave	Fontana	CA	92335
12910 Mulberry Dr	Whittier	CA	90602	8375 Sultana Ave	Fontana	CA	92335
12352 Whittier Blvd	Whittier	CA	90602	9211 Kaiser Way	Fontana	CA	92335
12252 Whittier Blvd	Whittier	CA	90602	13600 Napa St	Fontana	CA	92335
8550 Chetle Ave	Whittier	CA	90606	13265 Valley Blvd	Fontana	CA	92335
12100 Rivera Rd	Whittier	CA	90606	9988 Redwood Ave	Fontana	CA	92335
8189 Byron Rd	Whittier	CA	90606	13055 Valley Blvd	Fontana	CA	92335
6311 Knott Ave	Buena Park	CA	90620	13369 Valley Blvd	Fontana	CA	92335
6261 Caballero Blvd	Buena Park	CA	90620	13310 Valley Blvd	Fontana	CA	92335
6600 Valley View St	Buena Park	CA	90620	9774 Calabash Ave	Fontana	CA	92335
6905 Aragon Cir	Buena Park	CA	90620	9415 Kaiser Way	Fontana	CA	92335
6388 Artesia Blvd	Buena Park	CA	90620	13649 Valley Blvd	Fontana	CA	92335
6363 Regio Ave	Buena Park	CA	90620	14000 San Bernardino Ave	Fontana	CA	92335
6900 Orangethorpe Ave	Buena Park	CA	90620	13550 Valley Blvd	Fontana	CA	92335
6800 Valley View St	Buena Park	CA	90620	13277 San Bernardino Ave	Fontana	CA	92335
6400 Valley View St	Buena Park	CA	90620	13230 San Bernardino Ave	Fontana	CA	92335
6101 Knott Ave	Buena Park	CA	90620	13479 Valley Blvd	Fontana	CA	92335
6300 Regio Ave	Buena Park	CA	90620	9687 Transportation Way	Fontana	CA	92335
6280 Artesia Blvd	Buena Park	CA	90620	15895 Valley Blvd	Fontana	CA	92335
6570 Altura Blvd	Buena Park	CA	90620	8432 Almeria Ave	Fontana	CA	92335
6300 Regio Ave	Buena Park	CA	90620	7801 Cherry Ave	Fontana	CA	92336
6485 Descanso Ave	Buena Park	CA	90620	7630 Cherry Ave	Fontana	CA	92336
6545 Caballero Blvd	Buena Park	CA	90620	14750 Miller Ave	Fontana	CA	92336
6700 Artesia Blvd	Buena Park	CA	90620	5565 Sierra Ave	Fontana	CA	92336
6230 Descanso Ave	Buena Park	CA	90620	14527 Baseline Ave	Fontana	CA	92336
6880 Caballero Blvd	Buena Park	CA	90620	14605 Miller Ave	Fontana	CA	92336
6450 Caballero Blvd	Buena Park	CA	90620	7551 Cherry Ave	Fontana	CA	92336
6270 Caballero Blvd	Buena Park	CA	90620	14600 Bar Harbor Rd	Fontana	CA	92336
6800 Artesia Blvd	Buena Park	CA	90620	14650 Miller Ave	Fontana	CA	92336
6660 Orangethorpe Ave	Buena Park	CA	90620	7953 Cherry Ave	Fontana	CA	92336
6201 Regio Ave	Buena Park	CA	90620	14780 Bar Harbor Rd	Fontana	CA	92336
6300 Valley View St	Buena Park	CA	90620	5885 Sierra Ave	Fontana	CA	92336
6250 Caballero Blvd	Buena Park	CA	90620	7351 McGuire Ave	Fontana	CA	92336
6565 Knott Ave	Buena Park	CA	90620	7875 Hemlock Ave	Fontana	CA	92336
6525 Caballero Blvd	Buena Park	CA	90620	14650 Meyer Canyon Rd	Fontana	CA	92336
6251 Regio Ave	Buena Park	CA	90620	14597 Baseline Ave	Fontana	CA	92336
6201 Knott Ave	Buena Park	CA	90620	6101 Sierra Ave	Fontana	CA	92336
5650 Dolly Ave	Buena Park	CA	90621	14613 Bar Harbor Rd	Fontana	CA	92336
7025 Firestone Blvd	Buena Park	CA	90621	14779 Bar Harbor Rd	Fontana	CA	92336
5600 Beach Blvd	Buena Park	CA	90621	16270 Jurupa Ave	Fontana	CA	92337
7221 Cate Dr	Buena Park	CA	90621	11127 Catawba Ave	Fontana	CA	92337
5600 Knott Ave	Buena Park	CA	90621	10730 Production Ave	Fontana	CA	92337
5609 River Way	Buena Park	CA	90621	11275 Banana Ave	Fontana	CA	92337
7220 Cate Dr	Buena Park	CA	90621	13397 Marlay Ave	Fontana	CA	92337
5911 Fresca Dr	La Palma	CA	90623	11880 Pacific Ave	Fontana	CA	92337
5593 Fresca Dr	La Palma	CA	90623	10681 Production Ave	Fontana	CA	92337
5692 Fresca Dr	La Palma	CA	90623	11695 Pacific Ave	Fontana	CA	92337
6565 Valley View St	La Palma	CA	90623	17300 Slover Ave	Fontana	CA	92337
14000 E 183rd St	La Palma	CA	90623	12060 Cabernet Dr	Fontana	CA	92337
6901 Marlin Cir	La Palma	CA	90623	15996 Jurupa Ave	Fontana	CA	92337
11130 Holder St	Cypress	CA	90630	11081 Banana Ave	Fontana	CA	92337
11411 Valley View St	Cypress	CA	90630	11440 Pacific Ave	Fontana	CA	92337
5560 Katella Ave	Cypress	CA	90630	11251 Beech Ave	Fontana	CA	92337
6200 Phyllis Dr	Cypress	CA	90630	13414 Slover Ave	Fontana	CA	92337
11251 Warland Dr	Cypress	CA	90630	11591 Etiwanda Ave	Fontana	CA	92337
11150 Hope St	Cypress	CA	90630	13083 Slover Ave	Fontana	CA	92337
6550 Katella Ave	Cypress	CA	90630	13231 Slover Ave	Fontana	CA	92337
5665 Corporate Ave	Cypress	CA	90630	10851 Sierra Ave	Fontana	CA	92337
6600 Katella Ave	Cypress	CA	90630	10613 Jasmine St	Fontana	CA	92337
6450 Katella Ave	Cypress	CA	90630	13169 Slover Ave	Fontana	CA	92337
11130 Warland Dr	Cypress	CA	90630	11001 Etiwanda Ave	Fontana	CA	92337

Property Address	City	State	Zip	Property Address	City	State	Zip
10800 Valley View St	Cypress	CA	90630	11016 Mulberry Ave	Fontana	CA	92337
10824 Hope St	Cypress	CA	90630	11751 Cabernet Dr	Fontana	CA	92337
5440 Cerritos Ave	Cypress	CA	90630	13472 Marlay Ave	Fontana	CA	92337
5757 Plaza Dr	Cypress	CA	90630	13521 S Santa Ana Ave	Fontana	CA	92337
6032 Katella Ave	Cypress	CA	90630	10727 Commerce Way	Fontana	CA	92337
600 S Harbor Blvd	La Habra	CA	90631	10700 Business Dr	Fontana	CA	92337
1111 S Harbor Blvd	La Habra	CA	90631	10746 Commerce Way	Fontana	CA	92337
777 S Harbor Blvd	La Habra	CA	90631	10837 Commerce Way	Fontana	CA	92337
15221 Canary Ave	La Mirada	CA	90638	11875 Cabernet Dr	Fontana	CA	92337
14501 Artesia Blvd	La Mirada	CA	90638	13204 Philadelphia Ave	Fontana	CA	92337
14405 Artesia Blvd	La Mirada	CA	90638	13201 Dahlia St	Fontana	CA	92337
14450 Industry Cir	La Mirada	CA	90638	10825 Beech Ave	Fontana	CA	92337
15500 Phoebe Ave	La Mirada	CA	90638	1200 S Etiwanda Ave	Fontana	CA	92337
14041 Rosecrans Ave	La Mirada	CA	90638	10825 Production Ave	Fontana	CA	92337
14950 Valley View Ave	La Mirada	CA	90638	12925 Marlay Ave	Fontana	CA	92337
14720 E Alondra Blvd	La Mirada	CA	90638	11900 Cabernet Dr	Fontana	CA	92337
16800 E Trojan Way	La Mirada	CA	90638	13489 Slover Ave	Fontana	CA	92337
16930 Valley View Ave	La Mirada	CA	90638	13508 Marlay Ave	Fontana	CA	92337
16222 Phoebe Ave	La Mirada	CA	90638	13512 Marlay Ave	Fontana	CA	92337
14445 Alondra Blvd	La Mirada	CA	90638	12903 Jurupa Ave	Fontana	CA	92337
16420 Valley View Ave	La Mirada	CA	90638	11070 Mulberry Ave	Fontana	CA	92337
14001 Rosecrans Ave	La Mirada	CA	90638	10721 Jasmine St	Fontana	CA	92337
14659 Alondra Blvd	La Mirada	CA	90638	13032 Slover Ave	Fontana	CA	92337
16200 Trojan Way	La Mirada	CA	90638	13052 Jurupa Ave	Fontana	CA	92337
16400 Trojan Way	La Mirada	CA	90638	SEC Oleander & Santa Ana Ave	Fontana	CA	92337
16050 Canary Ave	La Mirada	CA	90638	12005 Cabernet Dr	Fontana	CA	92337
14585 Industry Cir	La Mirada	CA	90638	13050 Marlay Ave	Fontana	CA	92337
15005 Northam St	La Mirada	CA	90638	11700 Industry Ave	Fontana	CA	92337
15910 Valley View Ave	La Mirada	CA	90638	15750 Jurupa Ave	Fontana	CA	92337
14647 Northam St	La Mirada	CA	90638	13204 Jurupa Ave	Fontana	CA	92337
16501 Trojan Way	La Mirada	CA	90638	10846 Commerce Way	Fontana	CA	92337
15155 Northam St	La Mirada	CA	90638	11101 Etiwanda Ave	Fontana	CA	92337
15500 Valley View Ave	La Mirada	CA	90638	10586 Tamarind Ave	Fontana	CA	92337
14221 Artesia Blvd	La Mirada	CA	90638	13611 Jurupa Ave	Fontana	CA	92337
14355 Industry Cir	La Mirada	CA	90638	15971 Santa Ana Ave	Fontana	CA	92337
14701 Industry Cir	La Mirada	CA	90638	11260 Elm Ave	Fontana	CA	92337
14930 Alondra Blvd	La Mirada	CA	90638	10651 Elm Ave	Fontana	CA	92337
15300 Desman Rd	La Mirada	CA	90638	13423 Santa Ana Ave	Fontana	CA	92337
14101 Rosecrans Blvd	La Mirada	CA	90638	15910 Jurupa Ave	Fontana	CA	92337
14407 Alondra Blvd	La Mirada	CA	90638	11001 Citrus Ave	Fontana	CA	92337
15090 Northam St	La Mirada	CA	90638	10886 S Citrus Ave	Fontana	CA	92337
15130 Northam St	La Mirada	CA	90638	11754 Cabernet Dr	Fontana	CA	92337
16301 Trojan Way	La Mirada	CA	90638	11100 Hemlock Ave	Fontana	CA	92337
16000 Heron Ave	La Mirada	CA	90638	14874 Jurupa Ave	Fontana	CA	92337
14380 Industry Cir	La Mirada	CA	90638	11250 Poplar Ave	Fontana	CA	92337
16400 Knott Ave	La Mirada	CA	90638	13489 Jurupa Ave	Fontana	CA	92337
14455 Industry Cir	La Mirada	CA	90638	10850 Business Dr	Fontana	CA	92337
16651 Knott Ave	La Mirada	CA	90638	15801 Santa Ana Ave	Fontana	CA	92337
6913 Acco St	Montebello	CA	90640	15101 Santa Ana Ave	Fontana	CA	92337
7227 Telegraph Rd	Montebello	CA	90640	10760 Tamarind Ave	Fontana	CA	92337
1221 Frankel Ave	Montebello	CA	90640	11618 Mulberry Ave	Fontana	CA	92337
1150 S Taylor Ave	Montebello	CA	90640	11751 Industry Ave	Fontana	CA	92337
1501 Greenwood Ave	Montebello	CA	90640	16171 Santa Ana Ave	Fontana	CA	92337
7301 Telegraph Rd	Montebello	CA	90640	13366 Philadelphia Ave	Fontana	CA	92337
1 Minson Way	Montebello	CA	90640	13367 Marlay Ave	Fontana	CA	92337
901 Union St	Montebello	CA	90640	10725 Sierra Ave	Fontana	CA	92337
7171 Telegraph Rd	Montebello	CA	90640	11895 Cabernet Dr	Fontana	CA	92337
1540 S Greenwood Ave	Montebello	CA	90640	10509 Business Dr	Fontana	CA	92337
1550 S Maple Ave	Montebello	CA	90640	10918 Cherry Ave	Fontana	CA	92337
1220 W Washington Blvd	Montebello	CA	90640	10798 Catawba Ave	Fontana	CA	92337
3579 Minson Ave	Montebello	CA	90640	11188 Citrus Ave	Fontana	CA	92337
1620 S Greenwood Ave	Montebello	CA	90640	13003 Slover Ave	Fontana	CA	92337
1620 S Maple Ave	Montebello	CA	90640	15889 Slover Ave	Fontana	CA	92337
825 S Vail Ave	Montebello	CA	90640	11281 Citrus Ave	Fontana	CA	92337

Property Address	City	State	Zip
1520 Beach St	Montebello	CA	90640
6905 Acco St	Montebello	CA	90640
1515 Gage Rd	Montebello	CA	90640
1501 Date St	Montebello	CA	90640
7107 Telegraph Rd	Montebello	CA	90640
666 Union St	Montebello	CA	90640
800 Union St	Montebello	CA	90640
2101 W Flotilla St	Montebello	CA	90640
14405 Best Ave	Norwalk	CA	90650
15301 Shoemaker Ave	Norwalk	CA	90650
15505 Shoemaker Ave	Norwalk	CA	90650
12851 Leyva St	Norwalk	CA	90650
14820 Carmenita Rd	Norwalk	CA	90650
12840 E Leyva St	Norwalk	CA	90650
11100 Firestone Blvd	Norwalk	CA	90650
4700 Gregg Rd	Pico Rivera	CA	90660
4741 S Durfee Ave	Pico Rivera	CA	90660
8800 Rex Rd	Pico Rivera	CA	90660
8500 Rex Rd	Pico Rivera	CA	90660
9935 Beverly Blvd	Pico Rivera	CA	90660
8500 Mercury Ln	Pico Rivera	CA	90660
8625 Rex Rd	Pico Rivera	CA	90660
8460 E Whittier Blvd	Pico Rivera	CA	90660
5102 Industry Ave	Pico Rivera	CA	90660
4800 Gregg Rd	Pico Rivera	CA	90660
8820 Mercury Ln	Pico Rivera	CA	90660
8900 Rex Rd	Pico Rivera	CA	90660
8320 Rex Rd	Pico Rivera	CA	90660
4901 Gregg Rd	Pico Rivera	CA	90660
8525 Rex Rd	Pico Rivera	CA	90660
8321 Canford St	Pico Rivera	CA	90660
8905 Rex Rd	Pico Rivera	CA	90660
8570 Mercury Ln	Pico Rivera	CA	90660
8350 Rex Rd	Pico Rivera	CA	90660
8001 Telegraph Rd	Pico Rivera	CA	90660
8700 Rex Rd	Pico Rivera	CA	90660
7185 Rosemead Blvd	Pico Rivera	CA	90660
8200 E Slauson Ave	Pico Rivera	CA	90660
7860 Paramount Blvd	Pico Rivera	CA	90660
8700 Mercury Ln	Pico Rivera	CA	90660
7255 Rosemead Blvd	Pico Rivera	CA	90660
7875 Telegraph Rd	Pico Rivera	CA	90660
11204 Norwalk Blvd	Santa Fe Springs	CA	90670
13220 Molette St	Santa Fe Springs	CA	90670
13408 Orden Dr	Santa Fe Springs	CA	90670
13415 Carmenita Rd	Santa Fe Springs	CA	90670
15015 Valley View Ave	Santa Fe Springs	CA	90670
8945 Dice Rd	Santa Fe Springs	CA	90670
9211 Norwalk Blvd	Santa Fe Springs	CA	90670
12801 Excelsior Dr	Santa Fe Springs	CA	90670
9206 Santa Fe Springs Rd	Santa Fe Springs	CA	90670
11688 Greenstone Ave	Santa Fe Springs	CA	90670
15120 Marquardt Ave	Santa Fe Springs	CA	90670
9501 Norwalk Blvd	Santa Fe Springs	CA	90670
12202 E Slauson Ave	Santa Fe Springs	CA	90670
10035 Geary Ave	Santa Fe Springs	CA	90670
12320 Bloomfield Ave	Santa Fe Springs	CA	90670
13438 Foster Rd	Santa Fe Springs	CA	90670
13225 Alondra Blvd	Santa Fe Springs	CA	90670
11333 Greenstone Ave	Santa Fe Springs	CA	90670
10900 Painter Ave	Santa Fe Springs	CA	90670
10628 Fulton Wells Ave	Santa Fe Springs	CA	90670
9700 Bell Ranch Dr	Santa Fe Springs	CA	90670
13607 Orden Dr	Santa Fe Springs	CA	90670
10606 Commerce Way	Fontana	CA	92337
10661 Etiwanda Ave	Fontana	CA	92337
13500 Marlay Ave	Fontana	CA	92337
10545 Production Ave	Fontana	CA	92337
13170 Marlay Ave	Fontana	CA	92337
11800 Industry Ave	Fontana	CA	92337
13379 Jurupa Ave	Fontana	CA	92337
15816 Santa Ana Ave	Fontana	CA	92337
9441 N Opal Ave	Mentone	CA	92359
801 Opal Ave	Mentone	CA	92359
490 Nevada St	Redlands	CA	92373
2125 San Bernardino Ave	Redlands	CA	92373
1675 W Park Ave	Redlands	CA	92373
301 Tennessee St	Redlands	CA	92373
27352 River Bluff Ave	Redlands	CA	92374
2456 W Lugonia Ave	Redlands	CA	92374
9724 Alabama St	Redlands	CA	92374
2200 W San Bernardino Ave	Redlands	CA	92374
2255 W Lugonia Ave	Redlands	CA	92374
2459 Almond Ave	Redlands	CA	92374
26940 Palmetto Ave	Redlands	CA	92374
27573 River Bluff Ave	Redlands	CA	92374
26525 Pioneer Ave	Redlands	CA	92374
1897 E Colton Ave	Redlands	CA	92374
26763 San Bernardino Ave	Redlands	CA	92374
26871 San Bernardino Ave	Redlands	CA	92374
2301 W San Bernardino Ave	Redlands	CA	92374
9425 California St	Redlands	CA	92374
2501 W San Bernardino Ave	Redlands	CA	92374
26950 San Bernardino Ave	Redlands	CA	92374
1651 California St	Redlands	CA	92374
2200 Palmetto Ave	Redlands	CA	92374
27223 Pioneer Ave	Redlands	CA	92374
27334 San Bernardino Ave	Redlands	CA	92374
27517 Pioneer Ave	Redlands	CA	92374
27582 Pioneer Ave	Redlands	CA	92374
26875 Pioneer Ave	Redlands	CA	92374
9712 Alabama St	Redlands	CA	92374
1251 Research Dr	Redlands	CA	92374
1300 California St	Redlands	CA	92374
26881 Palmetto Ave	Redlands	CA	92374
26682 Almond Ave	Redlands	CA	92374
9425 Nevada St	Redlands	CA	92374
1455 Research Dr	Redlands	CA	92374
1730 Marigold Ave	Redlands	CA	92374
2300 W San Bernardino Ave	Redlands	CA	92374
26635 Pioneer Ave	Redlands	CA	92374
26681 San Bernardino Ave	Redlands	CA	92374
1898 Marigold Ave	Redlands	CA	92374
1480 Mountain View Ave	Redlands	CA	92374
1950 Palmetto Ave	Redlands	CA	92374
1901 California St	Redlands	CA	92374
27040 San Bernardino Ave	Redlands	CA	92374
2185 Lugonia Ave	Redlands	CA	92374
26759 Almond Ave	Redlands	CA	92374
9375 Alabama St	Redlands	CA	92374
26717 Palmetto Ave	Redlands	CA	92374
26597 San Bernardino Ave	Redlands	CA	92374
9889 Almond Ave	Redlands	CA	92374
27081 Almond Ave	Redlands	CA	92374
2470 W Lugonia Ave	Redlands	CA	92374
2255 W San Bernardino Ave	Redlands	CA	92374
1895 Marigold Ave	Redlands	CA	92374
1898 E Colton Ave	Redlands	CA	92374

Property Address	City	State	Zip	Property Address	City	State	Zip
15700 Shoemaker Ave	Santa Fe Springs	CA	90670	2290 Palmetto Ave	Redlands	CA	92374
12935 Leffingwell Ave	Santa Fe Springs	CA	90670	2250 W Lugonia Ave	Redlands	CA	92375
11925 E Pike St	Santa Fe Springs	CA	90670	1450 Alder Ave	Rialto	CA	92376
12928 Sandoval St	Santa Fe Springs	CA	90670	1552 N Alder Ave	Rialto	CA	92376
11600 Los Nietos Rd	Santa Fe Springs	CA	90670	1371 N Laurel Ave	Rialto	CA	92376
13409 Orden Dr	Santa Fe Springs	CA	90670	2625 W Renaissance Pky	Rialto	CA	92376
13500 Foster Rd	Santa Fe Springs	CA	90670	1979 W Renaissance Pky	Rialto	CA	92376
8834 Millergrove Dr	Santa Fe Springs	CA	90670	360 S Lilac Ave	Rialto	CA	92376
13225 Marquardt Ave	Santa Fe Springs	CA	90670	1660 N Linden Ave	Rialto	CA	92376
15510 Carmenita Rd	Santa Fe Springs	CA	90670	1314 W Merrill Ave	Rialto	CA	92376
10805 Painter Ave	Santa Fe Springs	CA	90670	1568 N Linden Ave	Rialto	CA	92376
12235 Bell Ranch Dr	Santa Fe Springs	CA	90670	1710 W Base Line Rd	Rialto	CA	92376
14141 Alondra Blvd	Santa Fe Springs	CA	90670	1364 W Rialto Ave	Rialto	CA	92376
9601 John St	Santa Fe Springs	CA	90670	1221 Alder Ave	Rialto	CA	92376
13227 Orden Dr	Santa Fe Springs	CA	90670	1998 W Baseline Rd	Rialto	CA	92376
12065 Pike St	Santa Fe Springs	CA	90670	1464 W Merrill Ave	Rialto	CA	92376
9200 Sorensen Ave	Santa Fe Springs	CA	90670	300 S Cedar Ave	Rialto	CA	92376
12418 Florence Ave	Santa Fe Springs	CA	90670	1401 Alder Ave	Rialto	CA	92376
12828 Carmenita Rd	Santa Fe Springs	CA	90670	1920 W Baseline Rd	Rialto	CA	92376
12318 Florence Ave	Santa Fe Springs	CA	90670	450 S Cactus Ave	Rialto	CA	92376
12301 Hawkins St	Santa Fe Springs	CA	90670	1110 W Merrill Ave	Rialto	CA	92376
9830 Norwalk Blvd	Santa Fe Springs	CA	90670	2510 W Walnut Ave	Rialto	CA	92376
13113 Adler Rd	Santa Fe Springs	CA	90670	562 W Santa Ana Ave	Rialto	CA	92376
13132 Lakeland Rd	Santa Fe Springs	CA	90670	2450 W Walnut Ave	Rialto	CA	92376
8808 Pioneer Blvd	Santa Fe Springs	CA	90670	1686 W Base Line Rd	Rialto	CA	92376
12034 Greenstone Ave	Santa Fe Springs	CA	90670	2245 Renaissance Pkwy	Rialto	CA	92376
10715 Shoemaker Ave	Santa Fe Springs	CA	90670	1543 Alder Ave	Rialto	CA	92376
8110 Sorensen Ave	Santa Fe Springs	CA	90670	1590 N Tamarind Ave	Rialto	CA	92376
12012 Burke St	Santa Fe Springs	CA	90670	371 S Cactus Ave	Rialto	CA	92376
15160 Spring Ave	Santa Fe Springs	CA	90670	1642 W Miro Way	Rialto	CA	92376
10506 Shoemaker Ave	Santa Fe Springs	CA	90670	1495 Tamarind Ave	Rialto	CA	92376
11650 Burke St	Santa Fe Springs	CA	90670	1420 N Tamarind Ave	Rialto	CA	92376
11529 Greenstone Ave	Santa Fe Springs	CA	90670	1750 Miro Way	Rialto	CA	92376
12827 E Imperial Hwy	Santa Fe Springs	CA	90670	120 S Cedar Ave	Rialto	CA	92376
11320 Bloomfield Ave	Santa Fe Springs	CA	90670	548 W Merrill Ave	Rialto	CA	92376
14027 Borate St	Santa Fe Springs	CA	90670	1960 W Miro Way	Rialto	CA	92376
12310 E Slauson Ave	Santa Fe Springs	CA	90670	181 S Larch Ave	Rialto	CA	92376
12330 Lakeland Rd	Santa Fe Springs	CA	90670	2225 Alder Ave	Rialto	CA	92377
14066 Borate St	Santa Fe Springs	CA	90670	2602 N Locust Ave	Rialto	CA	92377
13827 Carmenita Rd	Santa Fe Springs	CA	90670	2180 N Locust Ave	Rialto	CA	92377
13642 Orden Dr	Santa Fe Springs	CA	90670	1508 W Casmalia St	Rialto	CA	92377
10107 Norwalk Blvd	Santa Fe Springs	CA	90670	2415 N Locust Ave	Rialto	CA	92377
9306 Sorensen Ave	Santa Fe Springs	CA	90670	3196 N Locust Ave	Rialto	CA	92377
8724 Millergrove Dr	Santa Fe Springs	CA	90670	3105 N Alder Ave	Rialto	CA	92377
12681 Corral Pl	Santa Fe Springs	CA	90670	3110 N Alder Ave	Rialto	CA	92377
12311 Shoemaker Ave	Santa Fe Springs	CA	90670	1850 Vineyard Ave	Rialto	CA	92377
13901 Carmenita Rd	Santa Fe Springs	CA	90670	4982 Hallmark Pky	San Bernardino	CA	92407
13012 Molette St	Santa Fe Springs	CA	90670	2552 W Shenandoah Way	San Bernardino	CA	92407
12500 E Slauson Ave	Santa Fe Springs	CA	90670	5454 A Industrial Park	San Bernardino	CA	92407
12866 Ann St	Santa Fe Springs	CA	90670	7140 N Cajon Blvd	San Bernardino	CA	92407
13861 Rosecrans Ave	Santa Fe Springs	CA	90670	2765 Lexington Way	San Bernardino	CA	92407
13833 Borate St	Santa Fe Springs	CA	90670	6010 N Cajon Blvd	San Bernardino	CA	92407
11811 E Florence Ave	Santa Fe Springs	CA	90670	3454 Mike Daley Dr	San Bernardino	CA	92407
9101 Sorensen Ave	Santa Fe Springs	CA	90670	5685 Industrial Pky	San Bernardino	CA	92407
15614 Shoemaker Ave	Santa Fe Springs	CA	90670	2705 Lexington Way	San Bernardino	CA	92407
9630 Norwalk Blvd	Santa Fe Springs	CA	90670	7010 N Cajon Blvd	San Bernardino	CA	92407
12816 Adler Dr	Santa Fe Springs	CA	90670	3372 N Mike Daley Dr	San Bernardino	CA	92407
13220 Orden Dr	Santa Fe Springs	CA	90670	4472 Georgia Blvd	San Bernardino	CA	92407
9400 Santa Fe Springs Rd	Santa Fe Springs	CA	90670	4162 Georgia Blvd	San Bernardino	CA	92407
13530 Rosecrans Ave	Santa Fe Springs	CA	90670	5080 Hallmark Pky	San Bernardino	CA	92407
10006 Santa Fe Springs Rd	Santa Fe Springs	CA	90670	5415 N Industrial Pky	San Bernardino	CA	92407
12821 Carmenita Rd	Santa Fe Springs	CA	90670	5959 Palm Ave	San Bernardino	CA	92407
12801 Excelsior Dr	Santa Fe Springs	CA	90670	5990 N Cajon Blvd	San Bernardino	CA	92407

Property Address	City	State	Zip	Property Address	City	State	Zip
13325 Molette St	Santa Fe Springs	CA	90670	5404 Industrial Pky	San Bernardino	CA	92407
13833 Freeway Dr	Santa Fe Springs	CA	90670	1761 Interchange Dr	San Bernardino	CA	92407
13146 Firestone Blvd	Santa Fe Springs	CA	90670	3525 N Mike Daley Dr	San Bernardino	CA	92407
11130 Bloomfield Ave	Santa Fe Springs	CA	90670	6227 Cajon Blvd	San Bernardino	CA	92407
14911 Valley View Ave	Santa Fe Springs	CA	90670	4010 Georgia Blvd	San Bernardino	CA	92407
12850 E Florence Ave	Santa Fe Springs	CA	90670	4382 N Georgia Blvd	San Bernardino	CA	92407
12935 Imperial Hwy	Santa Fe Springs	CA	90670	4382 Georgia Blvd	San Bernardino	CA	92407
12241 Florence Ave	Santa Fe Springs	CA	90670	7250 Cajon Blvd	San Bernardino	CA	92407
12909 Sandoval St	Santa Fe Springs	CA	90670	2612 W Shenandoah Way	San Bernardino	CA	92407
13545 Larwin Cir	Santa Fe Springs	CA	90670	1651 Interchange Dr	San Bernardino	CA	92407
12623 Cisneros Ln	Santa Fe Springs	CA	90670	5690 Industrial Pky	San Bernardino	CA	92407
12380 Clark St	Santa Fe Springs	CA	90670	19949 Kendall Dr	San Bernardino	CA	92407
12005 Pike St	Santa Fe Springs	CA	90670	17335 Glen Helen Pky	San Bernardino	CA	92407
15050 Shoemaker Ave	Santa Fe Springs	CA	90670	6207 Cajon Blvd	San Bernardino	CA	92407
15225 Bonavista Ave	Santa Fe Springs	CA	90670	5405 Industrial Pky	San Bernardino	CA	92407
12991 Marquardt Ave	Santa Fe Springs	CA	90670	1592 E San Bernardino Ave	San Bernardino	CA	92408
12588 Florence Ave	Santa Fe Springs	CA	90670	125 E Club Center Dr	San Bernardino	CA	92408
12802 Leffingwell Rd	Santa Fe Springs	CA	90670	1050 E Orange Show Rd	San Bernardino	CA	92408
12540 Slauson Ave	Santa Fe Springs	CA	90670	945 S Sunnyside Ave	San Bernardino	CA	92408
11954 Washington Blvd	Santa Fe Springs	CA	90670	980 E Mill St	San Bernardino	CA	92408
12801 Excelsior Dr	Santa Fe Springs	CA	90670	270 E Central Ave	San Bernardino	CA	92408
12009 Telegraph Rd	Santa Fe Springs	CA	90670	555 E Orange Show Rd	San Bernardino	CA	92408
13527 Orden Dr	Santa Fe Springs	CA	90670	1454 S Sunnyside Ave	San Bernardino	CA	92408
14044 Freeway Dr	Santa Fe Springs	CA	90670	701 S Arrowhead Ave	San Bernardino	CA	92408
11500 Los Nietos Rd	Santa Fe Springs	CA	90670	1295 E Central Ave	San Bernardino	CA	92408
11211 Greenstone Ave	Santa Fe Springs	CA	90670	1400 E Victoria Ave	San Bernardino	CA	92408
12801 Ann St	Santa Fe Springs	CA	90670	1089 E Mill St	San Bernardino	CA	92408
10810 Painter Ave	Santa Fe Springs	CA	90670	1350 N Waterman Ave	San Bernardino	CA	92408
12825 Leffingwell Rd	Santa Fe Springs	CA	90670	1410 E Central Ave	San Bernardino	CA	92408
14088 Borate St	Santa Fe Springs	CA	90670	300 S Tippecanoe Ave	San Bernardino	CA	92408
13635 E Freeway Dr	Santa Fe Springs	CA	90670	1470 S Tippecanoe Ave	San Bernardino	CA	92408
14404 Best Ave	Santa Fe Springs	CA	90670	675 E Central Ave	San Bernardino	CA	92408
9747 S Norwalk Blvd	Santa Fe Springs	CA	90670	1910 E Central Ave	San Bernardino	CA	92408
13341 Cambridge St	Santa Fe Springs	CA	90670	1456 E Harry Sheppard Blvd	San Bernardino	CA	92408
13700 Firestone Blvd	Santa Fe Springs	CA	90670	890 E Mill St	San Bernardino	CA	92408
12601 Shoemaker Ave	Santa Fe Springs	CA	90670	990 E Mill St	San Bernardino	CA	92408
10205 Painter Ave	Santa Fe Springs	CA	90670	1905 Riverview Dr	San Bernardino	CA	92408
12907 Imperial Hwy	Santa Fe Springs	CA	90670	570 E Mill St	San Bernardino	CA	92408
15415 Marquardt Ave	Santa Fe Springs	CA	90670	786 E Central Ave	San Bernardino	CA	92408
10747 Patterson Pl	Santa Fe Springs	CA	90670	520 E Orange Show Rd	San Bernardino	CA	92408
15305 Valley View Ave	Santa Fe Springs	CA	90670	736 W Inland Center Dr	San Bernardino	CA	92408
10521 Dale Ave	Stanton	CA	90680	825 E Central Ave	San Bernardino	CA	92408
14014 Arbor Pl	Cerritos	CA	90703	1445 Riverview Dr	San Bernardino	CA	92408
16012 Arthur St	Cerritos	CA	90703	1650 E Central Ave	San Bernardino	CA	92408
13012 Midway Pl	Cerritos	CA	90703	258 E Commercial Dr	San Bernardino	CA	92408
14101 Park Pl	Cerritos	CA	90703	255 S Waterman Ave	San Bernardino	CA	92408
14121 Artesia Blvd	Cerritos	CA	90703	Tippecanoe Ave	San Bernardino	CA	92408
16000 Carmenita Rd	Cerritos	CA	90703	750 S Valley View Ave	San Bernardino	CA	92408
15928 Commerce Way	Cerritos	CA	90703	2505 Steele St	San Bernardino	CA	92408
12836 Alondra Blvd	Cerritos	CA	90703	343 S Lena Rd	San Bernardino	CA	92408
12889 Moore St	Cerritos	CA	90703	301 S Tippecanoe Ave	San Bernardino	CA	92408
16069 Shoemaker Ave	Cerritos	CA	90703	631 S Waterman Ave	San Bernardino	CA	92408
16110 Carmenita Rd	Cerritos	CA	90703	1445 S Tippecanoe Ave	San Bernardino	CA	92408
14171 Park Pl	Cerritos	CA	90703	311 S Doolittle Ave	San Bernardino	CA	92408
17211 Valley View Ave	Cerritos	CA	90703	1494 S Waterman Ave	San Bernardino	CA	92408
16010 Shoemaker Ave	Cerritos	CA	90703	1393 E San Bernardino Ave	San Bernardino	CA	92408
12850 Midway Pl	Cerritos	CA	90703	1050 W Rialto Ave	San Bernardino	CA	92410
15905 Commerce Way	Cerritos	CA	90703	1500 W Rialto Ave	San Bernardino	CA	92410
18021 Valley View Ave	Cerritos	CA	90703	7776 Tippecanoe Ave	San Bernardino	CA	92410
15950 Bloomfield Ave	Cerritos	CA	90703	927 E 9th St	San Bernardino	CA	92410
12851 Midway Pl	Cerritos	CA	90703	3512 14th St	Riverside	CA	92501
17101 Valley View Ave	Cerritos	CA	90703	9700 Indiana Ave	Riverside	CA	92503
15959 Piuma Ave	Cerritos	CA	90703	8200 Arlington Ave	Riverside	CA	92503
13226 Alondra Blvd	Cerritos	CA	90703	12000 Magnolia Ave	Riverside	CA	92503

Property Address	City	State	Zip	Property Address	City	State	Zip
17817 Valley View Ave	Cerritos	CA	90703	7145 Arlington Ave	Riverside	CA	92503
13950 Cerritos Corporate Dr	Cerritos	CA	90703	7337 Central Ave	Riverside	CA	92504
13233 Moore St	Cerritos	CA	90703	8000 Lincoln Ave	Riverside	CA	92504
12928 Midway Pl	Cerritos	CA	90703	5825 Jasmine St	Riverside	CA	92504
14100 Vine Pl	Cerritos	CA	90703	2950 Jefferson St	Riverside	CA	92504
16028 Marquardt Ave	Cerritos	CA	90703	7809 Lincoln Ave	Riverside	CA	92504
16200 Carmenita Rd	Cerritos	CA	90703	7227 Central Ave	Riverside	CA	92504
13140 Midway Pl	Cerritos	CA	90703	16833 Krameria Ave	Riverside	CA	92504
13131 166th St	Cerritos	CA	90703	3100 Jefferson St	Riverside	CA	92504
15927 Distribution Way	Cerritos	CA	90703	1080 Mount Vernon Ave	Riverside	CA	92507
16290 Shoemaker Ave	Cerritos	CA	90703	797 Palmyrita Ct	Riverside	CA	92507
10811 Bloomfield	Los Alamitos	CA	90720	545 Columbia Ave	Riverside	CA	92507
10681 Calle Lee	Los Alamitos	CA	90720	705 Columbia Ave	Riverside	CA	92507
4411 Katella Ave	Los Alamitos	CA	90720	800 E La Cadena Dr	Riverside	CA	92507
7210 Alondra Blvd	Paramount	CA	90723	3080 12th St	Riverside	CA	92507
14350 Garfield Ave	Paramount	CA	90723	1001 Columbia Ave	Riverside	CA	92507
16706 Garfield Ave	Paramount	CA	90723	1495 Columbia Ave	Riverside	CA	92507
14001 S Garfield Ave	Paramount	CA	90723	6860 Sycamore Canyon Blvd	Riverside	CA	92507
14900 Garfield Ave	Paramount	CA	90723	875 Michigan Ct	Riverside	CA	92507
7743 Adams St	Paramount	CA	90723	1560 Sierra Ridge Dr	Riverside	CA	92507
14001 Orange Ave	Paramount	CA	90723	795 Columbia Ave	Riverside	CA	92507
15701 Minnesota Ave	Paramount	CA	90723	555 Palmyrita Ave	Riverside	CA	92507
350 Westmont Dr	San Pedro	CA	90731	6681 River Run Dr	Riverside	CA	92507
401 Westmont Ave	San Pedro	CA	90731	800 Iowa Ave	Riverside	CA	92507
300 Westmont Dr	San Pedro	CA	90731	6721 Sycamore Canyon Blvd	Riverside	CA	92507
111 E 22nd St	San Pedro	CA	90731	475 Palmyrita Ave	Riverside	CA	92507
901 New Dock St	Wilmington	CA	90731	6275 Lance Dr	Riverside	CA	92507
301 Westmont Dr	San Pedro	CA	90731	6150 Sycamore Canyon Blvd	Riverside	CA	92507
1710 Apollo Ct	Seal Beach	CA	90740	1730 Eastridge Ave	Riverside	CA	92507
1770 Saturn Way	Seal Beach	CA	90740	1651 Eastridge Ave	Riverside	CA	92507
1700 Saturn Way	Seal Beach	CA	90740	935 Palmyrita Ave	Riverside	CA	92507
2401 E Pacific Coast Hwy	Wilmington	CA	90744	1111 Citrus St	Riverside	CA	92507
909 Colon St	Wilmington	CA	90744	6688 Box Springs Blvd	Riverside	CA	92507
900 E M St	Wilmington	CA	90744	1580 Eastridge Ave	Riverside	CA	92507
901 E E St	Wilmington	CA	90744	780 Columbia Ave	Riverside	CA	92507
920 E Pacific Coast Hwy	Wilmington	CA	90744	3087 12th St	Riverside	CA	92507
301 N Figueroa St	Wilmington	CA	90744	6335 Sycamore Canyon Blvd	Riverside	CA	92507
990 E 233rd St	Carson	CA	90745	333 Palmyrita Ave	Riverside	CA	92507
901 E 233rd St	Carson	CA	90745	1850 Atlanta Ave	Riverside	CA	92507
900 Watson Center Rd	Carson	CA	90745	500 Palmyrita Ave	Riverside	CA	92507
1111 E Watson Center Rd	Carson	CA	90745	6250 Sycamore Canyon Blvd	Riverside	CA	92507
1145 E 233rd St	Carson	CA	90745	6075 Lance Dr	Riverside	CA	92507
1071 E 233rd St	Carson	CA	90745	6255 Sycamore Canyon Blvd	Riverside	CA	92507
1710 E Sepulveda Blvd	Carson	CA	90745	6400 Sycamore Canyon Blvd	Riverside	CA	92507
810 E 233rd St	Carson	CA	90745	6711 Sycamore Canyon Blvd	Riverside	CA	92507
23610 S Banning Blvd	Carson	CA	90745	1155 Mount Vernon Ave	Riverside	CA	92507
800 E 230th St	Carson	CA	90745	6125 Sycamore Canyon Blvd	Riverside	CA	92507
24760 S Main St	Carson	CA	90745	1200 Columbia Ave	Riverside	CA	92507
22941 S Wilmington Ave	Carson	CA	90745	6975 Sycamore Canyon Blvd	Riverside	CA	92507
22673 S Wilmington Ave	Carson	CA	90745	6677 Box Spring Blvd	Riverside	CA	92507
809 E 236th St	Carson	CA	90745	1100 Citrus St	Riverside	CA	92507
21175 S Main St	Carson	CA	90745	490 Columbia Ave	Riverside	CA	92507
1113 E 230th St	Carson	CA	90745	1660 Iowa Ave	Riverside	CA	92507
1015 E 236th St	Carson	CA	90745	2727 Kansas Ave	Riverside	CA	92507
22707 S Wilmington Ave	Carson	CA	90745	2111 Eastridge Ave	Riverside	CA	92507
1035 Watson Center Rd	Carson	CA	90745	2321 3rd St	Riverside	CA	92507
1610 E Sepulveda Blvd	Carson	CA	90745	1680 Eastridge Ave	Riverside	CA	92507
1241 Watson Center Rd	Carson	CA	90745	1455 Citrus Ave	Riverside	CA	92507
1040 E Watson Center Rd	Carson	CA	90745	1601 Iowa Ave	Riverside	CA	92507
909 E 236th St	Carson	CA	90745	1500 Eastridge Ave	Riverside	CA	92507
22560 Lucerne St	Carson	CA	90745	6980 Sycamore Canyon Blvd	Riverside	CA	92507
1058 E 230th St	Carson	CA	90745	1455 Columbia Ave	Riverside	CA	92507
851 Watson Center Rd	Carson	CA	90745	6659 Sycamore Canyon Blvd	Riverside	CA	92507

Property Address	City	State	Zip	Property Address	City	State	Zip
23011 S Wilmington Ave	Carson	CA	90745	1995 3rd St	Riverside	CA	92507
1031 Watson Center Rd	Carson	CA	90745	7295 San Gorgonio Dr	Riverside	CA	92508
1165 E 230th St	Carson	CA	90745	7345 Sycamore Canyon Blvd	Riverside	CA	92508
1041 E 230th St	Carson	CA	90745	7105 Old 215 Frontage Rd	Riverside	CA	92508
720 Watson Center Rd	Carson	CA	90745	7350 San Gorgonio Dr	Riverside	CA	92508
989 E 233rd St	Carson	CA	90745	2325 Cottonwood Ave	Riverside	CA	92508
23000 Avalon Blvd	Carson	CA	90745	2325 Cottonwood Ave	Riverside	CA	92508
1130 Watson Center Rd	Carson	CA	90745	12246 Holly St	Riverside	CA	92509
1231 E 230th St	Carson	CA	90745	10045 Limonite Ave	Jurupa Valley	CA	92509
1021 E 233rd St	Carson	CA	90745	9670 Galena St	Jurupa Valley	CA	92509
23601 S Wilmington Ave	Carson	CA	90745	1135 Hall Ave	Jurupa Valley	CA	92509
1000 E 223rd St	Carson	CA	90745	4851 Felspar St	Jurupa Valley	CA	92509
24700 S Main St	Carson	CA	90745	6510 General Dr	Jurupa Valley	CA	92509
1350 E 223rd St	Carson	CA	90745	4510 Rutile St	Jurupa Valley	CA	92509
1240 E 230th St	Carson	CA	90745	5300 Via Ricardo	Jurupa Valley	CA	92509
22351 Wilmington Ave	Carson	CA	90745	6580 General Rd	Jurupa Valley	CA	92509
1118 E 223rd St	Carson	CA	90745	2356 Fleetwood Dr	Jurupa Valley	CA	92509
1130 E 230th St	Carson	CA	90745	2345 Fleetwood Dr	Jurupa Valley	CA	92509
24600 S Main St	Carson	CA	90745	1755 Brown Ave	Riverside	CA	92509
21023 S Main St	Carson	CA	90745	12215 Holly St	Riverside	CA	92509
23301 S Wilmington Ave	Carson	CA	90745	2350 Fleetwood Dr	Jurupa Valley	CA	92509
22600 S Bonita Ave	Carson	CA	90745	2100 Avalon St	Jurupa Valley	CA	92509
771 Watson Center Rd	Carson	CA	90745	14600 Innovation Dr	Riverside	CA	92518
1220 Watson Center Rd	Carson	CA	90745	14950 Meridian Pky	March Air Reserve Base	CA	92518
17145 S Margay Ave	Carson	CA	90746	15750 Meridian Pky	Riverside	CA	92518
18420 Harmon Ave	Carson	CA	90746	14605 Innovation Dr	Riverside	CA	92518
18655 S Bishop Ave	Carson	CA	90746	14855 Innovation Dr	Riverside	CA	92518
18300 Central Ave	Carson	CA	90746	14540 Innovation Dr	Riverside	CA	92518
18055 Harmon Ave	Carson	CA	90746	21800 Authority Way	Riverside	CA	92518
1535 E Beachey Pl	Carson	CA	90746	22000 Opportunity Way	Riverside	CA	92518
1501 E Victoria St	Carson	CA	90746	14751 Meridian Pky	Riverside	CA	92518
18431 S Wilmington Ave	Carson	CA	90746	20801 Krameria Ave	Riverside	CA	92518
18120 Bishop Ave	Carson	CA	90746	22280 Opportunity Way	Riverside	CA	92518
1500 E Glenn Curtiss St	Carson	CA	90746	22220 Opportunity Way	Riverside	CA	92518
1371 Charles Willard St	Carson	CA	90746	14813 Meridian Pky	Riverside	CA	92518
1725 Charles Willard St	Carson	CA	90746	20901 Krameria Ave	Riverside	CA	92518
16525 S Avalon Blvd	Carson	CA	90746	15801 Meridian Pky	Riverside	CA	92518
1380 Charles Willard St	Carson	CA	90746	15001 Meridian Pky	Riverside	CA	92518
1450 Glenn Curtiss St	Carson	CA	90746	14350 Meridian Pky	Riverside	CA	92518
1550 Charles Willard St	Carson	CA	90746	21822 Opportunity Way	Riverside	CA	92518
1650 E Glenn Curtiss St	Carson	CA	90746	5733 W Whittier Ave	Hemet	CA	92545
16325 S Avalon Blvd	Carson	CA	90746	17350 Perris Blvd	Moreno Valley	CA	92551
1651 E Glenn Curtiss St	Carson	CA	90746	24950 Grove View Rd	Moreno Valley	CA	92551
966 E Sandhill Ave	Carson	CA	90746	16875 Heacock St	Moreno Valley	CA	92551
1460 Beachey Pl	Carson	CA	90746	24960 San Michele Rd	Moreno Valley	CA	92551
1065 E Walnut St	Carson	CA	90746	17500 N Perris Blvd	Moreno Valley	CA	92551
17000 Kingsview Ave	Carson	CA	90746	24520 San Michele Rd	Moreno Valley	CA	92551
3201 Walnut Ave	Signal Hill	CA	90755	16901 San Celeste	Moreno Valley	CA	92551
3366 E Willow St	Signal Hill	CA	90755	17101 Heacock St	Moreno Valley	CA	92551
1281 Pier G Way	Long Beach	CA	90802	16110 Cosmos St	Moreno Valley	CA	92551
Pier F	Long Beach	CA	90802	24600 Nandina Ave	Moreno Valley	CA	92551
2500 E Thompson St	Long Beach	CA	90805	24300 Nandina Ave	Moreno Valley	CA	92551
6375 Paramount Blvd	Long Beach	CA	90805	24870 Nandina Ave	Moreno Valley	CA	92551
2201 E Market St	Long Beach	CA	90805	25300 Globe St	Moreno Valley	CA	92551
105 W Victoria St	Long Beach	CA	90805	17300 Perris Blvd	Moreno Valley	CA	92551
105 W Victoria St	Long Beach	CA	90805	17825 Indian St	Moreno Valley	CA	92551
6925 N Paramount Blvd	Long Beach	CA	90805	24103 San Michele Rd	Moreno Valley	CA	92551
6979 Cherry Ave	Long Beach	CA	90805	24975 Nandina Ave	Moreno Valley	CA	92551
100 W Victoria St	Long Beach	CA	90805	16850 Heacock St	Moreno Valley	CA	92551
3333 Airport Way	Long Beach	CA	90806	16415 Cosmos St	Moreno Valley	CA	92551
3500 E Willow St	Long Beach	CA	90806	24101 Iris Ave	Moreno Valley	CA	92551
2600 Temple Ave	Long Beach	CA	90806	17800 Perris Blvd	Moreno Valley	CA	92551
2401 E Wardlow Rd	Long Beach	CA	90807	17791 Perris Blvd	Moreno Valley	CA	92551

Property Address	City	State	Zip	Property Address	City	State	Zip
2400 E Wardlow Rd	Long Beach	CA	90807	24901 San Michele Rd	Moreno Valley	CA	92551
1800 E Wardlow Rd	Long Beach	CA	90807	17783 Indian St	Moreno Valley	CA	92551
4800 Conant St	Long Beach	CA	90808	24385 Nandina Ave	Moreno Valley	CA	92551
4001 Worsham Ave	Long Beach	CA	90808	15810 Heacock St	Moreno Valley	CA	92551
4501 E Conant St	Long Beach	CA	90808	17100 Perris Blvd	Moreno Valley	CA	92551
3701 Conant St	Long Beach	CA	90808	24208 San Michele Rd	Moreno Valley	CA	92551
3700 Cover St	Long Beach	CA	90808	25100 Globe St	Moreno Valley	CA	92551
3205 N Lakewood Blvd	Long Beach	CA	90808	23400 Cactus Ave	Moreno Valley	CA	92553
4175 E Conant St	Long Beach	CA	90808	14300 Graham St	Moreno Valley	CA	92553
3855 N Lakewood Blvd	Long Beach	CA	90808	14255 Elsworth St	Moreno Valley	CA	92553
2300 Redondo Ave	Long Beach	CA	90809	23700 Cactus Ave	Moreno Valley	CA	92553
3600 E Burnett Ave	Long Beach	CA	90809	23800 Cactus Ave	Moreno Valley	CA	92553
2211 E Carson St	Carson	CA	90810	23360 Cactus Ave	Moreno Valley	CA	92553
2320 E Dominguez St	Carson	CA	90810	22150 Goldencrest Dr	Moreno Valley	CA	92553
2839 El Presidio St	Carson	CA	90810	23650 Brodiaea Ave	Moreno Valley	CA	92553
2807 El Presidio St	Carson	CA	90810	22135 Alessandro Blvd	Moreno Valley	CA	92553
1483 W Via Plata St	Long Beach	CA	90810	22750 Cactus Ave	Moreno Valley	CA	92553
20500 S Alameda St	Carson	CA	90810	23400 Cactus Ave	Moreno Valley	CA	92553
2161 E Dominguez St	Long Beach	CA	90810	22705 Newhope St	Moreno Valley	CA	92553
2201 E Carson St	Carson	CA	90810	23532 Brodiaea Ave	Moreno Valley	CA	92553
2630 E El Presidio St	Carson	CA	90810	28020 Eucalyptus Ave	Moreno Valley	CA	92555
2220 E Carson St	Carson	CA	90810	28010 Eucalyptus Ave	Moreno Valley	CA	92555
2270 E 220th St	Carson	CA	90810	28025 Eucalyptus Ave	Moreno Valley	CA	92555
21950 Arnold Center Rd	Carson	CA	90810	28015 Eucalyptus Ave	Moreno Valley	CA	92555
2155 E 220th St	Carson	CA	90810	12661 Aldi Pl	Moreno Valley	CA	92555
2132 E Dominguez St	Carson	CA	90810	29800 Eucalyptus Ave	Moreno Valley	CA	92555
21136 S Wilmington Ave	Carson	CA	90810	25720 Jefferson Ave	Murrieta	CA	92562
2000 E Carson St	Carson	CA	90810	38655 Sky Canyon Dr	Murrieta	CA	92563
21906 Arnold Center Rd	Carson	CA	90810	30590 Cochise Cir	Murrieta	CA	92563
20633 S Fordyce Ave	Carson	CA	90810	19940 Hansen Ave	Nuevo	CA	92567
1665 Hughes Way	Long Beach	CA	90810	24312 Daytona Cove	Perris	CA	92570
20974 S Santa Fe Ave	Long Beach	CA	90810	24195 Orange Ave	Perris	CA	92570
20488 Reeves Ave	Carson	CA	90810	17618 Harvill Ave	Perris	CA	92570
21900 S Wilmington Ave	Carson	CA	90810	18810 Harvill Ave	Perris	CA	92570
20355 Reeves Ave	Carson	CA	90810	23129 Cajalco Rd	Perris	CA	92570
2649 E Dominguez St	Long Beach	CA	90810	17789 Old Oleander Blvd	Perris	CA	92570
2131 W Willow St	Long Beach	CA	90810	707 E 4th St	Perris	CA	92570
2711 E Dominguez St	Long Beach	CA	90810	23123 Cajalco Rd	Perris	CA	92570
1500 W Dominguez St	Long Beach	CA	90810	24201 Orange Ave	Perris	CA	92570
21750 S Arnold Center Dr	Carson	CA	90810	145 Malbert St	Perris	CA	92570
3025 E Dominguez St	Carson	CA	90810	18310 Harvill Ave	Perris	CA	92570
2011 E Carson St	Carson	CA	90810	22780 Harley Knox Blvd	Perris	CA	92570
20600 S Alameda St	Carson	CA	90810	3350 Redlands Ave	Perris	CA	92571
20801 S Santa Fe Ave	Carson	CA	90810	4413 Patterson Ave	Perris	CA	92571
2116 E 220th St	Carson	CA	90810	375 Markham St	Perris	CA	92571
2200 Technology Pl	Long Beach	CA	90810	4565 Redlands Ave	Perris	CA	92571
2888 E El Presidio St	Carson	CA	90810	3100 N Perris Blvd	Perris	CA	92571
2230 E Carson St	Carson	CA	90810	4555 Redlands Ave	Perris	CA	92571
20642 S Fordyce Ave	Carson	CA	90810	251 E Rider St	Perris	CA	92571
2417 E Carson St	Carson	CA	90810	290 W Markham St	Perris	CA	92571
2250 E 220th St	Carson	CA	90810	657 Nance St	Perris	CA	92571
20444 Reeves Ave	Carson	CA	90810	100 W Sinclair St	Perris	CA	92571
20499 Reeves Ave	Carson	CA	90810	4323 Indian Ave	Perris	CA	92571
1925 E Dominguez St	Carson	CA	90810	400 Harley Knox Blvd	Perris	CA	92571
2001 E Dominguez St	Long Beach	CA	90810	4150 Patterson Ave	Perris	CA	92571
3900 Via Oro	Long Beach	CA	90810	3411 N Perris Blvd	Perris	CA	92571
20943 S Maciel Ave	Carson	CA	90810	3700 Indian Ave	Perris	CA	92571
2400 E Dominguez St	Long Beach	CA	90810	4378 N Perris Blvd	Perris	CA	92571
1431 W Via Plata St	Long Beach	CA	90810	353 Perry St	Perris	CA	92571
20434 S Santa Fe Ave	Carson	CA	90810	4100 N Webster Ave	Perris	CA	92571
1981 E 213th St	Carson	CA	90810	3500 Indian Ave	Perris	CA	92571
2255 E 220th St	Carson	CA	90810	3300 Indian Ave	Perris	CA	92571
1901 W Pacific Coast Hwy	Long Beach	CA	90810	501 Harley Knox Blvd	Perris	CA	92571

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20821 S Santa Fe Ave	Carson	CA	90810	2830 Barrett Ave	Perris	CA	92571
2575 El Presidio St	Carson	CA	90810	3984 Indian Ave	Perris	CA	92571
20639 S Fordyce Ave	Carson	CA	90810	278 W Markham St	Perris	CA	92571
2201 E Dominguez St	Carson	CA	90810	22722 Harley Knox Blvd	Perris	CA	92571
625 W Anaheim St	Long Beach	CA	90813	4120 Indian St	Perris	CA	92571
1710 Pier B St	Long Beach	CA	90813	3691 N Perris Blvd	Perris	CA	92571
1711 Harbor Ave	Long Beach	CA	90813	4120 Indian St	Perris	CA	92571
3500 E Burnett Ave	Long Beach	CA	90815	3411 N Perris Blvd	Perris	CA	92571
4184 Conant St	Long Beach	CA	90846	3900 Indian Ave	Perris	CA	92571
3788 Conant St	Long Beach	CA	90846	3404 Indian Ave	Perris	CA	92571
4022 Conant St	Long Beach	CA	90846	350 W Markham St	Perris	CA	92571
4600 Conant St	Long Beach	CA	90846	1320 S Buena Vista St	San Jacinto	CA	92583
4350 Conant St	Long Beach	CA	90846	41573 Dendy Pky	Temecula	CA	92590
12321 Lower Azusa Rd	Arcadia	CA	91006	28820 Single Oak Dr	Temecula	CA	92590
12389 Lower Azusa Rd	Arcadia	CA	91006	43044 Business Park Dr	Temecula	CA	92590
12359 Lower Azusa Rd	Arcadia	CA	91006	42375 Remington Ave	Temecula	CA	92590
12339 Lower Azusa Rd	Arcadia	CA	91006	27460 Bostik Ct	Temecula	CA	92590
1700 Business Center Dr	Duarte	CA	91010	26879 Diaz Rd	Temecula	CA	92590
1801 Highland Ave	Duarte	CA	91010	27565 Diaz Rd	Temecula	CA	92590
2310 Central Ave	Duarte	CA	91010	43085 Business Park Dr	Temecula	CA	92590
801 Royal Oaks Dr	Monrovia	CA	91016	28381 Vincent Moraga Dr	Temecula	CA	92590
9545 Wentworth St	Sunland	CA	91040	43195 Business Park Dr	Temecula	CA	92590
1015 S Arroyo Pky	Pasadena	CA	91105	42301 Zevo Dr	Temecula	CA	92590
26801 Agoura Rd	Calabasas	CA	91301	41995 Zevo Dr	Temecula	CA	92590
6633 Canoga Ave	Canoga Park	CA	91303	41980 Winchester Rd	Temecula	CA	92590
8901 Canoga Ave	Canoga Park	CA	91304	41915 Business Park Dr	Temecula	CA	92590
8900 De Soto Ave	Canoga Park	CA	91304	27719 Diaz Rd	Temecula	CA	92590
8900 De Soto Ave	Canoga Park	CA	91304	42500 Winchester Rd	Temecula	CA	92590
9401 De Soto Ave	Chatsworth	CA	91311	43225 Business Park Dr	Temecula	CA	92590
8900 De Soto Ave	Canoga Park	CA	91311	40750 County Center Dr	Temecula	CA	92591
9409 Owensmouth Ave	Chatsworth	CA	91311	26040 Ynez Rd	Temecula	CA	92591
9109 Mason Ave	Chatsworth	CA	91311	40610 County Center Dr	Temecula	CA	92591
20000 Prairie St	Chatsworth	CA	91311	26201 Ynez Rd	Temecula	CA	92591
9631 De Soto Ave	Chatsworth	CA	91311	40761 County Center Dr	Temecula	CA	92591
20730 Prairie St	Chatsworth	CA	91311	26531 Ynez Rd	Temecula	CA	92591
20400 Plummer St	Chatsworth	CA	91311	3660 Brennan Ave	Perris	CA	92599
9419 Mason Ave	Chatsworth	CA	91311	14370 Myford Rd	Irvine	CA	92606
21701 Prairie St	Chatsworth	CA	91311	14600 Myford Rd	Irvine	CA	92606
20525 Nordhoff St	Chatsworth	CA	91311	14350 Myford Rd	Irvine	CA	92606
9120 Mason Ave	Chatsworth	CA	91311	1452 Alton Pky	Irvine	CA	92606
9140 Lurline Ave	Chatsworth	CA	91311	14524 Myford Rd	Irvine	CA	92606
21314 Lassen St	Chatsworth	CA	91311	16700 Red Hill Ave	Irvine	CA	92606
21350 Lassen St	Chatsworth	CA	91311	2815 Warner Ave	Irvine	CA	92606
9700 Independence Ave	Chatsworth	CA	91311	2152 Alton Pky	Irvine	CA	92606
9301 Mason Ave	Chatsworth	CA	91311	1601 Alton Pkwy	Irvine	CA	92606
20701 Plummer St	Chatsworth	CA	91311	1600 Barranca Pky	Irvine	CA	92606
21605 Plummer St	Chatsworth	CA	91311	1 Icon	Foothill Ranch	CA	92610
8900 De Soto Ave	Canoga Park	CA	91311	80 Icon	Foothill Ranch	CA	92610
9453 Owensmouth Ave	Chatsworth	CA	91311	50 Icon	Foothill Ranch	CA	92610
20650 Prairie St	Chatsworth	CA	91311	20131 Ellipse	Foothill Ranch	CA	92610
8900 De Soto Ave	Canoga Park	CA	91311	19511 Pauling	Foothill Ranch	CA	92610
18537 Parthenia St	Northridge	CA	91324	26972 Burbank Ave	Foothill Ranch	CA	92610
19901 Nordhoff St	Northridge	CA	91324	25892 Towne Centre Dr	Foothill Ranch	CA	92610
8500 Balboa Blvd	Northridge	CA	91329	19531 Pauling	Foothill Ranch	CA	92610
12708 Branford St	Pacoima	CA	91331	20 Icon	Foothill Ranch	CA	92610
10865 Sutter Ave	Pacoima	CA	91331	25861 Wright St	Foothill Ranch	CA	92610
12224 Montague St	Pacoima	CA	91331	20081 Ellipse	Foothill Ranch	CA	92610
10241 Norris Ave	Pacoima	CA	91331	20001 Ellipse Dr	Foothill Ranch	CA	92610
12878 Pierce St	Pacoima	CA	91331	1062 McGaw Ave	Irvine	CA	92614
13592 Desmond St	Pacoima	CA	91331	17482 Pullman St	Irvine	CA	92614
12450 Branford St	Pacoima	CA	91331	2323 Main St	Irvine	CA	92614
12820 Pierce St	Pacoima	CA	91331	17352 Derian Ave	Irvine	CA	92614
12154 Montague St	Pacoima	CA	91331	17352 Armstrong Ave	Irvine	CA	92614
675 Glenoaks Blvd	San Fernando	CA	91340	1 Edwards Way	Irvine	CA	92614

Property Address	City	State	Zip	Property Address	City	State	Zip
1150 Aviation Pl	San Fernando	CA	91340	17421 Von Karman Ave	Irvine	CA	92614
13571 Vaughn St	San Fernando	CA	91340	2026 McGaw Ave	Irvine	CA	92614
1245 Aviation Pl	San Fernando	CA	91340	121 Waterworks Way	Irvine	CA	92618
1145 Arroyo Ave	San Fernando	CA	91340	5 Marconi	Irvine	CA	92618
13207 Bradley Ave	Sylmar	CA	91342	20 Goodyear	Irvine	CA	92618
13259 Ralston Ave	Sylmar	CA	91342	9750 Irvine Blvd	Irvine	CA	92618
15180 Bledsoe St	Sylmar	CA	91342	9401 Toledo Way	Irvine	CA	92618
13100 Telfair Ave	Sylmar	CA	91342	1 Holland	Irvine	CA	92618
12780 San Fernando Rd	Sylmar	CA	91342	34 Parker	Irvine	CA	92618
15624 Roxford St	Sylmar	CA	91342	7000 Barranca Pky	Irvine	CA	92618
13291 Ralston Ave	Sylmar	CA	91342	117 Waterworks Way	Irvine	CA	92618
13235 Golden State Rd	Sylmar	CA	91342	9500 Jeronimo Rd	Irvine	CA	92618
12744 San Fernando Rd	Sylmar	CA	91342	6001 Oak Canyon	Irvine	CA	92618
12745 Arroyo St	Sylmar	CA	91342	6489 Oak Canyon	Irvine	CA	92618
13287 Ralston Ave	Sylmar	CA	91342	14300 Alton Pky	Irvine	CA	92618
15825 Roxford St	Sylmar	CA	91342	15800 Laguna Canyon Rd	Irvine	CA	92618
15860 Olden St	Sylmar	CA	91342	9400 Jeronimo Rd	Irvine	CA	92618
15648 Roxford St	Sylmar	CA	91342	5 Pasteur	Irvine	CA	92618
12975 Bradley Ave	Sylmar	CA	91342	9271 Jeronimo Rd	Irvine	CA	92618
14093 Balboa Blvd	Sylmar	CA	91342	67 Fairbanks	Irvine	CA	92618
12740 Arroyo St	Sylmar	CA	91342	9650 Jeronimo Rd	Irvine	CA	92618
15853 Olden St	Sylmar	CA	91342	8014 Marine Way	Irvine	CA	92618
13943 Balboa Blvd	Sylmar	CA	91342	15041 Bake Pky	Irvine	CA	92618
15148 Bledsoe St	Sylmar	CA	91342	9300 Toledo Way	Irvine	CA	92618
15900 Valley View Ct	Sylmar	CA	91342	76 Fairbanks	Irvine	CA	92618
16450 Foothill Blvd	Sylmar	CA	91342	9300 Toledo Way	Irvine	CA	92618
16633 Schoenborn St	North Hills	CA	91343	6485 Oak Canyon	Irvine	CA	92618
16719 Schoenborn St	North Hills	CA	91343	14155 Bake Pky	Irvine	CA	92618
16689 Schoenborn St	North Hills	CA	91343	10 Whatney	Irvine	CA	92618
25655 Springbrook Ave	Santa Clarita	CA	91350	9 Holland St	Irvine	CA	92618
25655 Springbrook Ave	Santa Clarita	CA	91350	9801 Muirlands Blvd	Irvine	CA	92618
20705 Centre Pointe Pky	Santa Clarita	CA	91350	1585 MacArthur Blvd	Costa Mesa	CA	92626
9545 San Fernando Rd	Sun Valley	CA	91352	1650 Sunflower Ave	Costa Mesa	CA	92626
7900 San Fernando Rd	Sun Valley	CA	91352	1660 Scenic Ave	Costa Mesa	CA	92626
7608 N Clybourn Ave	Sun Valley	CA	91352	1683 Sunflower Ave	Costa Mesa	CA	92626
9800 Glenoaks Blvd	Sun Valley	CA	91352	1701 Placentia Ave	Costa Mesa	CA	92627
10635 Stagg St	Sun Valley	CA	91352	20200 Windrow Dr	Lake Forest	CA	92630
9171 San Fernando Rd	Sun Valley	CA	91352	25392 Commercentre Dr	Lake Forest	CA	92630
12250 Montague St	Sun Valley	CA	91352	25952 Commercentre Dr	Lake Forest	CA	92630
10947 Pendleton St	Sun Valley	CA	91352	25862 Commercentre Dr	Lake Forest	CA	92630
11308 Penrose St	Sun Valley	CA	91352	14520 Delta Ln	Huntington Beach	CA	92647
9210 San Fernando Rd	Sun Valley	CA	91352	17311 Nichols Ln	Huntington Beach	CA	92647
10671 Lanark St	Sun Valley	CA	91352	5701 Skylab Rd	Huntington Beach	CA	92647
29115 Avenue Valleyview	Valencia	CA	91355	5800 Skylab Rd	Huntington Beach	CA	92647
24903 Avenue Kearny	Valencia	CA	91355	5700 Skylab Rd	Huntington Beach	CA	92647
29010 Avenue Paine	Valencia	CA	91355	7391 Heil Ave	Huntington Beach	CA	92647
28104 Witherspoon Pky	Valencia	CA	91355	14505 Astronautics Dr	Huntington Beach	CA	92647
27712 Avenue Mentry	Valencia	CA	91355	5901 Bolsa Ave	Huntington Beach	CA	92647
28901 N Avenue Paine	Valencia	CA	91355	5601 Skylab Rd	Huntington Beach	CA	92647
27811 Hancock Pky	Valencia	CA	91355	5951 Skylab Rd	Huntington Beach	CA	92647
28939 Avenue Williams	Valencia	CA	91355	5801 Skylab Rd	Huntington Beach	CA	92647
28355 Witherspoon Pky	Valencia	CA	91355	16350 Gothard St	Huntington Beach	CA	92647
25045 Avenue Tibbitts	Valencia	CA	91355	5900 Skylab Rd	Huntington Beach	CA	92647
29125 Avenue Paine	Valencia	CA	91355	7601 Clay Ave	Huntington Beach	CA	92648
28751 Witherspoon Pky	Valencia	CA	91355	5551 McFadden Ave	Huntington Beach	CA	92649
29120 Commerce Center Dr	Valencia	CA	91355	15342 Graham St	Huntington Beach	CA	92649
28936 Avenue Williams	Valencia	CA	91355	15400 Graham St	Huntington Beach	CA	92649
28470 Witherspoon Pky	Valencia	CA	91355	5600 Argosy Cir	Huntington Beach	CA	92649
27420 Avenue Scott	Valencia	CA	91355	22 Brookline	Aliso Viejo	CA	92656
28305 W Livingston Ave	Valencia	CA	91355	33608 Ortega Hwy	San Juan Capistrano	CA	92675
26121 Avenue Hall	Valencia	CA	91355	30800 Rancho Viejo Rd	San Juan Capistrano	CA	92675
25145 Anza Dr	Valencia	CA	91355	7400 Hazard Ave	Westminster	CA	92683
27680 Avenue Mentry	Valencia	CA	91355	15172 Goldenwest Cir	Westminster	CA	92683

Property Address	City	State	Zip	Property Address	City	State	Zip
28624 Witherspoon Pky	Valencia	CA	91355	29947 Avenida De Las Banderas	Rancho Santa Margarita	CA	92688
29010 Commerce Center Dr	Valencia	CA	91355	30200 Avenida De Las Banderas	Rancho Santa Margarita	CA	92688
28545 Livingston Ave W	Valencia	CA	91355	22591 Avenida Empresa	Rancho Santa Margarita	CA	92688
28909 Avenue Williams	Valencia	CA	91355	30322 Esperanza	Rancho Santa Margarita	CA	92688
28101 Industry Dr	Valencia	CA	91355	625 N Grand Ave	Santa Ana	CA	92701
25200 Rye Canyon Rd	Valencia	CA	91355	511 N Fairview St	Santa Ana	CA	92703
28150 Industry Dr	Valencia	CA	91355	3100 S Susan St	Santa Ana	CA	92704
27772 Avenue Scott	Santa Clarita	CA	91355	3441 W MacArthur Blvd	Santa Ana	CA	92704
27727 Avenue Scott	Valencia	CA	91355	3100 W Segerstrom Ave	Santa Ana	CA	92704
27801 Avenue Scott	Valencia	CA	91355	2811 S Harbor Blvd	Santa Ana	CA	92704
28455 Livingston Ave	Valencia	CA	91355	2701 S Harbor Blvd	Santa Ana	CA	92704
29040 Avenue Valleyview	Valencia	CA	91355	2700 S Fairview St	Santa Ana	CA	92704
28454 Livingston Ave	Valencia	CA	91355	4041 W Garry Ave	Santa Ana	CA	92704
28680 Braxton Ave	Valencia	CA	91355	3300 W Segerstrom Ave	Santa Ana	CA	92704
28210 Avenue Stanford	Valencia	CA	91355	3731 Warner Ave	Santa Ana	CA	92704
27911 W Franklin Pky	Valencia	CA	91355	4042 W Garry Ave	Santa Ana	CA	92704
29125 Avenue Valley View	Valencia	CA	91355	3300 S Fairview St	Santa Ana	CA	92704
28145 W Harrison Pky	Valencia	CA	91355	3030 S Susan St	Santa Ana	CA	92704
28310 W Livingston Ave	Valencia	CA	91355	3330 S Harbor	Santa Ana	CA	92704
28361 Constellation Rd	Valencia	CA	91355	3323 W Warner Ave	Santa Ana	CA	92704
29011 Commerce Center Dr	Valencia	CA	91355	2801 S Yale St	Santa Ana	CA	92704
24800 Avenue Rockefeller	Valencia	CA	91355	3201 S Susan St	Santa Ana	CA	92704
21200 Victory Blvd	Woodland Hills	CA	91367	3400 W Garry Ave	Santa Ana	CA	92704
21240 Burbank Blvd	Woodland Hills	CA	91367	1929 E Saint Andrew Pl	Santa Ana	CA	92705
14000 Arminta St	Panorama City	CA	91402	2400 S Grand Ave	Santa Ana	CA	92705
14400 Arminta St	Panorama City	CA	91402	2001 E Carnegie Ave	Santa Ana	CA	92705
7860 Nelson Rd	Van Nuys	CA	91402	2801 Catherine Way	Santa Ana	CA	92705
7900 Nelson Rd	Panorama City	CA	91402	2040 E Dyer Rd	Santa Ana	CA	92705
7651 Woodman Ave	Panorama City	CA	91402	2036 E Dyer Rd	Santa Ana	CA	92705
14200 Arminta St	Panorama City	CA	91402	1800 E Dyer Rd	Santa Ana	CA	92705
7865 Nelson Rd	Panorama City	CA	91402	1800 E Saint Andrew Pl	Santa Ana	CA	92705
7519 Woodman Ave	Van Nuys	CA	91405	3030 Red Hill Ave	Santa Ana	CA	92705
15800 Roscoe Blvd	Van Nuys	CA	91406	2525 Pullman St	Santa Ana	CA	92705
8201 Woodley Ave	Van Nuys	CA	91406	1951 Carnegie Ave	Santa Ana	CA	92705
15903 Strathern St	Van Nuys	CA	91406	1395 S Lyon St	Santa Ana	CA	92705
15330 Raymer St	Van Nuys	CA	91406	1224 E Warner Ave	Santa Ana	CA	92705
15853 Strathern St	Van Nuys	CA	91406	2601 S Garnsey St	Santa Ana	CA	92707
7855 Hayvenhurst Ave	Van Nuys	CA	91406	1801 S Standard Ave	Santa Ana	CA	92707
7800 Woodley Ave	Van Nuys	CA	91406	2400 S Garnsey St	Santa Ana	CA	92707
15955 Strathern St	Van Nuys	CA	91406	2526 S Birch St	Santa Ana	CA	92707
7943 Woodley Ave	Van Nuys	CA	91406	302 E Goetz Ave	Santa Ana	CA	92707
15500 Erwin St	Van Nuys	CA	91411	515 E Dyer Rd	Santa Ana	CA	92707
820 S Flower St	Burbank	CA	91502	1217 E Saint Gertrude Pl	Santa Ana	CA	92707
2980 N San Fernando Blvd	Burbank	CA	91504	601 W Dyer Rd	Santa Ana	CA	92707
3000 Winona Ave	Burbank	CA	91504	500 W Warner Ave	Santa Ana	CA	92707
4510 W Vanowen St	Burbank	CA	91505	11488 Slater Ave	Fountain Valley	CA	92708
960 Chestnut St	Burbank	CA	91506	17595 Mount Herrmann St	Fountain Valley	CA	92708
7306 Laurel Canyon Blvd	North Hollywood	CA	91605	17235 Newhope St	Fountain Valley	CA	92708
6904 Tujunga Ave	North Hollywood	CA	91605	17665 Newhope St	Fountain Valley	CA	92708
11651 Hart St	North Hollywood	CA	91605	1123 Warner Ave	Tustin	CA	92780
11500 Sherman Way	North Hollywood	CA	91605	1200 Valencia Ave	Tustin	CA	92780
11330 Sherman Way	North Hollywood	CA	91605	1111 Bell Ave	Tustin	CA	92780
7100 Tujunga Ave	North Hollywood	CA	91605	1382 Bell Ave	Tustin	CA	92780
11211 Vanowen St	North Hollywood	CA	91605	1201 Bell Ave	Tustin	CA	92780
11428 Sherman Way	North Hollywood	CA	91605	1231 Warner Ave	Tustin	CA	92780
1100 W Hollyvale St	Azusa	CA	91702	2721 Michelle Dr	Tustin	CA	92780
6230 N Irwindale Ave	Azusa	CA	91702	1101 Bell Ave	Tustin	CA	92780

Property Address	City	State	Zip	Property Address	City	State	Zip
1017 W 5th St	Azusa	CA	91702	3101 W Sunflower Ave	Santa Ana	CA	92799
1344 W Foothill Blvd	Azusa	CA	91702	353 N Euclid Way	Anaheim	CA	92801
823 W 8th St	Azusa	CA	91702	1256 N Magnolia Ave	Anaheim	CA	92801
16100 E Foothill Blvd	Irwindale	CA	91702	1160 N Anaheim Blvd	Anaheim	CA	92801
970 W Sierra Madre Ave	Azusa	CA	91702	1201 N Magnolia Ave	Anaheim	CA	92801
311 Aerojet Ave	Azusa	CA	91702	1415 N Raymond Ave	Anaheim	CA	92801
1223 W 10th Ave	Azusa	CA	91702	400 E Orangethorpe Ave	Anaheim	CA	92801
1000 W Sierra Madre Ave	Azusa	CA	91702	1212 N Hubbell Way	Anaheim	CA	92801
601 S Vincent Ave	Azusa	CA	91702	1226 N Olive St	Anaheim	CA	92801
1055 W 8th St	Azusa	CA	91702	500 E Orangethorpe Ave	Anaheim	CA	92801
500 W Danlee Dr	Azusa	CA	91702	1111 N Brookhurst St	Anaheim	CA	92801
975 W 8th St	Azusa	CA	91702	295 E Orangethorpe Ave	Anaheim	CA	92801
1100 Baldwin Park Blvd	Baldwin Park	CA	91706	1765 Penhall Way	Anaheim	CA	92801
5082 4th St	Irwindale	CA	91706	1515 S Manchester Ave	Anaheim	CA	92802
13502 Virginia Ave	Baldwin Park	CA	91706	2114 W Ball Rd	Anaheim	CA	92804
5793 Martin Rd	Irwindale	CA	91706	1500 S Anaheim Blvd	Anaheim	CA	92805
15761 Tapia St	Irwindale	CA	91706	1620 S Lewis St	Anaheim	CA	92805
13245 Los Angeles St	Baldwin Park	CA	91706	1331 S Vernon St	Anaheim	CA	92805
600 Live Oak Ave	Irwindale	CA	91706	901 E Ball Rd	Anaheim	CA	92805
5091 4th St	Irwindale	CA	91706	1400 S Allec St	Anaheim	CA	92805
16033 Arrow Hwy	Irwindale	CA	91706	1001 E Ball Rd	Anaheim	CA	92805
1450 Virginia Ave	Baldwin Park	CA	91706	1501 E Cerritos Ave	Anaheim	CA	92805
5400 N Irwindale Ave	Irwindale	CA	91706	1201 E Cerritos Ave	Anaheim	CA	92805
5300 Irwindale Ave	Irwindale	CA	91706	1000 E Ball Rd	Anaheim	CA	92805
16180 Ornelas St	Irwindale	CA	91706	929 E South St	Anaheim	CA	92805
5301 Rivergrade Rd	Irwindale	CA	91706	1771 S Lewis St	Anaheim	CA	92805
4826 4th St	Irwindale	CA	91706	1730 S Anaheim Way	Anaheim	CA	92805
4889 4th St	Irwindale	CA	91706	1051 S East St	Anaheim	CA	92805
4414 Azusa Canyon Rd	Irwindale	CA	91706	1515 E Winston Rd	Anaheim	CA	92805
5555 N Irwindale Ave	Irwindale	CA	91706	601 E Ball Rd	Anaheim	CA	92805
4800 Azusa Canyon Rd	Irwindale	CA	91706	710 E Ball Rd	Anaheim	CA	92805
15601 Cypress Ave	Irwindale	CA	91706	500 E Cerritos Ave	Anaheim	CA	92805
4401 Foxdale St	Irwindale	CA	91706	1625 S Lewis St	Anaheim	CA	92805
4981 4th St	Irwindale	CA	91706	1045 S East St	Anaheim	CA	92805
4775 Irwindale Ave	Irwindale	CA	91706	1455 S Allec St	Anaheim	CA	92805
16142 Fern Ave	Chino	CA	91708	3356 E La Palma Ave	Anaheim	CA	92806
15989 Cypress Ave	Chino	CA	91708	1423 S State College Blvd	Anaheim	CA	92806
8601 Merrill Ave	Chino	CA	91708	1600 N Kraemer Blvd	Anaheim	CA	92806
15820 Euclid Ave	Chino	CA	91708	1206 N Miller St	Anaheim	CA	92806
16043 El Prado	Chino	CA	91708	1440 N Kraemer Blvd	Anaheim	CA	92806
6720 Kimball Ave	Chino	CA	91708	2121 E Winston Rd	Anaheim	CA	92806
6911 Bickmore Ave	Chino	CA	91708	2201 E Cerritos Ave	Anaheim	CA	92806
16388 Fern Ave	Chino	CA	91708	3130 Miraloma Ave	Anaheim	CA	92806
6509 Kimball Ave	Chino	CA	91708	2891 E Miraloma Ave	Anaheim	CA	92806
15710 San Antonio Ave	Chino	CA	91708	1200 N Miller St	Anaheim	CA	92806
15785 Mountain Ave	Chino	CA	91708	1919 S State College Blvd	Anaheim	CA	92806
16300 Fern Ave	Chino	CA	91708	3190 Miraloma Ave	Anaheim	CA	92806
6720 Kimball Ave	Chino	CA	91708	3310 E Miraloma Ave	Anaheim	CA	92806
8646 Enterprise Way	Chino Hills	CA	91708	1231 N Miller St	Anaheim	CA	92806
15835 San Antonio Ave	Chino	CA	91708	1211 N Miller St	Anaheim	CA	92806
6750 Kimball Ave	Chino	CA	91708	1151 N Ocean Cir	Anaheim	CA	92806
15780 El Prado Rd	Chino	CA	91708	1650 N Kraemer Blvd	Anaheim	CA	92806
15970 Mountain Ave	Chino	CA	91708	1540 S Page Ct	Anaheim	CA	92806
16380 Euclid Ave	Chino	CA	91708	3125 E Coronado St	Anaheim	CA	92806
6377 Kimball Ave	Chino	CA	91708	3335 E La Palma Ave	Anaheim	CA	92806
15704 Mountain Ave	Chino	CA	91708	1204 N Miller St	Anaheim	CA	92806
15578 Hellman Ave	Chino	CA	91708	1202 N Miller St	Anaheim	CA	92806
15730 Mountain Ave	Chino	CA	91708	1150 N Red Gum St	Anaheim	CA	92806
16081 S Fern Ave	Chino	CA	91708	1000 N Edward Ct	Anaheim	CA	92806
15913 Mountain Ave	Chino	CA	91708	2040 S State College Blvd	Anaheim	CA	92806
8719 Enterprise Way	Chino	CA	91708	3340 E La Palma Ave	Anaheim	CA	92806
16045 Mountain Ave	Chino	CA	91708	1153 N Ocean Cir	Anaheim	CA	92806
6716 Bickmore Ave	Chino	CA	91708	3454 E Miraloma Ave	Anaheim	CA	92806
16133 Fern Ave	Chino	CA	91708	3845 E Coronado St	Anaheim	CA	92807

Property Address	City	State	Zip	Property Address	City	State	Zip
15910 Euclid Ave	Chino	CA	91708	5455 E La Palma Ave	Anaheim	CA	92807
6711 Bickmore Ave	Chino	CA	91708	5115 E La Palma Ave	Anaheim	CA	92807
15207 Flight Ave	Chino	CA	91708	4875 E Hunter Ave	Anaheim	CA	92807
15702 Cypress Ave	Chino	CA	91708	1230 N Tustin Ave	Anaheim	CA	92807
6725 Kimball Ave	Chino	CA	91708	5235 E Hunter Ave	Anaheim	CA	92807
15221 Fairfield Ranch Rd	Chino Hills	CA	91709	4633 E La Palma Ave	Anaheim	CA	92807
15291 Fairfield Ranch Rd	Chino Hills	CA	91709	1275 N Manassero St	Anaheim	CA	92807
15271 Fairfield Ranch Rd	Chino Hills	CA	91709	5425 E La Palma Ave	Anaheim	CA	92807
13775 Magnolia Ave	Chino	CA	91710	5325 E Hunter Ave	Anaheim	CA	92807
13445 12th St	Chino	CA	91710	5001 E La Palma Ave	Anaheim	CA	92807
13602 12th St	Chino	CA	91710	1265 N Van Buren St	Anaheim	CA	92807
13925 Pipeline Ave	Chino	CA	91710	5200 E La Palma Ave	Anaheim	CA	92807
15559 Flight Ave	Chino	CA	91710	105 S Puente St	Brea	CA	92821
15097 Van Vliet Ave	Chino	CA	91710	2701 E Imperial Hwy	Brea	CA	92821
13799 Monte Vista Ave	Chino	CA	91710	114 S Berry St	Brea	CA	92821
13931 Yorba Ave	Chino	CA	91710	408 Saturn St	Brea	CA	92821
4450 Edison Ave	Chino	CA	91710	3200 Enterprise St	Brea	CA	92821
5400 Alton St	Chino	CA	91710	300 E Cypress St	Brea	CA	92821
14101 Pipeline Ave	Chino	CA	91710	205 S Puente St	Brea	CA	92821
5085 Schaefer Ave	Chino	CA	91710	113 Viking Ave	Brea	CA	92821
13824 Yorba Ave	Chino	CA	91710	3300 E Birch St	Brea	CA	92821
13880 Monte Vista Ave	Chino	CA	91710	895 Columbia St	Brea	CA	92821
13780 Central Ave	Chino	CA	91710	630 E Lambert Rd	Brea	CA	92821
4091 E Francis Ave	Ontario	CA	91710	200 N Berry St	Brea	CA	92821
14701 Yorba Ave	Chino	CA	91710	2830 Orbiter St	Brea	CA	92821
15065 Flight Ave	Chino	CA	91710	350 Ranger Ave	Brea	CA	92821
13950 Norton Ave	Chino	CA	91710	100 S Puente St	Brea	CA	92821
4340 Eucalyptus Ave	Chino	CA	91710	200 N Puente St	Brea	CA	92821
14680 Monte Vista Ave	Chino	CA	91710	250 S Kraemer Blvd	Brea	CA	92821
6910 Bickmore Ave	Chino	CA	91710	3172 Nasa St	Brea	CA	92821
4626 Eucalyptus Ave	Chino	CA	91710	2750 Orbiter St	Brea	CA	92821
4681 Edison Ave	Chino	CA	91710	1225 W Imperial Hwy	Brea	CA	92821
4361 Edison Ave	Chino	CA	91710	2650 Orbiter St	Brea	CA	92821
13725 Pipeline Ave	Chino	CA	91710	566 Vanguard Way	Brea	CA	92821
4950 Edison Ave	Chino	CA	91710	675 S Placentia Ave	Fullerton	CA	92831
14430 Monte Vista Ave	Chino	CA	91710	1400 S Manhattan Ave	Fullerton	CA	92831
5521 Schaefer Ave	Chino	CA	91710	2020 E Orangethorpe Ave	Fullerton	CA	92831
4271 Edison Ave	Chino	CA	91710	2100 E Valencia Dr	Fullerton	CA	92831
14425 Yorba Ave	Chino	CA	91710	1030 E Valencia Dr	Fullerton	CA	92831
13950 Ramona Ave	Chino	CA	91710	1600 E Valencia Dr	Fullerton	CA	92831
12851 Reservoir St	Chino	CA	91710	700 S Raymond Ave	Fullerton	CA	92831
8986 Remington Ave	Chino	CA	91710	315 S Hale Ave	Fullerton	CA	92831
14035 Pipeline Ave	Chino	CA	91710	1335 S Acacia Ave	Fullerton	CA	92831
5150 Eucalyptus Ave	Chino	CA	91710	601 S Acacia Ave	Fullerton	CA	92831
13770 Norton Ave	Chino	CA	91710	1820 E Valencia Dr	Fullerton	CA	92831
15616 Euclid Ave	Chino	CA	91710	1500 E Valencia Dr	Fullerton	CA	92831
13860 Ramona Ave	Chino	CA	91710	1415 S Acacia St	Fullerton	CA	92831
5150 Edison Ave	Chino	CA	91710	1610 E Orangethorpe Ave	Fullerton	CA	92831
14210 Telephone Ave	Chino	CA	91710	800 S State College Blvd	Fullerton	CA	92831
13851 Ramona Ave	Chino	CA	91710	1500 E Walnut Ave	Fullerton	CA	92831
13771 Norton Ave	Chino	CA	91710	800 S Raymond Ave	Fullerton	CA	92831
8985 Merrill Ave	Chino	CA	91710	1551 E Orangethorpe Ave	Fullerton	CA	92831
5026 Chino Hills Pky	Chino	CA	91710	1424 S Raymond Ave	Fullerton	CA	92831
4640 Vinita Ct	Chino	CA	91710	667 S State College Blvd	Fullerton	CA	92831
14275 Telephone Ave	Chino	CA	91710	1401 E Orangethorpe Ave	Fullerton	CA	92831
5045 Eucalyptus Ave	Chino	CA	91710	350 S Raymond Ave	Fullerton	CA	92831
13850 Central Ave	Chino	CA	91710	2001 E Orangethorpe Ave	Fullerton	CA	92831
13875 Ramona Ave	Chino	CA	91710	701 S Sally Pl	Fullerton	CA	92831
4980 Eucalyptus Ave	Chino	CA	91710	1050 S State College Blvd	Fullerton	CA	92831
4250 Eucalyptus Ave	Chino	CA	91710	1901 E Rosslynn Ave	Fullerton	CA	92831
13950 Mountain Ave	Chino	CA	91710	2501 E Orangethorpe Ave	Fullerton	CA	92831
13404 Monte Vista Ave	Chino	CA	91710	2441 Cypress Way	Fullerton	CA	92831
13941 Norton Ave	Chino	CA	91710	1800 E Orangethorpe Ave	Fullerton	CA	92831
5116 Chino Hills Pky	Chino	CA	91710	2340 E Walnut Ave	Fullerton	CA	92831

Property Address	City	State	Zip	Property Address	City	State	Zip
14525 Monte Vista Ave	Chino	CA	91710	2325 Moore Ave	Fullerton	CA	92833
14207 Monte Vista Ave	Chino	CA	91710	2330 Raymer Ave	Fullerton	CA	92833
4651 Schaefer Ave	Chino	CA	91710	2009 Raymer Ave	Fullerton	CA	92833
14141 Yorba Ave	Chino	CA	91710	560 N Gilbert St	Fullerton	CA	92833
Monte Vista Ave	Chino	CA	91710	1920 Malvern St	Fullerton	CA	92833
8721 Merrill Ave	Chino	CA	91710	2425 W Commonwealth Ave	Fullerton	CA	92833
14310 Ramona Ave	Chino	CA	91710	570 N Gilbert St	Fullerton	CA	92833
4451 Eucalyptus Ave	Chino	CA	91710	2430 W Artesia Blvd	Fullerton	CA	92833
13971 Norton Ave	Chino	CA	91710	2750 W Moore Ave	Fullerton	CA	92833
13950 Yorba Ave	Chino	CA	91710	1930 Malvern St	Fullerton	CA	92833
14510 Monte Vista Ave	Chino	CA	91710	691 Burning Tree Rd	Fullerton	CA	92833
14725 Monte Vista Ave	Chino	CA	91710	1881 W Malvern Ave	Fullerton	CA	92833
5125 Schaefer Ave	Chino	CA	91710	1901 Raymer Ave	Fullerton	CA	92833
14120 Ramona Ave	Chino	CA	91710	4225 N Palm St	Fullerton	CA	92835
14326 Monte Vista Ave	Chino	CA	91710	4260 N Harbor Blvd	Fullerton	CA	92835
6185 Kimball Ave	Chino	CA	91710	458 E Lambert Rd	Fullerton	CA	92835
14651 Yorba Ave	Chino	CA	91710	4250 N Harbor Blvd	Fullerton	CA	92835
13775 Ramona Ave	Chino	CA	91710	210 E Lambert Rd	Fullerton	CA	92835
14000 Monte Vista Ave	Chino	CA	91710	4201 Bonita Pl	Fullerton	CA	92835
5151 Eucalyptus Ave	Chino	CA	91710	4150 N Palm St	Fullerton	CA	92835
15245 Van Vliet Ave	Chino	CA	91710	4278 N Harbor Blvd	Fullerton	CA	92835
14286 Monte Vista Ave	Chino	CA	91710	7421 Chapman Ave	Garden Grove	CA	92841
13975 Monte Vista Ave	Chino	CA	91710	12122 Western Ave	Garden Grove	CA	92841
4775 Eucalyptus Ave	Chino	CA	91710	7571 Lampson Ave	Garden Grove	CA	92841
5051 Edison Ave	Chino	CA	91710	12752 Monarch St	Garden Grove	CA	92841
13428 Benson Ave	Chino	CA	91710	12131 Western Ave	Garden Grove	CA	92841
13770 Ramona Ave	Chino	CA	91710	12101 Western Ave	Garden Grove	CA	92841
14720 Monte Vista Ave	Chino	CA	91710	11955 Monarch St	Garden Grove	CA	92841
8599 Rochester Ave	Rancho Cucamonga	CA	91730	7301 Orangewood Ave	Garden Grove	CA	92841
9409 Buffalo Ave	Rancho Cucamonga	CA	91730	12571 Western Ave	Garden Grove	CA	92841
10299 6th St	Rancho Cucamonga	CA	91730	12821 Knott St	Garden Grove	CA	92841
8949 Buffalo Ave	Rancho Cucamonga	CA	91730	12570 Knott St	Garden Grove	CA	92841
10621 6th St	Rancho Cucamonga	CA	91730	7361 Doig Dr	Garden Grove	CA	92841
11711 Arrow Route	Rancho Cucamonga	CA	91730	11700 Monarch St	Garden Grove	CA	92841
11335 Jersey Blvd	Rancho Cucamonga	CA	91730	7372 Doig Dr	Garden Grove	CA	92841
9160 N Buffalo Ave	Rancho Cucamonga	CA	91730	7366 Orangewood Ave	Garden Grove	CA	92841
10865 Jersey Blvd	Rancho Cucamonga	CA	91730	7300 Chapman Ave	Garden Grove	CA	92841
12155 6th St	Rancho Cucamonga	CA	91730	1900 2nd St	Norco	CA	92860
11081 Tacoma Dr	Rancho Cucamonga	CA	91730	3390 Horseless Carriage Dr	Norco	CA	92860
11701 6th St	Rancho Cucamonga	CA	91730	1300 W Taft Ave	Orange	CA	92865
10680 Acacia St	Rancho Cucamonga	CA	91730	2060 N Batavia St	Orange	CA	92865
10660 Acacia St	Rancho Cucamonga	CA	91730	2164 N Batavia St	Orange	CA	92865
11600 Millenium Ct	Rancho Cucamonga	CA	91730	615 N Grove Ave	Orange	CA	92865
10670 6th St	Rancho Cucamonga	CA	91730	230 W Blueridge Ave	Orange	CA	92865
11600 Dayton Dr	Rancho Cucamonga	CA	91730	2079 N Glassell St	Orange	CA	92865
11167 White Birch Dr	Rancho Cucamonga	CA	91730	2095 N Batavia St	Orange	CA	92865
8595 Milliken Ave	Rancho Cucamonga	CA	91730	1481 N Main St	Orange	CA	92867
9150 Hermosa Ave	Rancho Cucamonga	CA	91730	833 N Elm St	Orange	CA	92867
11555 Arrow Route	Rancho Cucamonga	CA	91730	750 N Main St	Orange	CA	92868
9292 9th St	Rancho Cucamonga	CA	91730	759 N Eckhoff St	Orange	CA	92868
9449 8th St	Rancho Cucamonga	CA	91730	625 W Palm Ave	Orange	CA	92868
10808 6th St	Rancho Cucamonga	CA	91730	190 W Crowther Ave	Placentia	CA	92870
11530 6th St	Rancho Cucamonga	CA	91730	355 S Melrose St	Placentia	CA	92870
9345 Santa Anita Ave	Rancho Cucamonga	CA	91730	200 Boysenberry Ln	Placentia	CA	92870
9560 Buffalo Ave	Rancho Cucamonga	CA	91730	1575 Magnolia Ave	Corona	CA	92878
8901 Arrow Route	Rancho Cucamonga	CA	91730	150 E Radio Rd	Corona	CA	92879
9545 Santa Anita Ave	Rancho Cucamonga	CA	91730	1375 Sampson Ave	Corona	CA	92879
9325 Santa Anita Ave	Rancho Cucamonga	CA	91730	1001 El Camino Ave	Corona	CA	92879
10667 Jersey Blvd	Rancho Cucamonga	CA	91730	300 E Parkridge Ave	Corona	CA	92879
9000 9th St	Rancho Cucamonga	CA	91730	1283 Sherborn St	Corona	CA	92879
8858 Rochester Ave	Rancho Cucamonga	CA	91730	515 S Promenade Ave	Corona	CA	92879
10650 4th St	Rancho Cucamonga	CA	91730	1223 Sherborn St	Corona	CA	92879
11246 Jersey Blvd	Rancho Cucamonga	CA	91730	2553 Sampson Ave	Corona	CA	92879
9101 Hermosa Ave	Rancho Cucamonga	CA	91730	1560 E 6th St	Corona	CA	92879

Property Address	City	State	Zip
8449 Milliken Ave	Rancho Cucamonga	CA	91730
10404 6th St	Rancho Cucamonga	CA	91730
8400 Milliken Ave	Rancho Cucamonga	CA	91730
9471 Buffalo Ave	Rancho Cucamonga	CA	91730
11096 Jersey Blvd	Rancho Cucamonga	CA	91730
10013 8th St	Rancho Cucamonga	CA	91730
9333 Hermosa Ave	Rancho Cucamonga	CA	91730
8369 Milliken Ave	Rancho Cucamonga	CA	91730
9363 Lucas Ranch Rd	Rancho Cucamonga	CA	91730
12434 4th St	Rancho Cucamonga	CA	91730
11599 Arrow Rt	Rancho Cucamonga	CA	91730
9678 Utica Ave	Rancho Cucamonga	CA	91730
9189 Utica Ave	Rancho Cucamonga	CA	91730
9059 Hermosa Ave	Rancho Cucamonga	CA	91730
8535 Oakwood Pl	Rancho Cucamonga	CA	91730
8865 Utica Ave	Rancho Cucamonga	CA	91730
9133 Center Ave	Rancho Cucamonga	CA	91730
9120 Center Ave	Rancho Cucamonga	CA	91730
10750 7th St	Rancho Cucamonga	CA	91730
11400 Newport Dr	Rancho Cucamonga	CA	91730
9168 Hermosa Ave	Rancho Cucamonga	CA	91730
11655 Jersey Blvd	Rancho Cucamonga	CA	91730
8825 Boston Pl	Rancho Cucamonga	CA	91730
9141 Arrow Hwy	Rancho Cucamonga	CA	91730
8291 Milliken Ave	Rancho Cucamonga	CA	91730
9180 Center Ave	Rancho Cucamonga	CA	91730
8840 Flower Rd	Rancho Cucamonga	CA	91730
10401 7th St	Rancho Cucamonga	CA	91730
9448 Richmond Pl	Rancho Cucamonga	CA	91730
10825 7th St	Rancho Cucamonga	CA	91730
9650 9th St	Rancho Cucamonga	CA	91730
9041 Pittsburgh Ave	Rancho Cucamonga	CA	91730
9050 Hermosa Ave	Rancho Cucamonga	CA	91730
11355 Arrow Route	Rancho Cucamonga	CA	91730
11601 Dayton Dr	Rancho Cucamonga	CA	91730
11200 Arrow Route	Rancho Cucamonga	CA	91730
9393 Arrow Route	Rancho Cucamonga	CA	91730
12320 4th St	Rancho Cucamonga	CA	91730
9060 Rochester Ave	Rancho Cucamonga	CA	91730
10655 E 7th St	Rancho Cucamonga	CA	91730
8784 Rochester Ave	Rancho Cucamonga	CA	91730
8950 Toronto Ave	Rancho Cucamonga	CA	91730
9408 Richmond Pl	Rancho Cucamonga	CA	91730
12320 4th St	Rancho Cucamonga	CA	91730
10220 4th St	Rancho Cucamonga	CA	91730
9955 6th St	Rancho Cucamonga	CA	91730
9000 Rochester Ave	Rancho Cucamonga	CA	91730
8950 Rochester Ave	Rancho Cucamonga	CA	91730
10955 Arrow Rt	Rancho Cucamonga	CA	91730
9089 8th St	Rancho Cucamonga	CA	91730
11190 White Birch Dr	Rancho Cucamonga	CA	91730
9520 Santa Anita Ave	Rancho Cucamonga	CA	91730
9100 9th St	Rancho Cucamonga	CA	91730
9275 Buffalo Ave	Rancho Cucamonga	CA	91730
8998 Hyssop Ave	Rancho Cucamonga	CA	91730
9282 Pittsburgh Ave	Rancho Cucamonga	CA	91730
11195 Eucalyptus St	Rancho Cucamonga	CA	91730
9121 Pittsburgh Ave	Rancho Cucamonga	CA	91730
12250 E 4th St	Rancho Cucamonga	CA	91730
9199 Cleveland Ave	Rancho Cucamonga	CA	91730
9595 Utica Ave	Rancho Cucamonga	CA	91730
8886 White Oak Ave	Rancho Cucamonga	CA	91730
4501 Arden Dr	El Monte	CA	91731
9320 Telstar Ave	El Monte	CA	91731
555 S Promenade Ave	Corona	CA	92879
222 S Promenade Ave	Corona	CA	92879
353 Meyer Cir	Corona	CA	92879
1470 E 6th St	Corona	CA	92879
1660 Leeson Ln	Corona	CA	92879
265 Radio Rd	Corona	CA	92879
264 Mariah Cir	Corona	CA	92879
1550 Magnolia Ave	Corona	CA	92879
1235 E Quarry St	Corona	CA	92879
725 E Harrison St	Corona	CA	92879
1493 E Bentley Dr	Corona	CA	92879
580 E Harrison St	Corona	CA	92879
395 Smitty Way	Corona	CA	92879
2571 Sampson Ave	Corona	CA	92879
235 Radio Rd	Corona	CA	92879
1275 Quarry St	Corona	CA	92879
375 TRM Cir	Corona	CA	92879
545 Alcoa Cir	Corona	CA	92880
550 Monica Cir	Corona	CA	92880
2380 Railroad St	Corona	CA	92880
1692 Jenks Dr	Corona	CA	92880
1990 Pomona Rd	Corona	CA	92880
451 N Cota St	Corona	CA	92880
220 Klug Cir	Corona	CA	92880
250 Airport Cir	Corona	CA	92880
475 N Sheridan St	Corona	CA	92880
150 S Maple St	Corona	CA	92880
299 N Smith Ave	Corona	CA	92880
132 Business Center Dr	Corona	CA	92880
14969 Summit Dr	Eastvale	CA	92880
250 Klug Cir	Corona	CA	92880
150 N Maple St	Corona	CA	92880
1400 W Rincon St	Corona	CA	92880
1160 W Rincon St	Corona	CA	92880
311 Cessna Cir	Corona	CA	92880
6300 Providence Way	Eastvale	CA	92880
14940 Summit Dr	Eastvale	CA	92880
450 N Sheridan St	Corona	CA	92880
341 Bonnie Cir	Corona	CA	92880
311 Bonnie Cir	Corona	CA	92880
1000 W Rincon St	Corona	CA	92880
14939 Summit Dr	Eastvale	CA	92880
345 Cessna Cir	Corona	CA	92880
185 N Smith Ave	Corona	CA	92880
2455 Wardlow Rd	Corona	CA	92880
1170 W Rincon St	Corona	CA	92880
1150 W Rincon St	Corona	CA	92880
1295 E Ontario Ave	Corona	CA	92881
1851 California Ave	Corona	CA	92881
1930 California Ave	Corona	CA	92881
1241 Old Temescal Rd	Corona	CA	92881
1161 Olympic Dr	Corona	CA	92881
1346 Railroad St	Corona	CA	92882
909 W Railroad St	Corona	CA	92882
1010 Railroad St	Corona	CA	92882
1351 Railroad St	Corona	CA	92882
2621 Research Dr	Corona	CA	92882
2616 Research Dr	Corona	CA	92882
22324 Temescal Canyon Rd	Corona	CA	92883
22420 Temescal Canyon Rd	Corona	CA	92883
21937 Knabe Rd	Corona	CA	92883
22705 Savi Ranch Pky	Yorba Linda	CA	92887

Property Address	City	State	Zip	Property Address	City	State	Zip
4187 Temple City Blvd	El Monte	CA	91731				
9860 Gidley St	El Monte	CA	91731				
4189 Temple City Blvd	El Monte	CA	91731				
3136 Rosemead Blvd	El Monte	CA	91731				
4250 Shirley Ave	El Monte	CA	91731				
4350 Temple City Blvd	El Monte	CA	91731				
10511 Valley Blvd	El Monte	CA	91731				
4300 Baldwin Ave	El Monte	CA	91731				
4300 Shirley Ave	El Monte	CA	91731				
9700 Factorial Way	South El Monte	CA	91733				
11077 Rush St	South El Monte	CA	91733				
1886 Santa Anita Ave	South El Monte	CA	91733				
1747 Tyler Ave	South El Monte	CA	91733				
12465 6th St	Rancho Cucamonga	CA	91739				
12455 Arrow Hwy	Rancho Cucamonga	CA	91739				
12521 Arrow Rte	Rancho Cucamonga	CA	91739				
12400 Arrow Rt	Rancho Cucamonga	CA	91739				
8939 Etiwanda Ave	Rancho Cucamonga	CA	91739				
8570 Hickory Ave	Rancho Cucamonga	CA	91739				
8728 Etiwanda Ave	Rancho Cucamonga	CA	91739				
12200 Arrow Rt	Rancho Cucamonga	CA	91739				
8925 Santa Anita Ave	Rancho Cucamonga	CA	91739				
2001 E Gladstone St	Glendora	CA	91740				
139 N Sunset Blvd	City Of Industry	CA	91744				
14750 Nelson Ave	City of Industry	CA	91744				
16017 E Valley Blvd	City of Industry	CA	91744				
15000 Nelson Ave	City of Industry	CA	91744				
14500 Nelson Ave	City of Industry	CA	91744				
17637 E Valley Blvd	City of Industry	CA	91744				
15930 Valley Blvd	City Of Industry	CA	91744				
15801 E Valley Blvd	City of Industry	CA	91744				
17411 Valley Blvd	City of Industry	CA	91744				
14380 E Nelson Ave	City of Industry	CA	91744				
15620 E Valley Blvd	City of Industry	CA	91744				
15929 E Valley Blvd	City of Industry	CA	91744				
347 S Stimson Ave	City of Industry	CA	91744				

Appendix D: POTENTIAL SIP CREDIT APPROACH FOR PR 2305

Introduction

What is the purpose of PR 2305?

As stated in PR 2305, its purpose is to reduce local and regional emissions, and to facilitate local and regional emission reductions associated with warehouses and the mobile sources attracted to warehouses in order to help achieve state and federal ambient air quality standards and to reduce exposure to diesel particulate matter.

What is the State Implementation Plan?

The federal Clean Air Act requires areas with levels of ozone, particulate matter, and other pollutants that exceed National Ambient Air Quality Standards (NAAQS) to develop State Implementation Plans (SIPs). SIPs are comprehensive plans that describe how an area will attain the NAAQS. SIPs are not single documents. They are a compilation of new and previously submitted plans, programs (such as monitoring, incentives, permitting, emissions inventory, etc.), local air district rules, state regulations, and federal controls. State law makes CARB the lead agency for all purposes related to the SIP. Local air districts prepare SIP elements and submit them to CARB for review and approval. CARB then forwards these SIP revisions to the EPA for approval.

What is 'SIP credit'?

SIP credit is the general term given for emission reductions that are creditable towards commitments in the SIP.

Why is SIP Credit needed?

The SIP contains a detailed accounting of the expected emissions inventory in future milestone years with Clean Air Act deadlines. This emissions inventory includes a baseline scenario (i.e. business-as-usual) and a control scenario (if the SIP's proposed measures are all adopted). The 2016 AQMP from South Coast AQMD and the companion State SIP Strategy from CARB includes substantial emission reductions tied to 'further deployment of cleaner technologies' control measures that are not yet fully defined. Emission reductions from these control measures are needed to both meet the NAAQS and to ensure that federal sanctions are not imposed under the federal Clean Air Act. If adopted, PR 2305 will provide emission reductions that can help meet these 'further deployment' commitments. This document provides the background for how PR 2305 emission reductions will be SIP creditable.

What are the requirements for SIP credit?

There are a variety of guidance documents[1] and regulations that address how emission reductions can be credited towards the SIP. In general, SIP creditable emission reductions must satisfy five

[1] Voluntary Mobile Source SIP Programs, www.epa.gov/sites/production/files/2016-05/documents/vmep-gud.pdf
Improving Air Quality with Economic Incentive Programs (2001), www.epa.gov/sites/production/files/2015-07/documents/eipfin.pdf
Voluntary and Emerging SIP Measures, www.epa.gov/sites/production/files/2016-05/documents/voluntarycontrolmeasurespolicyepa.pdf
Energy Efficiency and Renewable Energy SIP Measures, www.epa.gov/sites/production/files/2016-05/documents/ereseerem_gd.pdf

key 'integrity elements'. Namely, the emission reductions must be quantifiable, enforceable, verifiable, surplus, and real.

Which emission source categories can achieve SIP-creditable emission reductions with PR 2305?
The emission sources that may have SIP-creditable emission reductions from PR 2305 include on-road trucks, hostlers (both on-road and off-road vehicles), Transport Refrigeration Units (TRUs), light duty vehicles, and power plants.

What is the role of scrapping in SIP-creditable mobile source measures?
Scrapping is the process by which older vehicles that are replaced by newer, cleaner vehicles are scrapped and taken out of service to ensure that the emission reductions from the newer vehicle are achieved. Scrapping ensures that the new vehicle is not just accommodating growth in the vehicle fleet. SIP-creditable emission reductions can be achieved both with and without a scrappage program. Examples of SIP-creditable programs with scrapping requirements include many voluntary incentive programs like Carl Moyer, or AB 617 funding. These programs are implemented on an individual truck basis (through grant funding contracts), and without a scrappage requirement it would not be possible to discern whether any one individual truck would result in eventual scrappage of a truck somewhere in the entire truck fleet, or if the newer, cleaner truck is actually adding emissions due to growing the truck fleet.

Other SIP-creditable measures do not require scrapping, such as CARB regulations like the Low NOx Omnibus Rule or the Advanced Clean Trucks Rule. These rules rely on assumptions about future truck sales and future truck activity (e.g., miles travelled per year). Importantly, these rules broadly affect large sections of the truck fleet instead of individual trucks, and the rulemaking analysis for these rules consider how each rule will affect the entire truck fleet, including growth and rates of vehicle turnover. These assumptions are subsequently verified through the regular updates to the EMFAC model.

What is EMFAC?
EMFAC is an emissions model developed and used by CARB to assess emissions from on-road vehicles including cars, trucks, and buses in California, and to support CARB's regulatory and air quality planning efforts to meet the Federal Highway Administration's transportation planning requirements. U.S. EPA approves EMFAC for use in the State Implementation Plan and transportation conformity analyses.

How does SIP credit work for incentive funding programs?
Programs like Carl Moyer or AB-617 funding programs provide subsidies to offset the higher purchase price of near-zero and zero emission vehicles. In some cases, these types of voluntary

Incorporating Bundled Measures in a SIP, www3.epa.gov/ttn/naaqs/aqmguide/collection/cp2/20050816_page_incorporating_bundled_measure_sip.pdf
Incorporating Energy Efficiency/Renewable Energy Policies and Programs into SIPs, www.epa.gov/sites/production/files/2016-05/documents/eeremanual_0.pdf
Diesel Retrofit SIP Programs, http://nepis.epa.gov/Exe/ZyPDF.cgi/P100HP2S.PDF?Dockey=P100HP2S.PD

incentive programs can result in prospective SIP creditable emission reductions.[2] While incentive funding programs have been included as control measures within the 2016 AQMP, they are not included in the baseline emissions inventory, nor are their effects included within EMFAC. PR 2305 is designed to work together with incentive programs. Although some incentive programs are oversubscribed[3], others are undersubscribed[4]. PR 2305 can help ensure that incentive funds are fully utilized, and can also potentially spread incentives to additional vehicles by lowering the amount that vehicle purchasers are willing to accept due to the requirements within PR 2305 on warehouse operators.

Background on Obtaining SIP Credit for Mobile Source Emission Reduction Measures

SIP creditable emission reductions are typically obtained through three key processes.

1) Regulations adopted at the local, state, or federal level that meet the 'integrity elements' described above can achieve prospective SIP credit at the time that the regulation is adopted. Prospective SIP credit is a projection of how emission reductions will occur in the future due to a control measure.
    a. Example: CARB's Truck and Bus Regulation[5] requires fleets to only utilize trucks that meet or exceed 2010 truck engine standards (with some limited exceptions) by 2023. Those fleets may include older, higher-emitting trucks today, but the future emission reductions from the existing regulation provides prospective SIP credit. As shown below, not all emission reduction measures can be credited towards the SIP prospectively.
2) For some regulations or control measures, actual emission reductions achieved may be higher or lower than originally estimated at the time the regulation was adopted. A later analysis may evaluate how a rule is actually being implemented and adjust the amount of SIP creditable emission reductions. These retrospective emission reductions evaluate how emissions changed in the past, and then project how that will affect the future.
    a. Example: EPA's Heavy Duty Engine Standards[6] required all truck engine manufacturers to meet a NOx emission standard of 0.2 g/hp-hr by 2010 (with some limited exceptions). SIP creditable prospective emission reductions were assumed in the EMFAC 2007 emission model at the time assuming that engines would meet these standards in real world conditions.[7] However, subsequent testing of these engines has shown that engines that meet the EPA standard (based on a test cycle) do not achieve the previously assumed level of emission reductions in real world conditions.[8] One example includes during periods when the engine exhaust controls

[2] https://ww2.arb.ca.gov/resources/documents/implementation-state-sip-strategy
[3] http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2019/2019-dec6-006.pdf
[4] http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2020/2020-dec4-005.pdf
[5] https://ww2.arb.ca.gov/our-work/programs/truck-bus-regulation/truck-and-bus-regulation-regulation-advisories Accessed 11/5/2020.
[6] https://www.govinfo.gov/content/pkg/FR-2001-01-18/pdf/01-2.pdf Accessed 11/5/2020.
[7] EMFAC 2007 Revision of Heavy Heavy-Duty Diesel Truck Emission Factors and Speed Correction Factors. https://ww3.arb.ca.gov/msei/onroad/techmemo/revised_hhddt_emission_factors_and_speed_corr_factors.pdf. Accessed 11/5/2020.
[8] See Figure ES-3 for an example: https://ww3.arb.ca.gov/regact/2020/hdomnibuslownox/isor.pdf#page=27. Accessed 11/5/2020.

are operating at lower temperatures than necessary to fully reduce NOx emissions.[9] As a result, a more recent EPA-approved emissions inventory for trucks in EMFAC 2017 has subsequently been updated to incorporate this more recent real world data.[10] The table below shows a comparison of NOx emission rates for the same model year truck between the EPA-approved EMFAC 2007 and EMFAC 2017 emissions inventory models. The more recent EMFAC 2017 model used more recent real-world data, and the subsequent SIP creditable emission reductions from the EPA Heavy Duty Engine Standard have been revised to incorporate real-world conditions.

Table 1: Zero-Mile NOx Emission Rates for Model Year 2015

EMFAC 2007[11]	EMFAC 2017[12]
1.14	2.68

3) Finally, real-world emissions from some sources are often affected by multiple factors. For example, on-road vehicle emissions are affected by multiple regulations, market forces (e.g., the state of the economy, the price of fuel, etc.), financial incentive programs (e.g., the Carl Moyer program), and private sector policies (e.g., corporate sustainability goals). In order to account for all of these competing influences, every few years the baseline mobile source emissions inventory used for the SIP is updated, including through updates to CARB's mobile source inventories (e.g., the EMFAC model, off-road equipment inventories, etc.), updates to the Regional Transportation Plan (RTP) from the Southern California Association of Governments (SCAG), and new South Coast AQMD Air Quality Management Plans (AQMPs). Because SIP creditable emission reductions cannot always be separately assigned to each unique factor, the holistic evaluation of the on-road mobile source sector in EMFAC updates (or equivalent off-road sector updates) conducted by CARB ensures that the SIP inventory is as comprehensive, accurate, and current as possible.
    a. Example: Every four years SCAG updates its forecast for the transportation system in the RTP. This modeling analysis includes a forecast of vehicle miles travelled in the freight sector based on a number of factors including: activity data from the ports of Los Angeles and Long Beach, national commodity flow surveys, land use patterns, developments in the roadway network, etc. These modeled outputs (e.g., vehicle miles travelled, vehicle speeds, location of vehicle activity) are combined with emission factors from EMFAC to establish the SIP creditable emissions inventory in the subsequent AQMP.

[9] Tan et al., On-Board Sensor-Based NOx Emissions from Heavy-Duty Diesel Vehicles. *Environ. Sci. Technol.* 2019, 53, 9, 5504–5511. https://pubs.acs.org/doi/10.1021/acs.est.8b07048 Accessed 11/5/2020.
[10] EMFAC2017 Volume III – Technical Documentation. https://ww3.arb.ca.gov/msei/downloads/emfac2017-volume-iii-technical-documentation.pdf
[11] https://ww3.arb.ca.gov/msei/onroad/techmemo/revised_hhddt_emission_factors_and_speed_corr_factors.pdf, Table 8
[12] https://ww3.arb.ca.gov/msei/downloads/emfac2017-volume-iii-technical-documentation.pdf, Table 4.3-46

Expected Mechanisms to Obtain SIP-Creditable Emission Reductions with PR 2305

If PR 2305 is adopted, SIP-creditable emission reductions can be achieved prospectively, retrospectively, and through holistic mobile source inventory analysis. Because other existing and forthcoming mobile source measures will reduce emissions from the same sources, not all emission reductions achievable from PR 2305 can be fully quantified at time of rule adoption. As described in CARB's Mobile Source Strategy[13], additional future measures may be developed that would affect emission sources at facilities covered by PR 2305, but it is too speculative at this stage to determine how they may or may not overlap with PR 2305.

Prospective Emission Reductions from PR 2305

Emissions reductions are expected from all of the emissions sources covered by PR 2305, however not all of the emission reductions can be fully quantified at time of rule adoption. This is primarily because some emission reductions from PR 2305 will at least partially overlap with other SIP-creditable measures. The table at the end of this section lists the key existing and future mobile source measures that also reduce emissions sources addressed by PR 2305, and describes how the overlap is addressed. Even if prospective SIP creditable emission reductions are not achievable at the time of rule adoption, other means of obtaining SIP credit are possible (see below). Further, through the implementation of the WAIRE Mitigation Program, it may be possible to develop prospective SIP creditable emission reductions at a future date.

Retrospective Emission Reductions from PR 2305

The PR 2305 WAIRE Program will be tracked by South Coast AQMD staff to evaluate how it is implemented every year, reported publicly to the Governing Board Mobile Source Committee, with results also made available on the South Coast AQMD web page. A key component of this analysis will be to evaluate which menu options are being chosen by every facility, and comparing that to the original analysis conducted during the rulemaking process. If trends emerge that show greater or lesser emission reductions than envisioned in the rulemaking analysis, then adjustment may be made in subsequent revisions to the SIP inventory (e.g., as part of a future AQMP).

Holistic Analysis of Emission Reductions from PR 2305

Some emission reductions may be attributable to PR 2305, but will not be captured in either a prospective or retrospective analysis. This could include emissions from trucks purchased to comply with PR 2305, but that make truck trips between facilities that aren't regulated under PR 2305. These truck trips are not accounted for in the rulemaking analysis, or in subsequent annual reviews of the WAIRE Program. In addition, if many warehouse operators decide to install zero emission charging/fueling infrastructure, this is expected to make it easier for truck owners to decide to switch to zero emission technologies as finding a fueling location will become less of a concern. This potential increased zero emission technology penetration into the overall truck fleet is not accounted for in the rulemaking analysis except for zero emissions truck visits to regulated facilities. Further, the assumptions included in the rulemaking analysis about other mobile source measures (e.g., CARB's Low NOx Omnibus Rule or ACT Rule) will likely be revised based on future, unknown conditions. In particular, the level of future truck sales, future activity per truck, future costs to operate trucks, etc. all may require updates as part of a normal EMFAC update. As is currently practiced, this holistic analysis will provide the mechanism to ensure that all

[13] https://ww2.arb.ca.gov/resources/documents/2020-mobile-source-strategy

overlapping mobile source measures are captured across the entire truck fleet. This is the primary mechanism by which the San Joaquin Valley Air Pollution Control District receives quantifiable 'SIP credit' for its Indirect Source Review program (Rule 9510).[14]

[14] When EPA approved Rule 9510 into the SIP, it specifically did not allow the rule to be used for prospective SIP credit (76 FR 26609). Notwithstanding this approach, the most recent Annual Report for Rule 9510 shows that since its inception the rule has resulted in 15,617 tons of NOx and PM10 that have been avoided, with another 12,147 tons of NOx and PM10 that has been reduced through use of its mitigation fee program (https://www.valleyair.org/ISR/Documents/2020-ISR-Final-Annual-Report.pdf).

Table 2: Existing and Future Measures that Have Overlapping SIP-Creditable Emission Reductions with PR 2305

Emission Reduction Measure	Measure Summary	Existing or Future Measure	Potential Overlap with PR 2305 Requirements	Calculation Method to Address Potential Overlap for Prospective SIP Credit
Incentive Funding Programs	Various state and federal programs (e.g., Carl Moyer, AB 617 funding, DERA, etc.) provide subsidies to offset the higher cost of NZE and ZE vehicles.	Existing and Future	Potential overlap for existing state and federal funding programs. Uncertain overlap for any new funding programs.	Because incentive programs are not included within EMFAC, no adjustments are made to the PR 2305 calculation.
EPA Heavy Duty Engine Standards	Requires manufacturers nationwide to only sell trucks meeting specified emission standards by 2010 (e.g., 0.2 g/hp-hr NOx)	Existing	Partial overlap due to CARB Truck and Bus Rule.	Overlap calculated as part of CARB Truck and Bus Rule.
CARB Truck and Bus Rule	Requires truck fleets to only operate trucks meeting EPA's 2010 engine standard by 2023. Measure is phased in before 2023.	Existing	Partial overlap before 2023. No overlap after 2023.	Any emission from NZE or ZE truck activity associated with PR 2305 are compared against baseline truck emission rates that are the average for that truck type in any calendar year from EMFAC 2017 (which includes the Truck and Bus Rule).
CARB Advanced Clean Truck (ACT) Rule	Requires truck manufacturers to ensure that a portion of their new vehicle sales in CA are zero emissions. Measure phases in from 2024-2035.	Existing	No overlap before 2024. Partial overlap after 2024.	Before 2024, any ZE truck activity attributable to PR 2305 that aren't funded by Incentive Programs provide prospective SIP creditable emission reductions. As a conservative approach[1], after 2024 any emission reductions from ZE truck activity associated with PR 2305 will be reduced by the amount of applicable ZE truck activity

Emission Reduction Measure	Measure Summary	Existing or Future Measure	Potential Overlap with PR 2305 Requirements	Calculation Method to Address Potential Overlap for Prospective SIP Credit
				associated with ACT[2] in addition to any potentially incentive funded trucks.
CARB Low NOx Omnibus Rule	Requires manufacturers to only sell trucks in CA meeting specified emission standards. Updates warranty, useful life, certification testing procedures, etc. Measure phases in from 2024-2027.	Existing	No overlap before 2024. Partial overlap after 2024	Before 2024, any NZE truck activity attributable to PR 2305 that aren't funded by Incentive Programs provide prospective SIP creditable emission reductions. As a conservative approach[1], after 2024 any emission reductions from ZE truck activity associated with PR 2305 is reduced by the amount of applicable NZE truck activity associated with Low NOx Omnibus[2] in addition to any potentially incentive funded trucks.
CARB Transport Refrigeration Units (TRU) Air Toxics Control Measure (ATCM)	Requires TRUs to meet in-use particulate matter standards, phased in through 2021.	Existing	No overlap.	No adjustment necessary as rule is completely phased in.
CARB In-Use Off-Road Diesel Rule	For PR2305, this measure applies to yard trucks. This rule requires fleets to meet specified in-use emission levels, depending on fleet size. The rule is phased in from 2014-2029.	Existing	Potential overlap.	Average baseline emission rate for yard trucks is based on industry estimate of yard truck age. This age profile results in baseline emissions that are lower than the most stringent standard in the In-Use Offroad Rule. SIP-creditable emission reduction calculations for yard trucks therefore assume less emission reductions than if only considering this measure.

Emission Reduction Measure	Measure Summary	Existing or Future Measure	Potential Overlap with PR 2305 Requirements	Calculation Method to Address Potential Overlap for Prospective SIP Credit
EPA Cleaner Trucks Initiative	Proposal would require manufacturers nationwide to only sell trucks meeting specified emission standards. Level of control and timing uncertain, though it may match CARB's Low NOx Omnibus Rule in 2027.	Future	Potential overlap after any new standards go into place.	No analysis currently possible as measure has not yet been sufficiently developed or approved. SIP credit for this measure in relation to PR 2305 will be determined at a later date if PR 2305 is approved.
CARB Advanced Clean Fleets Rule	Proposal would require fleets to increasingly use ZE trucks. Goal is a 100% ZE truck fleet by 2045, with interim goals before then.	Future	Potential overlap after any new standards go into place.	No analysis currently possible as measure has not yet been sufficiently developed or approved. SIP credit for this measure in relation to PR 2305 will be determined at a later date if both PR 2305 and ACF are approved.
CARB Proposed TRU ATCM Amendments	Proposal will transition straight truck TRUs to ZE from 2024-2031. A second rule amendment will target transitioning trailer TRUs to ZE by 2035.	Future	Potential overlap after any new standards go into place.	No analysis currently possible as measure has not yet been sufficiently developed or approved. SIP credit for this measure in relation to PR 2305 will be determined at a later date if both PR 2305 and the TRU ATCM are approved. PR 2305 (d)(3)(A) also prohibits earning WAIRE Points in any year that a CARB or EPA rule applies.
CARB Proposed ZE Forklift Rule	Proposal would require fleets to phase in ZE forklifts from 2025-2040.	Future	Potential overlap after any new standards go into place.	No analysis currently possible as measure has not yet been sufficiently developed or approved. Emission reductions not calculated for forklifts in PR 2305 as these are not included in the WAIRE Menu.

Emission Reduction Measure	Measure Summary	Existing or Future Measure	Potential Overlap with PR 2305 Requirements	Calculation Method to Address Potential Overlap for Prospective SIP Credit
CARB Heavy Duty Inspection & Maintenance (HD I/M) Rule	Proposal would require truck owners to routinely test their trucks to ensure they operate within acceptable standards.	Future	Potential overlap as emission reductions from this measure are not yet accounted for in EMFAC.	Expected effect of HD I/M is calculated in CARB META tool. Baseline truck emissions (i.e. trucks that would go to warehouses absent PR 2305) will be reduced to account for HD I/M before calculating the difference due to ZE and NZE trucks visiting PR 2305 warehouses.

Notes:

1) There are no requirements in this measure that ensure that mandated statewide sales targets will result in emission reductions specifically in the South Coast Air Basin.
2) Emissions from this measure are derived from CARB's Mobile Emissions Toolkit and Analysis (META) tool that was developed for CARB's Mobile Source Strategy as a means of evaluating how all mobile source strategies will interact in the future. The analysis in META assumes that truck sales will match the sales targets in Table A-1 of California Code of Regulations (CCR) Title 13, Section 1963.1, but does not consider the impact of the vehicle weight modifiers in Table A-2 or the credit/trading provisions of the regulation in Section 1963.2. Based on experience with similar provisions in the Advanced Clean Cars (ACC) regulation from CARB (CCR Title 13 Section 1962.2), this assumption results in a high-end estimate of ZE vehicles that will be sold, and the emission reduction estimates due to PR 2305 in this staff report may be higher than shown. For example, the target for light duty sales in ACC is 22% in 2025 and beyond [Section 1962.2 (b)(1)(A)], however EMFAC 2017 only assumes 6.3% based on actual sales that are expected to occur (Table 4.5-5 in EMFAC 2017 Technical Documentation).[250] If crediting provisions in ACT similarly result in either lower sales percentages, or a focus on sales of truck types that do not visit PR 2305 warehouses, then less ZE trucks will visit warehouses in the baseline, and more WAIRE Points will need to be earned.

[250] https://ww3.arb.ca.gov/msei/downloads/emfac2017-volume-iii-technical-documentation.pdf

Appendix E: NZE ALTERNATIVES FOR CUSTOM WAIRE PLANS

The Draft Environmental Assessment provides an alternative analysis which considered NZE technology alternatives. As a continuation of that analysis the inclusion of NZE yard trucks and NZE fueling infrastructure is discussed below if it were to be included as Custom WAIRE Plan submissions. In the currently proposed rule, the submission of NZE yard truck fueling infrastructure and NZE on-road truck fueling infrastructure are prohibited from being considered as Custom WAIRE Plans.

NZE YARD TRUCKS

NZE yard trucks are fueled with CNG, LNG or Propane resulting in a 90% or better reduction in NOx emissions and 100% DPM reductions. In addition to the 10% or less NOx emission reduction difference between the ZE and NZE yard trucks, NZE yard trucks may have local public health impacts as they may idle similar to conventional diesel yard trucks, especially as yard trucks typically do not leave the warehouse site and may be used solely for off-road applications. During the analysis of NZE yard trucks, no off-road CARB certified yard trucks were identified, which would otherwise have provided a cost saving at the time of purchase for off-road vehicles. The NZE yard trucks that are used for demonstration projects at the Port of Los Angeles include Capacity trucks with CWI 6.7 and 8.9 liter engines which performed well with the heavier duty cycles of port application. NZE yard trucks have been demonstrated for several years and were not commercial status, but recent advancements have resulted in commercially available NZE yard trucks that are on-road CARB certified to 0.02 g/bhp-hr. Recent innovations of a propane "pony" system allows propane NZE yard truck models to quickly switch propane tanks with minor interruptions to service, which may result in wider use for warehouse, port, and railyard applications.

There are multiple NZE yard truck manufacturers including Capacity, Autocar, and TICO with different engine manufacturers including Cummins, PSI, and Ford. According to the Ports' Feasibility Study[251] the cost for an NZE yard truck is currently about $150,000, with conventional diesel models costing about $100,000 which makes the incremental cost about $50,000. The incremental costs for NZE yard trucks can vary depending on the engine size and whether the yard truck is fueled with CNG, LNG, or Propane. Another potential cost to the NZE yard trucks are the NZE infrastructure that would be used to fuel the NZE yard trucks with CNG, LNG, or Propane. Costs for the NZE yard truck fueling infrastructure is another potential investment that could be proposed should Custom WAIRE Plan submissions be allowed for NZE yard trucks, as the cost for the infrastructure would vary depending on the type of natural gas.

NZE FUELING INFRASTRUCTURE

NZE fueling infrastructure is not included in the currently proposed WAIRE Menu as there is an established network of NZE fueling stations in California, with 295 public stations and

[251] San Pedro Bay Ports, 2018 Feasibility Assessment for Cargo-Handling Equipment, September 2019, https://cleanairactionplan.org/documents/final-cargo-handling-equipment-che-feasibility-assessment.pdf/

another 184 private stations[252]. The typical equipment required at CNG and LNG stations include a compressor, storage, dryer, and fueling posts, with the system design based on capacity determining the number of each type of equipment. Based on the station design the costs of CNG or LNG station can range from $1.1 million to nearly $2 million depending on the system design[253]. Some of the companies that design and install CNG and LNG stations include SoCal Gas, TruStar Energy, Ozinga, and Clean Energy.

[252] https://afdc.energy.gov/stations/#/analyze?region=US-CA&fuel=CNG&fuel=LNG&fuel=LPG
[253] Based on quotations submitted to the CEC and Carl Moyer incentive programs

APPENDIX F: RESPONSE TO COMMENTS

CENTER FOR COMMUNITY ACTION & ENVIRONEMNTAL JUSTICE
EAST YARD COMMUNITIES FOR ENVRIONMENTAL JUSTICE
EARTHJUSTICE
ATURAL RESOURCES DEFENSE COUNCIL
SAN PEDRO & PENINSULA HOMEOWNERS COALITION
SIERRA CLUB
URBAN & ENVIRONMENTAL POLICY INSTITUTE

February 14, 2019

Chair Parker and Members of the Committee
obile Source Committee
South Coast Air Quality Management District
21865 Copley Dr.
Diamond Bar, CA 91765

Re: Update on Development of Facility-Based Mobile Source Measures in 2016 AQMP

Dear Chair Parker and Members of the Committee:

On behalf of the undersigned organizations, we file comments on the facilities-based measure update that is before your committee. Communities have been fighting pollution from the freight industry for decades. The communities surrounding ports, railyards, warehouses, and freight corridors continue to suffer disproportionately from this industry. And the impacts are serious and grave. Given the contribution of this industry in concentrating pollution in neighborhoods in the region and its regional contribution to air pollution, it is critical that the South Coast Air Quality Management District do everything within its authority to control pollution from freight facilities. We understand that other agencies must do their part (i.e. the California Air Resources Board and the Environmental Protection Agency), but we also need our local air district to do everything it can given the seriousness of the freight pollution crisis. 1-1

As this Committee hears the updates on the various work in addressing pollution from freight facilities, we want to provide some initial input for this committee to consider.

Ports: Given community concerns with a Memorandum of Understanding (MOU) approach, it is vital that any MOU effort be fully vetted in public. As such, it is critical to start the outreach and vetting of these documents now. People concerned with breathing safe air will need time to understand how these contracts are enforceable and set forth strong metrics for emissions reductions at the largest fixed source of pollution in the region.

Warehouses: Staff should continue to examine strategies like facility caps, even if it prefers fleet certification and mitigation fees as a tool. We fear that options for legal approaches are being taken off the table prior to the requisite analysis being completed. While some strategies may aid in reductions region-wide, we remain concerned with approaches that could allow for picking winners and losers in some communities getting cleaner air and others not. We think a strong facility cap could be effective in ensuring warehouses clean up their pollution in all communities. 1-2

Railyards: We continue to find out more about the harmful impacts railyards impose on communities. The air district should pursue a strong rule to combat these facilities that impose so much health burden on communities. We are excited to start this rulemaking process in earnest.

We appreciate your consideration of these comments, and we look forward to working with the Air District to bring clean air to the communities who've been harmed by the freight industry for decades. 1-3

Sincerely,

Adrian Martinez
ichelle Ghafar
Earthjustice

Andrea Vidaurre
Center for Community Action & Environmental Justice

Taylor Thomas
East Yard Communities for Environmental Justice

David Pettit
Natural Resources Defense Council

essica Tovar
Urban & Environmental Policy Institute
Occidental College

Peter Warren
San Pedro & Peninsula Homeowners Coalition

Carlo De La Cruz
Sierra Club

4675 MacArthur Court, Suite 800
Newport Beach, California 92660 USA
949.437.1400 fax: 949.612.1894

www.CleanEnergyFuels.com

Todd R. Campbell
Vice President Public Policy & Regulatory Affairs

Clean Energy

September 17, 2019

Mr. Ian MacMillan
Mr. Victor Juan
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: Comments on the August 23rd Warehouse Indirect Source Rule Working Group

Dear Mr. MacMillan, Mr. Juan, and AQMD Staff:

Clean Energy appreciates the opportunity to comment on the latest staff presentation provided during the August 23rd Warehouse Indirect Source Rule (ISR) Working Group. We also would like to commend South Coast Air Quality Management District (AQMD) staff on your collective efforts to seek deeper NOx reductions from mobile sources that demonstrably have a disproportional impact upon the South Coast Air Basin and disadvantaged communities. If the South Coast is ever to reach clean air attainment under the federal Clean Air Act's ozone standards or improve upon the health of impacted communities, the AQMD must be in the best position to transition the basin's fleet to near zero and, as they become available, zero emission medium and heavy-duty truck strategies. As a long-time partner of the AQMD, we offer our support and provide the following comments and recommendations designed to improve upon the agency's ability to move regional warehouse operations toward a cleaner future. 2-1

Near Zero Trucks must be based and have full access to In-Basin Warehouse Facilities

If warehouses located within the South Coast Air Basin are to meaningfully reduce truck-related emissions in the near- to mid-term, low NOx trucks must be able to both access and be domiciled at warehouse facilities. In short, full access of such trucks that significantly cut diesel exhaust pollution – both smog and carcinogenic diesel particulate emissions – must be a part of the AQMD's emissions reduction strategy portfolio.

During the August 23 workshop, a stakeholder suggested that only zero emission vehicles should be allowed to either access or be domiciled at a warehouse, especially if said facility is located near or adjacent to a disadvantaged community. Adopting such a position, however, would deny any immediate air pollution relief to a heavily impacted community as the default would likely be a dirtier diesel truck. Conversely, providing incentives for warehouse operators and the fleet owners that serve them over to low NOx trucks using renewable natural gas would deliver 90 percent fewer smog-forming emissions and potentially carbon negative emissions reductions immediately. 2-2

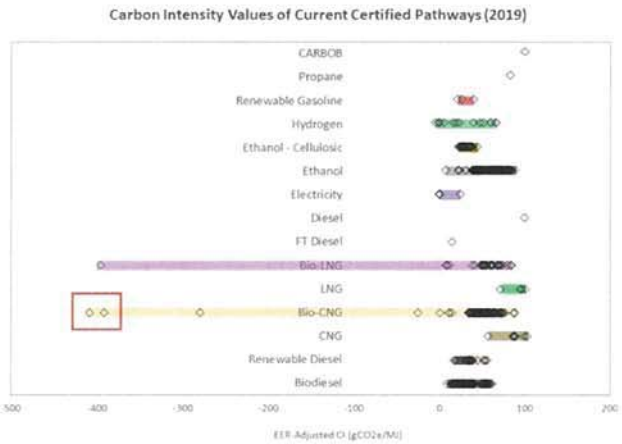
The South Coast AQMD Must Transition Away from Diesel Trucks as Quickly as Possible

Today's diesel trucks not only fail to meet the most stringent low NOx standard, but likely exceed the current NOx emission standard for heavy-duty truck engines if they use a selective-catalytic reduction (SCR) system. Specifically, diesel trucks using SCR devices were found to be ineffective in cutting NOx emissions when operating at low speeds (i.e., drayage). In fact, we would recommend that AQMD staff review recent literature published by the California Air Resources Board clearly stating that emissions from base-line diesel trucks could be up to 9 times above the current heavy-duty truck engine standard for NOx emissions during low speed operations.[i]

2-3

Low NOx trucks powered by natural gas, however, do not depend on an SCR system and have been certified to NOx emissions levels that are 90% below the current heavy-duty truck engine standards (i.e., 0.02 g/bhp-hr NOx v. 0.2g/bhp-hr, respectively). Recent studies by the University of California at Riverside also have demonstrated that in-use NOx emissions by natural gas low NOx trucks actually show up to a 99% reduction of NOx emissions compared to the current heavy-duty truck standards set by the US Environmental Protection Agency (EPA) and CARB.[ii] Additionally, when a low NOx truck is powered with renewable natural gas (RNG), carbon emissions performance for a low NOx truck can actually be carbon negative depending upon the fuel source.[iii] It should be noted that the two leading providers of natural gas as a transportation fuel in the South Coast Air Basin and the State of California only sell RNG at the pump thanks to the Low Carbon Fuel Standard.





Clearly, low NOx strategies powered by RNG should play an unapologetic and prominent role in the final Warehouse Indirect Source Rule. 2-3 (continued)

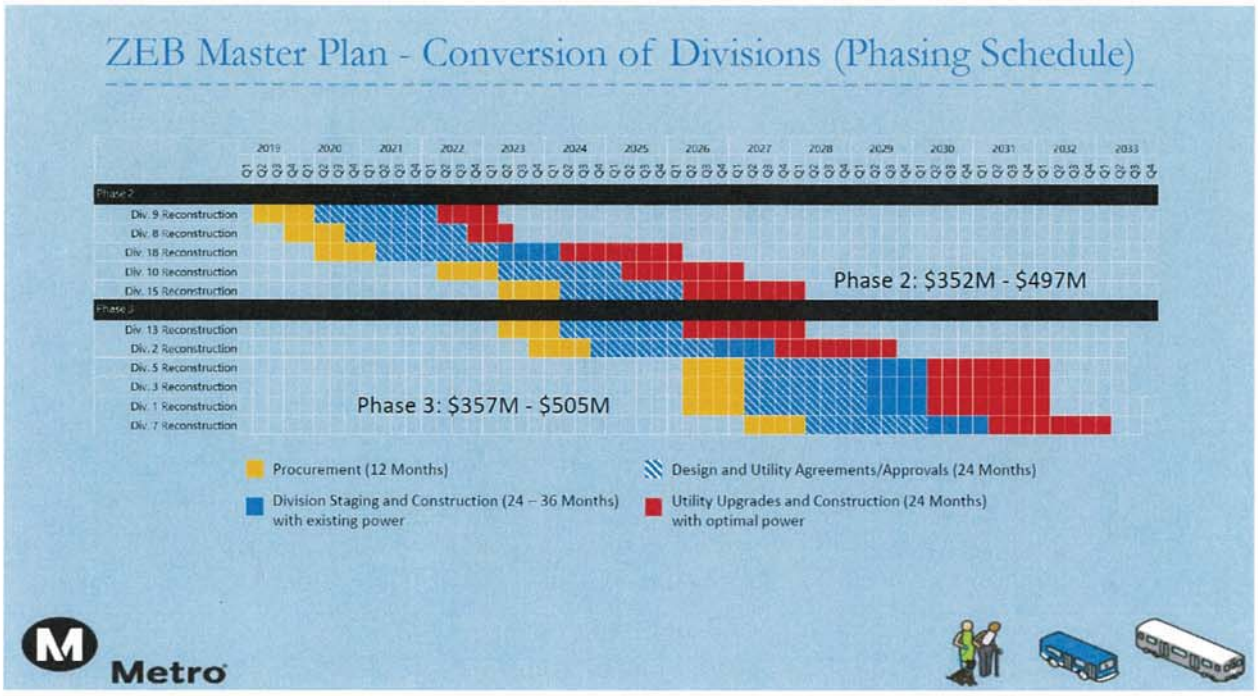
Include Renewable Natural Gas Fueling Stations in the Ongoing Warehouse ISR Mitigation Menu

After reviewing the August 23rd Warehouse ISR Working Group presentation, we strongly recommend that AQMD Staff add RNG fueling infrastructure investments on the ongoing mitigation menu as additional fueling infrastructure will be needed to fully address the South Coast's truck pollution crisis.

A few stakeholders have argued against the inclusion of RNG fueling infrastructure with the hope that AQMD would only support zero emission fueling infrastructure projects from this point forward. They even claim that such RNG fueling investments would become stranded assets with the promise of zero emission technology on the horizon. However, RNG fueling infrastructure investments would largely make use of private capital (not public funds) and a return on investment would easily be achieved within 5 to 10 years. Further, while the desire to achieve zero emission strategies now is not lost upon us, it is highly unlikely that the region can make a regional transition for several decades due to both cost, infrastructure and logistical issues. 2-4

For example, Los Angeles County Metro's Board of Directors committed the agency to make a full transition to zero emission buses by 2030 and Metro is now required to do so by 2040 under the California Air Resources Board's Innovative Clean Transit rule. Despite this momentum and receiving massive federal and state public subsidies, Metro staff is quickly learning the herculean challenges of adopting a strategy that has yet to be fully commercialized. For example, Metro's Operations, Safety and Customer Experience Committee is recommending on Thursday, September 19, to purchase 259 Contract Option forty-foot CNG buses because the transit authority cannot get the necessary zero-emission charging infrastructure in place to run more ZEBs in Metro's fleet.[iv] Further, there are numerous complications associated with certain zero emission bus technologies in terms of weight and range that remain unresolved and are steadily pushing out Metro's target implementation date to no fault of Metro staff's efforts.[v] The reality

is zero emission strategies face multiple logistical, technical and cost challenges that go well beyond the operator.



Finally, while we highly dispute the statements pertaining to the NGV industry's ability to quickly build out public or private RNG fueling infrastructure in the 2018 Drayage Truck Feasibility Assessment released by the San Pedro Bay Port Authorities, failing to include RNG fueling infrastructure as an ongoing menu option under the proposed Warehouse ISR will result in delayed emissions reductions for the region.[vi] For example, an agency could fail to act on adopting policies that are supportive of AQMD's Warehouse ISR if they determine that there is insufficient fueling stations to support a clean fleet policy or transition. The AQMD's final Warehouse ISR should take progressive steps to deny such an outcome by promoting fueling infrastructure that supports low NOx trucks using renewable and climate friendly fuel today.

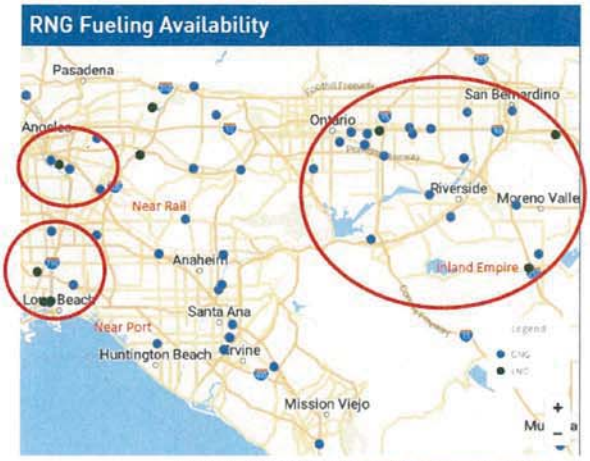
2-5

Substantial RNG Fueling Is Already Available Where Port Trucks Travel

33 existing stations are located near the port, along the 710 corridor to Commerce rail yards and the Inland Empire.

Clean Energy Wilmington station has 6 dispensers. Assuming the remaining 32 stations have 2 dispensers, this gives 70 total dispensers for port trucks. Assuming 50% utilization (actual is less than 50%), the existing network can support 70 x 116 to 165 trucks x 50% = 4,060 to 5,775 trucks.

In actuality, near port stations have 12 dispensers that can handle 12 x 116 to 165 = 1,392 to 1,980 trucks (current utilization goes to zero as the legacy LNG trucks retire). However, to be conservative, this study uses 50% utilization.



Station location data is from https://afdc.energy.gov/stations#

Area	Existing Capacity to Serve Additional Trucks
Near-Port	1,392 to 1,980 Trucks
LA Basin	4,060 to 5,775 Trucks

Conclusion:

Clean Energy would like to thank and support AQMD staff's efforts to develop a meaningful Warehouse ISR. The Final Warehouse ISR must: (1) embrace low NOx trucks powered by RNG as a key mitigation strategy and (2) add RNG fueling infrastructure to the ongoing mitigation menu of the Warehouse ISR. Falling short of adopting these two progressive action items in the final Warehouse ISR's strategy would not only deny regional warehouses and fleet operators a key tool to combat both air and climate pollution generated by trucks, it would run contrary to the AQMD's own 2016 Air Quality Management Plan which heavily relies upon low NOx natural gas truck adoption as a core and central strategy to achieve the necessary NOx ton reductions to meet federal ozone attainment.

2-6

In fact, we believe both the San Joaquin Valley and South Coast air districts recently said it best in a letter to the California Air Resources Board urging CARB staff to retain low NOx funding under HVIP by stating:

> *"Both air districts have prioritized the need to replace a large number of long haul and other diesel (Class 7 & 8) trucks by 2024 with zero and near-zero emission technologies through transformational changes in the heavy-duty trucking sector. Additionally, both air districts, with grant funding from CARB, are working on developing and demonstrating zero emission heavy-duty (Class 7 & 8) trucks, and recognize that large scale deployments can provide a valuable option as they continue to become*

commercially available and feasible for fleets, especially with consideration or varying duty cycles. ***However, these trucks are not yet commercially available.*** *Therefore, to reach both regions' and state's air quality goals, near-term large-scale emission reductions are required that can only be achieved by deploying currently available near-zero low NOx technologies today, with immediate reductions needed in AB 617 communities and broader regions.*

Towards that end, both districts support continued HVIP funding for zero and near-zero heavy duty (Class 7 & 8) trucks that reduce greenhouse gas and criteria pollutant emissions, especially when combined with renewable fuels that have increasing in-state production as a result of state funding. Both air districts have communities that are heavily impacted by goods movement due to the significant amount of heavy-duty diesel vehicles transporting materials on a daily basis. Bringing about significant additional reductions in freight emissions will be essential for reaching attainment with ever-tightening federal ozone and particulate standards. The development and implementation of near zero-emission low NOx technologies in the freight sector will also provide for significant reductions in toxic air contaminants that affect residents."[vii]

2-6
cont'd

If you should have any questions or would like to have further input from our team, please do not hesitate to contact me directly.

Sincerely,

Todd R. Campbell
Vice President, Public Policy and Regulatory Affairs

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[i] See California Air Resources Board. October 26, 2016. "High In-Use NOx Emissions from Heavy-Duty Diesel Trucks Equipped with SCR Systems and Their Impact on Air Quality Planning in California" by Yoon, Collins, Misra, Herner, Carter, Sax.

[ii] See UC Riverside's College of Engineering – Center for Environmental Research and Technology. February 2016. "Ultra-Low NOx Natural Gas Vehicle Evaluation: ISL G NZ" by Johnson, Jiang, and Yang.

[iii] See https://ww3.arb.ca.gov/fuels/lcfs/fuelpathways/pathwaytable.htm.

[iv] See https://metro.legistar.com/LegislationDetail.aspx?ID=4136484&GUID=63368C2C-DCBE-4B38-A8DD-577532AB42F8

[v] See LA County Metro's "Zero Emission Bus (ZEB) Program Update. July 18, 2019. Operations, Safety, and Customer Experience Committee.

[vi] See http://www.cleanairactionplan.org/documents/final-drayage-truck-feasibility-assessment.pdf/

[vii] Joint San Joaquin Valley Air Pollution Control District and South Coast Air Quality Management District comment letter to the California Air Resources Board dated September 13, 2019 re: San Joaquin Valley Air Pollution Control District & South Coast Air Quality Management District Comments on the Discussion Draft of the Low Carbon Transportation Funding Plan.

4675 MacArthur Court, Suite 800
Newport Beach, California 92660 USA
949.437.1400 fax: 949.612.1894

www.CleanEnergyFuels.com

Todd R. Campbell
Vice President Public Policy & Regulatory Affairs

Clean Energy

November 26, 2019

Mr. Ian MacMillan
Mr. Victor Juan
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: Comments on the November 13th Warehouse Indirect Source Rule Working Group

Dear Mr. MacMillan, Mr. Juan, and South Coast Air Quality Management District Staff:

Clean Energy appreciates the opportunity to comment on the latest staff presentation provided during the November 13th Warehouse Indirect Source Rule (ISR) Working Group. We also would like to commend South Coast Air Quality Management District (AQMD) staff on your collective efforts to seek deeper NOx reductions from mobile sources that demonstrably have a disproportional impact upon the South Coast Air Basin and its disadvantaged communities. If the South Coast is ever to reach clean air attainment under the federal Clean Air Act's ozone standards or improve upon the health of impacted communities, the AQMD must be in the best position to transition the basin's fleet to near zero and, as they become available, zero emission medium and heavy-duty truck strategies. 3-1

As a long-time partner of the AQMD, we offer our support and provide the following comments and recommendations designed to improve upon the agency's ability to move regional warehouse operations toward a cleaner future.

The following comments are being made after review of the newly proposed language:

Warehouse Size Must be Clarified in Rule Language:

Clean Energy recommends that language referring to warehouse size be consistent with the calculations on warehouse size made throughout the document. To do so, we recommend changing the draft language's references to warehoused size located in the AQMD from:

"with greater than 100,000 square feet of indoor floor space in a single building"

to:

"with equal or greater than 100,000 square feet of indoor floor space in a single building" 3-2

Instances where "equal or" should be amended into the draft rule's language are on pages: 2305-1, section (b); 2305-3, section (d)(1); and, 2305-7, section (e)(1)(A).

Implementation of Warehouse Rule based on Warehouse Size

Staff is recommending that this rule be phased in over a three-year period covering 2021-2023 based on three warehouse sizes: >=250,000 sq. ft. (2021); >=150,000 sq. ft. (2022), and >=100,000 sq. ft. (2023). Clean Energy questions why there would be any delay in adopting mitigation measures for sources of pollution at warehouses, especially when the South Coast Air Basin needs to come into attainment with the federal Clean Air Act for ozone in 2023. Given this sense of urgency, it seems to make more sense to require all warehouses equal or greater than 100,000 sq. ft. subject to rule starting in July of 2021. In that way, the rule may see some economies of scale benefits come into play over compliance costs if more, not less, regulated warehouses need to purchase advanced clean trucks and other warehouse mitigation strategies to meet rule obligations. Has staff done any type of analysis as to what the benefits and costs would be to stretch out this rule as currently proposed? Given the enormous costs associated with air pollution and the real possibility of federal sanctions if we fail to meet federal attainment deadlines under the Clean Air Act, it would make more sense for AQMD to implement this rule forward as soon as possible. 3-3

Other Considerations for Rule Acceleration

As staff develops values for WAIRE points, another way to accelerate proactive action would be to reward early action. For example, actions done in advance by warehouse owners or operators who do not currently have any WAIRE obligations would receive a multiplier of WAIRE points that could be used toward compliance. This option certainly should be considered if staff insists on staggering warehouse compliance of the regulation based on size. One recommendation would be, actions taken two years in advance of obligations receive a 2X multiple and actions taken one year in advance would receive a 1.5X multiple. 3-4

Default WATTs Calculation due to a Force Majeure

Staff suggests that if a warehouse operator fails to know the number of annual truck trips made to a warehouse due to a force majeure or for whatever reason, a default WATTs calculation shall be used to determine an owner or operator's compliance requirements. Such calculations should be used only as a last resort and be heavily weighted in favor of public health. In other words, a default WATTs calculation should be set in such a way that a warehouse owner or operator would prefer to voluntarily report out the actual WATTs values at each warehouse facility over taking the default WATTs calculation. This principle would be similar to default pathways established under the Low Carbon Fuel Standard (LCFS) whereas the default would not generate the level of credits that one would normally expect at a fuel production facility. By doing so, the producer is motivated to submit a detailed pathway to maximize a plants low carbon fuel accreditation. 3-5

Mitigation Fee

Although no fee has been set by Staff in the proposed language, it goes without saying that such a fee must serve as a real deterrent to a warehouse owner or operator who would otherwise opt to violate the rule if the penalty was inconsequential. We will be very interested in the rationale behind whatever figure staff ultimately proposes for the $XX amount for each WAIRE point. 3-6

Warehouse Activities Definition

We are concerned about the potential abuse that could occur if staff allows supporting office administration, maintenance or manufacturing areas within a warehouse, etc., not count as warehouse activities. It is quite possible that such areas could be created permanently or temporarily to intentionally avoid obligations under the proposed warehouse rule. Further, the AQMD's ability to enforce and prosecute those who take advantage of this loophole with fraudulent intent would be a challenge for Staff. We highly recommend the removal of these exemptions to warehouse activities. 3-7

Near-Zero Emission (NZE) Trucks Definition

We strongly support this definition as it ensures that the rule will put the cleanest low NOx truck option onto the South Coast Air Basin's roads. 3-8

WAIRE Menu

We highly recommend the following changes to the WAIRE Menu to make sure that the AQMD achieves meaningful reductions in air pollution from warehouse operations.

- Acquire ZE/NZE Truck: Support
- NZE/ZE Truck Visits: Support
- Acquire ZE Yard Truck: Support <u>if amended to include</u> NZE Yard Truck to this item as NZE trucks, as defined by the rule, now come in 6.7L, 8.9L and 11.9L engine options. 3-9
- Install Onsite ZE Charging or Fueling Stations: Oppose. We recommend this option's removal from the WAIRE menu. The usage of such stations at the facility is what helps achieve emissions reductions at a warehouse. The actual act of installing a charging or fueling station does not reduce emissions in or around a warehouse if there is no volume exhibited. This action therefore should not receive WAIRE credit. 3-10
- Use Onsite ZE Charging or Fueling Stations: Oppose unless amended to include NZE fueling stations. Clean Energy believes that the state LCFS already incentivizes the use of low carbon charging or fuel use by volume. However, if staff elects to maintain this action item under the WAIRE menu, it should also include the usage of renewable fuel at NZE fueling stations located at or near warehouses. The value of the WAIRE credit value should also be determined by the CI value of the renewable fuel at a charging or fueling station using the CI values under the California Air Resources Board's LCFS program. 3-11
- Install Onsite Energy Systems: Oppose. We recommend removing this action from the WAIRE menu as it does nothing to reduce air pollution at warehouse facilities which is the rule's objective.
- Use Onsite Energy Systems: Oppose. We recommend removing this action from the WAIRE menu as it does not actually reduce air pollution at a warehouse which is the rule's objective. 3-12
- Community Benefits: Support. Any action that better informs the community on the health risks and impacts is important information to collect and share with the community. 3-13

Conclusion:

Clean Energy would like to thank and support AQMD staff's efforts to develop a meaningful Warehouse ISR. If possible, we would like to meet with you to discuss the above amendments and recommendations in person prior to the next Warehouse Workshops in December. 3-14

Also, if you should have any questions or would like to have further input from our team, please do not hesitate to contact me directly.

Sincerely,



Todd R. Campbell
Vice President, Public Policy and Regulatory Affairs

CENTER FOR COMMUNITY ACTION & ENVIRONMENTAL JUSTICE
EARTHJUSTICE
EAST YARD COMMUNITIES FOR ENVIRONMENTAL JUSTICE
LEADERSHIP COUNSEL FOR JUSTICE & ACCOUNTABILITY
LONG BEACH ALLIANCE FOR CHILDREN WITH ASTHMA
NATURAL RESOURCES DEFENSE COUNCIL
SAN PEDRO & PENINSULA HOMEOWNERS COALITION
SIERRA CLUB
TEAMSTERS LOCAL 1932
WAREHOUSE WORKER RESOURCE CENTER

December 6, 2019

Ian MacMillan
Planning and Rules Manager
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: Comments on Preliminary Draft Warehouse Indirect Source Rule (Proposed Rule 2305)

Dear Mr. MacMillan:

On behalf of the undersigned coalition of community and environmental organizations, we submit these comments on the preliminary draft warehouse indirect source rule proposed by South Coast Air Quality Management District staff during the November 13, 2019 meeting of the warehouse working group. Our coalition is actively involved in this group because communities adjacent to warehouses are consistently and disproportionately harmed by the freight industry every day. We have advocated *for years* for a strong and equitable warehouse rule that will achieve necessary emissions reductions. Indeed, it is well past time for the warehouse industry to see effective and meaningful regulation, and to finally be a good neighbor to the communities burdened by dirty air and unacceptable health risks. The Air District must therefore use this opportunity to pass a strong rule that advances both short- and long-term solutions for the air quality and health crises caused by this industry. The health burden placed on current and future generations of children, pregnant mothers, and our elders and families as a whole must stop now. The time for delay is long over. 4-1

While we appreciate the robust work done so far to develop a strong warehouse rule, and commend the Air District's decision to move away from a credit trading program that would simply amount to pollution trading and we know would not work, the draft rule can do more to better reflect the reality of warehouse operations and the pollution crisis in the region. The Inland Empire has seen a proliferation of these facilities in recent years, and the Southern California Association of Governments projects even more warehouse space will be built or retrofitted in 4-2

the future.[1] These facilities continue to be sited in neighborhoods throughout the South Coast air basin that routinely show high levels of ozone and fine particulate matter. In fact, the region continues to rank as one of the most polluted areas of the country, recently receiving an "F" from the American Lung Association for ozone and fine particulate matter pollution.[2] After operating for years under a business model that places industry over our health, this industry must be held accountable for business decisions that contribute to consistent and toxic pollution in our neighborhoods. 4-2 (continued)

And there is no question that the Air District can ensure accountability here, under its considerable legal and regulatory authority to develop a strong warehouse rule that tackles the freight pollution crisis. Under the California Health and Safety Code, the Air District is expressly required to provide a warehouse facility-based measure that addresses "high-level, localized concentrations of pollutants" throughout the South Coast air basin.[3] Thus, we request that Air District staff update the draft rule to reflect our comments below prior to submitting it to the Air District's Governing Board for adoption in May 2020.

I. The Rule Must Apply to Warehouses 100,000 Square Feet or Larger in Size.

Throughout the draft rule, the language indicates it applies to warehouses that are either greater than 100,000 square feet in size, or greater than *or equal to* 100,000 square feet, shifting between the two interchangeably. (Compare Proposed Rule 2305(b), (d) 1), and (e)(1)(A) with Proposed Rule 2305(d)(1)(C), (e)(3)(A).) Given that the former option likely exempts from the rule many facilities that the rule actually intends to cover, the final rule should clearly and consistently state it applies to warehouses that are greater than or equal to 100,000 square feet. 4-3

In addition, the draft rule defines a warehouse as a "facility consisting of one or more buildings that stores cargo," yet notes it only applies to "a single building" that meets its size requirements. (Proposed Rule 2305(b), (c)(22).) We have seen many facilities in our communities that consist of smaller buildings clustered near each other, however, with one operator running all the warehousing activities in each building. A limitation to single buildings thus may not reflect the reality of warehouse operations, and may again unintentionally exempt certain facilities that should be regulated. The final rule must account for warehousing activities spanning several neighboring buildings that together may meet the 100,000 square feet requirement. 4-4

II. The Points Compliance Obligation Must Reflect the Disproportionate Impacts on Environmental Justice Communities.

The specifics of the warehouse points compliance obligation are still left largely undefined in the draft rule. The stringency value, annual variable, and points for each menu item are critical to creating a strong rule, and we anticipate participating in the technical working 4-5

[1] So. Cal. Assn. of Governments, *Industrial Warehousing in the SCAG Region* Apr. 2018) at p. 81.

[2] Am. Lung Assn., *State of the Air 2019* at pp. 69-70.

[3] Health & Saf. Code, § 40440(b)(3 .

group and providing more detailed comments once these factors are defined. We want to ensure at this point, however, that the points obligation for each warehouse accounts for nearby sensitive receptors, and that facilities located in environmental justice communities and/or neighbor sensitive receptors must receive a higher points obligation. A just and equitable warehouse rule must ultimately aid in region-wide emissions reductions and avoid approaches that could allow for picking winners and losers, with some communities getting cleaner air and others not. A compliance obligation that reflects the disproportionate impacts faced by disadvantaged communities will be effective in ensuring warehouses clean up their pollution in *all* communities.

4-5 (continued)

The draft rule further fails to specify exactly how warehouse owners and operators will determine their final points compliance obligation each year. We presume the Air District will provide owners and operators their precise obligation using the equation in Proposed Rule 2305(d)(1), however, the draft rule does not describe this process. We suggest the final rule lay out the process, including how and when the Air District will communicate the final obligation, in order to ensure consistency in the rule's application.

4-6

Finally, and again for the sake of clarity, the final rule should also define "sensitive receptors" as used in the table of menu items, e.g., residential areas, schools, hospitals, daycare facilities, nursing homes, parks, or other areas where occupants are more susceptible to the negative impacts of pollution.

4-7

III. The Mitigation Fee Option Should Be Minimal.

As with the points compliance obligation, the draft rule does not specify the mitigation fee rate. (Proposed Rule 2305(f).) Yet it is imperative that the mitigation fee option not become a "pay to pollute" alternative, with facilities simply paying their way out of their compliance obligation each year rather than investing in the on-site menu items. The current draft rule language seems to allow for just such an alternative, simply making the fee progressively more expensive each year that an operator fails to meet its compliance obligation using on-site menu items. Unfortunately, we have seen time and time again that the industry would rather pay more than change their operations or invest in meaningful emissions reduction measures. Thus, the final rule must properly limit the role of a mitigation fee in an operator's compliance obligation.

4-8

To that end, the mitigation fee must appropriately cost more than the menu options in order to incentivize on-site investments, and the points generated per dollar must be further discounted for those facilities located near sensitive receptors and/or in environmental justice communities. The final rule should also specify how and where the mitigation fees generated each year will be used. Given that our members bear the brunt of this industry's operations, we expect such fees will fund emissions reduction projects in our communities.

4-9

IV. The Freight Sector Must Move to Zero-Emissions.

We want to be abundantly clear that our community members want <u>zero-emissions</u> technology as part of any warehouse rule, in order to truly address the air quality and health crises caused by the warehouse industry. Any investment in "near-zero" equipment and

4-10

infrastructure at this point is counterproductive and should not be included in this rule. The on-site menu items still include the purchase of near-zero trucks as one of many options to earn points, yet near-zero technologies ultimately delay the development and implementation of the zero-emissions equipment necessary to clean up pollution in our communities.

We continue to hear industry representatives push near-zero technology in our working group meetings, but near-zero is often used as code for traditional combustion technologies burning methane gas. These technologies provide no bridge to advancing zero-emissions technologies, and ultimately create barriers to the transition to and implementation of zero-emissions infrastructure. Moreover, the communities listed on this letter are those that bear the brunt of the natural gas and oil infrastructure that supports these combustion technologies. These communities do not want the continued negative climate and health impacts that accompany the propagation of fossil fuel technology, equipment, and infrastructure. 4-10 (continued)

Near-zero advocates talk about their technologies being available now as an argument why the region should invest robustly in natural gas infrastructure and vehicles. We remind the Air District that zero-emissions technologies are developing rapidly and by the time compliance obligations start for this rule, we expect significant further developments in the zero-emissions technologies space. 4-11

The freight sector must move to zero-emissions to meet not only our greenhouse gas reduction targets, but also to be consistent with the directives and plans adopted at the regional, State, and even global level. Indeed, the transition to zero-emissions will happen, and the Air District is wise to begin planning and demonstrating a clear foundation for it. 4-12

V. The Final Rule Must Address CEQA Obligations.

The draft rule does not address the interplay between compliance with the final warehouse rule, and facilities' compliance with obligations under the California Environmental Quality Act (CEQA). Yet we anticipate seeing future CEQA documents where warehouse owners and operators claim they will address air pollutant emissions, for example, through the warehouse rule, thereby punting their CEQA obligations rather than properly analyzing and mitigating the impacts of their projects through the CEQA process. The Air District must clarify and formalize in the final rule that owners and operators cannot use future compliance with this rule as satisfying CEQA's disclosure and mitigation requirements, regardless of the warehouse rule's application. 4-13

VI. Our Communities Cannot Afford Further Delays in the Rulemaking Process.

The warehouse rule should have been before the Air District's Governing Board in December of this year. Instead, the rule is now tentatively scheduled to go to the Governing Board in mid-2020. We cannot keep pushing the adoption of this rule further into the future, even as pollution continues to envelop our communities. We want to remind the Air District that we expect a finalized and adopted warehouse rule by May 2020. 4-14

We appreciate your consideration of these comments, and reiterate our support for the important work done so far to develop a meaningful warehouse rule. We look forward to working with the Air District to lift up the voices of our community members and tackle the harms caused by the warehouse industry. 4-15

Sincerely,

Adrian Martinez
Michelle Ghafar
Earthjustice

Andrea Vidaurre
Center for Community Action & Environmental Justice

Taylor Thomas
East Yard Communities for Environmental Justice

Rebecca Zaragoza
Leadership Counsel for Justice & Accountability

Sylvia Betancourt
Long Beach Alliance for Children with Asthma

Heather Kryczka
Natural Resources Defense Council

Peter M. Warren
San Pedro & Peninsula Homeowners Coalition

Carlo De La Cruz
Sierra Club

Randy Korgan
Teamsters Local 1932

Sheheryar Kaoosji
Warehouse Worker Resource Center

cc:

Chair Burke and Members of the Committee
Mobile Source Committee
South Coast Air Quality Management District

Wayne Nastri
Executive Officer
South Coast Air Quality Management District

COALITION FOR CLEAN AIR

December 6, 2019

Ian MacMillan
Planning & Rules Manager
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765
Via email - imacmillan@aqmd.gov

Re: First Draft of Proposed Rule 2305 – Warehouse Indirect Source Rule

Dear Mr. MacMillan:

Thank you for the opportunity to review and provide comments on the first draft of the South Coast Air Quality Management District (SCAQMD) Facility Based Mobile Source Measure – Warehouse Indirect Source Rule (Warehouse ISR). We appreciate how much work you and the other SCAQMD staff have put into this proposed rule, and look forward to continuing to work with you on an effective rule for full implementation. 5-1

Founded in 1971, the Coalition for Clean Air protects public health, improves air quality, and prevents climate change. We submit these comments in the hopes that they will be taken in the cooperative spirit in which they are offered.

I. Necessary Details of Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program Must Be Clarified

Under section (d) (1) (A) Requirements, the SCAQMD has left much undefined and without the ability for the public to determine how the WAIRE points will be calculated. The equation to calculate annual WAIRE program points required per warehouse includes the following:

WPCO = WATTs x Stringency x (Annual Variable)

However, "Stringency" is completely undefined, leaving interested members of the public wondering exactly how SCAQMD will calculate the required WAIRE points according to its own equation. Similarly, the "Annual Variable" is to be determined according to Table 1 (Proposed Warehouse ISR, 2305-11). When reviewing Table 1, however the Annual Variables in that table are also undefined. 5-2

Without hypothetical or placeholder values to insert into SCAQMD's proposed equation, it is impossible to determine what a proposed WAIRE point value would be for warehouses. Without some indication of what SCAQMD is proposing for both Stringency values and Annual Variables, the first draft of the Warehouse ISR is frustratingly vague and ambiguous. We hope that these values will be much

more fully fleshed out by SCAQMD staff before our next Warehouse ISR meeting on Tuesday, December 10.

5-2 (cont.)

II. The Initial Requirement Dates Are Too Far Out

In table 2, the initial reporting dates are listed as follows:

Warehouse Size (sq. ft.)	Initial Reporting Date
Greater than or equal to 250,000	July 30, 2021
Greater than or equal to 150,000	August 2, 2022
Greater than or equal to 100,000	August 1, 2023

5-3

However, from the draft rule, it is unclear why such a large range of reporting dates is included. If the rule is voted upon and implemented next year, why would smaller warehouses have approximately three years to provide their initial reports? Why can't the warehouses be required to report their initial information sooner, so that the SCAQMD can begin implementation expeditiously? I hope this can be addressed at our next Working Group Meeting.

III. The Mitigation Fees Must be Increased Annually by a Larger Percentage

5-4

Again, as with the values of the equation discussed above, the proposed rule provides no value for each WAIRE point. (Proposed ISR, 2305-9, section (f)(1).) Further, the SCAQMD proposes that if a warehouse operator does not complete at least 50% of their WAIRE points obligation, the mitigation fee will rise by 10% the following year. (Proposed ISR, 2305-9, 10, section (f)(2).) We propose that the fee rise by **20%** in the event of deficient compliance in a WAIRE year. This way, the operator will have even more incentive to comply with the WAIRE compliance rule. This is also to ensure that warehouse operators will simply pay the mitigation fee rather than make good faith efforts to comply with the WAIRE points SCAQMD rule.

5-5

Conclusion

Again, we appreciate the opportunity to comment and provide constructive criticism on the SCAQMD proposed Warehouse ISR. We understand that an element of uncertainty is part of the development of the Warehouse ISR, as it is new to SCAQMD. However, to make the rulemaking meaningful to public stakeholders, SCAQMD must do a better job of providing enough information about the proposed Warehouse ISR so that we can have appropriate input into it. In its current form, it is very difficult to determine if the proposed Warehouse ISR has developed a useful way to measure WAIRE points for warehouses in the South Coast Basin.

5-6

Sincerely,

Jerilyn López Mendoza

Jerilyn López Mendoza
Senior Policy Advocate

Kevin Maggay
Energy and Environmental Affairs
555 W. 5th Street
Los Angeles, CA 90013

tel: 213-244-8192
Email: kmaggay@semprautilities.com

December 6, 2019

Mr. Ian MacMillan
21865 Copley Drive
Diamond Bar, CA 91765
Transmitted to: imacmillan@aqmd.gov

Re: PROPOSED RULE 2503 - WAREHOUSE INDIRECT SOURCE RULE

SoCalGas appreciates the opportunity to comment on the South Coast Air Quality Management District SCAQMD) Proposed Rule 2305: Warehouse Indirect Source Rule ISR) – Warehouse Actions and Investments to Reduce Emissions WAIRE) Program Proposed Rule). SoCalGas would like to offer the following comments for consideration for the Proposed Rule. 6-1

WAIRE Points Should Prioritize State Implementation Plan SIP Creditable Actions and Investments.

The Working Group presentation given on November 13, 2019, states that the number of WAIRE points earned for each menu item will be based on cost, direct emission reduction, and local benefit. While these are important considerations, SoCalGas recommends that SIP creditable emission reductions also be a top priority when determining WAIRE point values. Warehouse ISRs and the other Facility Based Mobile Source Measures were identified as control strategies in the 2016 Air Quality Management Plan to meet the 2023 attainment deadline for ozone. This can only be achieved through SIP creditable emission reductions. While other actions or investments that reduce exposure or enable emission reductions, such as installing filtration systems or electric vehicle chargers, are beneficial, they do not help to achieve the purpose of the Facility Based Mobile Source Measures of producing emission reductions that can be counted towards the SIP. Therefore, SIP creditable reductions should be prioritized. 6-2

Early Actions Should Receive Weighted WAIRE Points

With the federal Clean Air Act ozone attainment deadline quickly approaching in 2023, it is important to achieve as many emission reductions as possible and as soon as possible to meet attainment. Early action would be those that can be deployed immediately with commercially available technologies, such as heavy-duty trucks that meet the California Air Resources Board Optional Low Nitrogen Oxide NOx standard of 0.02 grams per brake horsepower hour. Early SIP creditable actions should be given weighted WAIRE points to encourage early action. 6-3

A Standardized Process to Add Actions and Investments to the WAIRE Menu Should be Developed

The WAIRE menu included in the Proposed Rule language contains only nine actions and investments that receive WAIRE points. While this is the first version and will certainly be expanded, SoCalGas recommends developing a continuous, standardized process to add items to the WAIRE menu. A standardize process may include:

- Streamlined application process.
- Technical review committee with regularly scheduled meetings.
- Acceptance guidelines.
- Minimum requirements/criteria guidance document

6-4

Providing requirements and WAIRE point methodologies will give technology developers and solution providers an opportunity to pursue solutions with some amount of certainty that it will be eligible for WAIRE points.

Hydrogen Production Should Receive Additional WAIRE Points

Hydrogen fueling is mentioned in the WAIRE menu, which will achieve emission reductions for the WAIRE program. In addition to fueling, onsite hydrogen production should generate additional WAIRE points. Producing hydrogen on site reduces emissions from transporting the fuel and is a significant financial investment.

6-5

Natural Gas Fueling Infrastructure Should be Included in the WAIRE Menu

The WAIRE Menu includes the addition of alternative fuel infrastructure and specifically states electric and hydrogen infrastructure. Gas infrastructure should also be eligible to generate WAIRE points. Natural gas trucks are the only commercially available Class 8 trucks suitable for goods movement. Supporting the immediate deployment of Low NOx natural gas trucks would significantly assist the region to meeting the 2023 attainment deadline.

6-6

Thank you again for the opportunity to comment on the Proposed Regulation. If you have any questions, please feel free to contact me.

6-7

Respectfully submitted,



Kevin Maggay
Energy and Environmental Affairs Program Manager

To: Ian MacMillan and Victor Juan, South Coast Air Quality Management District
From: Britta McOmber, UCLA Luskin Center for Innovation
Date: December 6, 2019
RE: Proposed Rule 2305 Warehouse Indirect Source Rule - Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program

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LCI commends the South Coast Air Quality Management District for crafting a Warehouse Indirect Source Rule. We would like to support SCAQMD in development of the final rule that would reduce GHG emissions and harmful diesel emissions from associated heavy-duty truck (HDT) traffic while incentivizing the transition to the cleanest available HDTs. We believe a well-designed Warehouse ISR could improve air quality, public health, and quality of life for communities with concentrated warehousing development. Our potential ability to help quantifiably estimate some of these benefits will depend on the level of specificity available from SCAQMD pertaining to the proposed rule. Thus, please consider these questions for future revisions and workshops of Proposed Rule 2305. 7-1

ensitive Receptors and Local Benefit Weighting

We would appreciate a better understanding of how the rule will define "Sensitive Receptors" within (c) Definitions. Working group meetings[1] have discussed the proximity of warehouses to sensitive receptors as an important component of the weighted Localized Benefit in the equation that will determine the value of WAIRE points. There should be a clear definition of this term in the draft rule itself, as it is referenced in the WAIRE Menu. The definition could include a specific description of the populations most vulnerable to the impacts of poor air quality (who), and the types of land uses or facilities where vulnerable populations are located or concentrated (type). SCAQMD could further consider a definition of what is meant by "Local Benefit" in the draft rule; for example, defining the distance from a warehouse at which Sensitive Receptors would influence the value of WAIRE Points (proximity). 7-2

- Will "Sensitive Receptors" and/or "Sensitive Sites" be defined under (c) Definitions in a future version of Proposed Rule 2305?
- Will "Sensitive Receptors" be defined separately from "Residential Receptors" and "Worker Receptors"? Does SCAQMD intend to include "Residential Receptors" and "Worker Receptors" as components of the weighted Localized Benefit? 7-3
- When is the expected timeline for release of the Supplemental Handbook that will include default calculations of Costs, Local Benefits, and Direct Emission Reductions for each menu item? 7-4

Facility-Based Mobile Source Measures Warehouse Working Group. (Aug 23, 2019). *South Coast Air Quality Management District*.

Facility-Based Mobile Source Measures Warehouse Working Group. (Sep 19, 2019). *South Coast Air Quality Management District.*

eporting, Notification, and Recordkeeping

We are not aware of text in the draft rule regarding who bears the responsibility of identifying or reporting the number of "Sensitive Receptors" in close proximity to warehouses and distribution centers. It would be useful to specify the role of SCAQMD or some other independent entity in doing so under a uniform approach. This metric could follow the format of other initial site information required in the report, including the number, type, and proximity of Sensitive Receptors (i.e., there are two schools within one mile of the Facility A). 7-5

. Will identification of "Sensitive Receptors" be the responsibility of SCAQMD staff, the responsibility of the warehouse owner/operator, or another entity?

ransferring WAIRE Points to a Different Warehouse

We also have a question about Section (d)(3)(A) Transferring WAIRE Points to a Different Warehouse. It states "If a warehouse operator conducts warehousing activities at more than one warehouse, then WAIRE Points earned for one warehouse may be used at the other warehouse(s) under the operational control of that same warehouse operator. Only those points that are earned in excess of a warehouse operator's WAIRE Points Compliance Obligation at that site may be transferred. Any WAIRE Points transferred to a different warehouse shall be calculated using the values specified in the WAIRE Menu in Table 3." We are unsure if this provision could unintentionally weaken a key goal underpinning the Rule, namely the *local* in "[t]o facilitate local and regional emission reductions through actions and investments at warehouses." 7-6

. Could there be some mechanism or language added to this section of the Proposed Rule that would restrict the transferring of WAIRE Points between warehouses with the same operator in a way that maximizes local benefits?

ransparency

Finally, an attendee of the November 13th Warehouse ISR working group raised a question about transparency of Proposed Rule 2305: What information from the Annual WAIRE Reports would be available to the public? While we appreciate there may be industry-sensitive information in the Annual Reports that warehouse owners/operators may want to protect, LCI as a public serving research entity would appreciate having access to information about the associated investments. We also recognize that it is important that communities with high concentrations of warehousing activities and residents in close proximity to warehouses have the ability to know which warehouse owners/operators are, and are not, in compliance with the Rule. 7-7

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*Facility-Based Mobile Source Measures Warehouse Working Group. (Sep 19, 2019). "*Warehouse ISR Working Group*." South Coast Air Quality Management District.* Slide 28.

Thank you for your substantial effort to prepare the Proposed Warehouse Indirect Source Rule. I also appreciate the consideration of SCAQMD staff in reviewing these questions, and look forward to further discussions and working group meetings on the content of the rule. 7-8

Sincerely,

Britta McOmber
Staff Researcher, Luskin Center for Innovation
UCLA Luskin School of Public Affairs
Public Affairs Building, Box 951656
Los Angeles, California 90095
Office: (310) 825-7202
Email: bmcomber@luskin.ucla.edu

CENTER FOR COMMUNITY ACTION & ENVIRONMENTAL JUSTICE
EARTHJUSTICE
EAST YARD COMMUNITIES FOR ENVIRONMENTAL JUSTICE
SIERRA CLUB
TEAMSTERS LOCAL 1932

January 24, 2020

Chair Burke and Members of the Committee
Mobile Source Committee
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: Comments on Preliminary Draft Warehouse Indirect Source Rule (Proposed Rule 2305)

Dear Chair Burke and Members of the Committee:

On behalf of the undersigned coalition of community and environmental organizations, we submit these comments on the preliminary draft warehouse indirect source rule that is before your Committee. Our coalition represents the communities who live and work adjacent to warehouses and who are consistently and disproportionately harmed by the freight industry every day. After years of advocating for a strong and equitable warehouse rule that will achieve necessary emissions reductions, our communities can no longer afford a business model that places industry over our health. We need our Air District to use its considerable legal and regulatory authority to develop a strong warehouse rule that tackles the region's freight pollution crisis. Indeed, the warehouse industry must be held accountable for business decisions that contribute to consistent and toxic pollution in our neighborhoods. 8-1

As this Committee hears updates today on the progress of the warehouse rule, we provide the following input for the Committee's additional consideration:

I. The Freight Sector Must Move to Zero-Emissions.

As we have repeatedly emphasized to Air District staff, our community members expect zero-emissions technology as part of any warehouse rule, in order to truly address the air quality and health crises caused by the warehouse industry. Any investment in "near-zero" equipment and infrastructure at this point is counterproductive and should not be included in this rule. Although we commend the staff's decision to not grant points for near-zero infrastructure in the "WAIRE" menu of in-site investment items, the current menu still includes the purchase of near-zero trucks as one of many options to earn points toward compliance. In addition, we are deeply concerned that zero-emissions truck trips earn the same number of points as near-zero truck trips in the current menu. Given that the lion's share of air quality benefits from the rule stem from the use and operation of trucks, zero-emissions trucks must be elevated and granted a greater points value in the final menu. Near-zero technologies only delay the development and implementation of the zero-emissions equipment necessary to clean up pollution in our communities. 8-2

We continue to hear industry representatives push near-zero technology in our working group meetings, but near-zero is often used as code for traditional combustion technologies burning methane gas. These technologies provide no bridge to advancing zero-emissions operations, and ultimately create barriers to the transition to and implementation of zero-emissions infrastructure. Moreover, the communities listed on this letter are those that bear the brunt of the natural gas and oil infrastructure that supports these combustion technologies. These communities do not want the continued negative climate and health impacts that accompany the propagation of fossil fuel technology, equipment, and infrastructure. 8-3

Near-zero advocates talk about their technologies being available now as an argument why the region should invest robustly in natural gas infrastructure and vehicles. We remind the Air District that zero-emissions technologies are developing rapidly and by the time compliance obligations start for this rule, we expect significant further developments in the zero-emissions technologies space. We must take this opportunity to elevate zero-emissions technology and infrastructure in this rule—and begin phasing out near-zero—in order to ensure effective and meaningful regulation of the warehouse industry. 8-4

The freight sector must move to zero-emissions to meet not only our greenhouse gas reduction targets, but also to be consistent with the directives and plans adopted at the regional, State, and even global level. Indeed, the transition to zero-emissions will happen, and the Air District is wise to begin planning for it. 8-5

II. The Points Compliance Obligation Must Reflect the Disproportionate Impacts on Environmental Justice Communities.

The specifics of the warehouse points compliance obligation are still being finalized in the warehouse working group. The stringency value, annual variable, and points for each menu item are critical to creating a strong rule, and we anticipate providing more detailed comments as these factors are further developed. We want to ensure at this point, however, that the points obligation for each warehouse accounts for nearby sensitive receptors, and that facilities located in environmental justice communities and/or neighbor sensitive receptors must either receive a higher points obligation or attain zero-emissions operations on an accelerated timeline. A just and equitable warehouse rule must ultimately aid in region-wide emissions reductions and avoid approaches that could allow for picking winners and losers, with some communities getting cleaner air and others not. A compliance obligation that reflects the disproportionate impacts faced by disadvantaged communities will be effective in ensuring warehouses clean up their pollution in *all* communities. 8-6

Although the preliminary draft rule does not define "sensitive receptors," any final rule should include a definition that encompasses residential areas, schools, hospitals, daycare facilities, nursing homes, parks, or other areas where occupants are more susceptible to the negative impacts of pollution. Thus, for example, the rule would require that any facilities built near schools receive a greater warehouse points compliance obligation, or attain zero-emissions operations faster. Whether by its stringency or accelerated implementation, the rule must accommodate an evolving points system that truly reflects the reality of warehouse operations in the region. 8-7

We also note that the current menu of on-site investment items does not include designated on-site resting areas for workers and truck drivers that prevent parking and idling in nearby communities. This item would address one of the major impacts of freight operations in our communities. 8-8

III. Our Communities Cannot Afford Further Delays in the Rulemaking Process.

The warehouse rule should have been before the Air District's Governing Board in December of this past year. Instead, the rule is now tentatively scheduled to go to the Governing Board in mid-2020. We cannot keep pushing the adoption of this rule further into the future, even as pollution continues to envelop our communities. We want to remind the Air District that we expect a finalized and adopted warehouse rule by May 2020. We appreciate the Air District's staff pushing hard on this rule, and we encourage Committee members to support staff meeting the May 2020 deadline given the importance of this rule. 8-9

We appreciate your consideration of these comments, and appreciate the robust work done so far to develop a meaningful warehouse rule. We look forward to working with the Air District to lift up the voices of our community members and tackle the harms caused by the warehouse industry. 8-10

Sincerely,

Adrian Martinez
Michelle Ghafar
Earthjustice

Andrea Vidaurre
Center for Community Action & Environmental Justice

Taylor Thomas
East Yard Communities for Environmental Justice

Carlo De La Cruz
Sierra Club

Randy Korgan
Teamsters Local 1932

cc:

Wayne Nastri
Executive Officer
South Coast Air Quality Management District

Ian MacMillan
Planning and Rules Manager
South Coast Air Quality Management District

4675 MacArthur Court, Suite 800
Newport Beach, California 92660 USA
949.437.1400 fax: 949.612.1894

www.CleanEnergyFuels.com

Todd R. Campbell
Vice President Public Policy & Regulatory Affairs

Clean Energy

January 15, 2020

Mr. Ian MacMillan
Mr. Victor Juan
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: Comments on the December 10 Warehouse Indirect Source Rule Working Group

Dear Mr. MacMillan, Mr. Juan, and South Coast Air Quality Management District Staff:

Clean Energy appreciates the opportunity to comment on the latest staff presentation during the Warehouse Indirect Source Rule (ISR) Working Group on December 10, 2019. We would like to provide the following comments on the proposed WAIRE point system: 9-1

WAIRE methodology must prioritize actual, quantifiable and SIP creditable emissions reductions.

We believe there is too much emphasis in the proposed WAIRE menu system to make investments that do not necessarily result in real, tangible, and quantifiable emissions reductions. Given that the South Coast airshed must reach federal clean air attainment standards in less than 3 years, WAIRE points should be focused and heavily weighted on the emissions reduction side of the equation.

We therefore recommend that AQMD staff place greater emphasis and weight on the action side of the menu and less on the investment side of the menu. We would also recommend that WAIRE points allocated toward investments be held until the regulated party can demonstrate to AQMD staff that the investment is helping the related facility to generate WAIRE points on the action side of the menu.

Using your example on slide 5, company A makes a $20K investment but cannot demonstrate a regional emissions reductions or local benefit. 9-2

Company B makes a $20K investment and can demonstrate a 60 lb. NOx reduction and a 0.4 DPM reduction.

Under our proposal, company A would be eligible for 1 WAIRE point but does not receive that WAIRE point until company A can demonstrate to AQMD staff that the investment was being used as intended. Company B, however, would receive 5 WAIRE points because company B can demonstrate to AQMD staff that their investment is being used.

The last thing the South Coast air basin needs is a rule that promotes stranded asset investments that achieve no real emissions reduction. By making the credit for an investment dependent upon usage, the rule will incentivize the regulated party to proactively plan for

system installation and usage in advance. The way the WAIRE system is currently proposed, the AQMD staff did not develop the rule in such a way that compels the regulated party to make investments that will lead to real reductions. 9-2 (continued)

Early Adopter Bonus

We strongly encourage AQMD staff to consider an "early adopter bonus" for facilities that commit to achieving emission reductions prior to rule capture of the regulated party. While we do not have any specific recommendations on what multiplier should be used, one possible starting point could be as follows: 9-3

- 2x credit generation for actions completed 3 or more years in advance of rule capture;
- 1.5x credit generation for actions completed 2 or more years in advance of rule capture;
- 1.25x credit generation for actions completed 1 year or less in advance of rule capture.

Equal Treatment

Near-zero (defined as 0.02 NOx) should be treated equally as zero emissions technologies for onsite mitigation and under the Warehouse ISR for that matter. It is widely known that so-called zero emission strategies are not free of polluting emissions when the power generation is not from renewable sources. In fact, the South Coast Air Quality Management District expressed on numerous occasions that low NOx trucks certified at 0.02 grams NOx are essentially equivalent to zero emission battery electric trucks and buses based on the profile of the regional electrical grid. Of course, powerplants within the region are often located in disadvantaged communities and this pollution should not be overlooked. Additionally, in-state sources of renewable natural gas are increasingly coming online and have the ability of delivering up to minus 400 carbon intensity levels for low NOx trucks which could result in low NOx trucks being better on climate emissions than zero emission platforms. It is for all of these reasons that we believe the Warehouse ISR should not treat zero and near zero (low NOx trucks) any differently when it comes to credits or as options on the WAIRE menu. 9-4

Project Costs Do Not Equate to Emissions Reductions

Project cost tiers shown in the point system approach are too low if cost should be included at all. Including cost provides a path to accumulate points without a corresponding level of emissions reductions. It would be better to have an optional mitigation fee that can then be used to fund real quantifiable emission reductions. If costs are used to generate points then the costs should be amortized over the useful life of the equipment rather than upfront, and they should be awarded based on actual use of the equipment. Using cost as a point parameter may prevent the regulated party from using public funding. 9-5

Specific Comments on the Draft WAIRE Menu

- Add NZ as an option to every item that only shows ZE. 9-6
- Eliminate points for purchasing vehicles and only award points for actual use. 9-7
- Eliminate points for car charging, car charging does not eliminate DPM or other truck emissions. 9-8

- Allow trucks to be purchased by a 3rd party to address businesses that do not own/operate trucks, but they could fund 3rd party trucking companies. 9-9
- Points should only be earned upon completion of infrastructure projects, not over incremental development milestones. Even better, infrastructure points should be earned based on use. 9-10

Conclusion:

Clean Energy would like to thank and support AQMD staff's efforts to develop a meaningful Warehouse ISR. The development of the WAIRE menu in terms of how actions are valued, how WAIRE points are generated, and how the WAIRE menu incentivizes regulated parties to comply is critical to the rule's success. We hope AQMD staff takes our comments under full consideration so that the Warehouse ISR can achieve the maximum amount of emissions reductions in the shortest period of time. 9-11

If you should have any questions or would like to have further input from our team, please do not hesitate to contact me directly.

Sincerely,



Todd R. Campbell
Vice President, Public Policy and Regulatory Affairs

WPGA
WESTERN PROPANE GAS ASSOCIATION
Leading the way for renewable propane

February 12, 2020

Mr. Ian MacMillan
Mr. Victor Juan
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

RE: Warehouse Indirect Source Rule

Dear Mr. MacMillan, Mr. Juan, and South Coast Air Quality Management District Staff:

Thank you for the opportunity to comment on the South Coast Air Quality Management District's (SCAQMD) development of the Warehouse Indirect Source Rule ISR) and WAIRE program aimed at reducing and facilitating local and regional emission reductions associated with warehouses and mobile sources attracted to warehouses. The Western Propane Gas Association (WPGA seeks to be a valuable contributor in both the development of the rule and the policies and procedures that may emerge as a result of these discussions. 10-1

WPGA would like to commend SCAQMD staff on your efforts to seek deeper NOx reductions from mobile sources that have a disproportional impact upon the South Coast Air Basin and disadvantaged communities. 10-2
We believe as the South Coast strives to reach federal clean air attainment and improve upon the health of impacted communities, near-zero and low-NOx technologies using renewable fuel are the most efficient and cost-effective way to address GHG and NOx emissions, especially in the near-term. 10-3

When looking toward the future, the propane industry is investing heavily in renewable propane, derived from sustainable sources like beef tallow or vegetable oil. The carbon intensity for renewable propane is on par with that of electric and prioritizing near-zero and low-NOx technologies, such as those using renewable propane, in the ISR will play an important role by sending a signal to the market of the importance of in-state production of renewable propane and the continued production of low-NOx engines to help reduce greenhouse gas emissions for decades to come.

The Western Propane Gas Association appreciates your work in this area and hope AQMD staff take a holistic view of the role near-zero and low-NOx technologies using renewable fuels can play in reducing emissions associated with warehouses and mobile sources attracted to warehouses.

Sincerely,

Ben Granholm
Regulatory Affairs Specialist

April 9, 2020

Victor Juan, Program Supervisor
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

RE: Comments on the Draft WAIRE Menu Technical Report

Dear Victor,

The Lion Electric Co. appreciates the opportunity to provide comments on the Draft WAIRE Menu Technical Report for Warehouse Indirect Source Rule (ISR). Lion strongly supports the South Coast Air Quality Management District's continued efforts to accelerate the deployment of zero-emission vehicles and infrastructure to reduce harmful GHG and criteria pollutant emissions in our state's most impacted communities. 11-1

Lion is a leading Original Equipment Manufacturer of all-electric vehicles, including zero-emission school buses and zero-emission trucks and shuttle buses, with deployments in California, New York, Massachusetts, and other states across the nation. Today, there are currently over 300 Lion electric school buses in operation in North America that have been carrying kids to school every day safely for the last three years, with over six million miles of service provided.

Please see below for our comments.

The estimated incremental cost for a Class 8 zero-emission (ZE) truck is listed as being $150,000 in Table 2 of the draft report. However, with the average diesel Class 8 truck costing about $150,000 and a typical ZE Class 8 truck costing roughly $500,000 for a longer range truck a cost more accurately outlined in Table 9), the incremental cost is actually closer to $350,000. This is a substantial increase from the initially proposed $150,000 and of course results in the proposed WAIRE points achieved per ZE Class 8 truck purchase being lower than reasonably expected. With a more accurate incremental cost being closer to $350,000, this would mean that the WAIRE points earned for a ZE Class 8 truck purchase should be 14 ($350,000 / $25,000 AUM = 14). With more WAIRE points earned by warehouses for choosing ZE truck options, not only will this incentivize warehouse owners/operators to begin transitioning their fleets to zero-emission, it will also accelerate the emissions reductions realized by the Warehouse ISR. 11-2 11-3

Lion appreciates the inclusion of the Lion8 on the list of commercially available ZE trucks on page 4 of the draft report. We would like to request the inclusion of our Class 6 and 7 electric 11-4

trucks as well – the Lion6 and Lion7. In addition, we also offer the Lion8 Tractor and Lion8 Straight-body Truck. These trucks represent our other commercial electric truck offerings and are available to suit the needs of a variety of fleets, including those that serve warehouses. Lion thanks South Coast Air Quality Management District (SCAQMD) for considering our vehicles.

The total cost of ownership (TCO) charts (Tables 7-10) present a default operating life of 12 years for all vehicle types and classes listed. As part of the operating life, a "midlife cost" is included, which is defined as a battery replacement for battery electric vehicles (BEVs). Lion would like to point out that with our three years of on-road BEV experience, we have noticed less than 0.5% rate of battery life degradation per year in our vehicles. What this means is that, at this current rate, these vehicles would not need a "midlife" battery replacement before 12 years of use because the batteries will have had only minor reductions to capacity through wear and tear. This would result in a lower TCO for BEVs as presented in Tables 8-10 specifically, because the estimated large cost of a battery replacement event would likely be factored out. In order to further protect the battery life of our vehicles, we offer a standard battery warranty of eight years, and an optional extended warranty of 12 years. 11-5

Lion strongly supports SCAQMD's proposal to apply a multiplier of three to truck-related actions taken by warehouses to gain WAIRE points. This is an effective way to incentivize warehouse owners/operators to begin transitioning their fleets to zero-emission and to accelerate emissions reductions in the most impacted communities in the SCAQMD region. To further this, Lion respectfully recommends that the multiplier be increased to 5 for ZE truck-related actions specifically (and to keep the multiplier at 3 for near-zero emission (NZE) truck actions). This would help distinguish between the greater costs required for warehouses to acquire ZE trucks as opposed to NZE trucks, and would reward warehouse owners/operators for choosing the cleanest available technology to accelerate emissions reductions. 11-6

Lion is proud to support SCAQMD as it works to pass the Warehouse ISR. This ISR will greatly improve the air quality and health of the communities surrounding warehouses in the region and will prove a successful case study for other regions and communities across the state. 11-7

Lion appreciates the opportunity to provide comments on the Draft WAIRE Menu Technical Report and looks forward to continuing to work with SCAQMD on projects to reduce emissions in our state's most impacted communities.

Sincerely,



Nate Baguio
Vice President of Sales

Community Development Department
Planning Division
14177 Frederick Street
P O Box 88005
Moreno Valley CA 92552-0805
Telephone: 951.413-3206
Fax: 951.413-3210

April 30, 2020

Ian MacMillan
Planning and Rules Manager
South Coast Air Quality Management District
21865 Copley Dr.
Diamond Bar, CA 91765

Subject: Comments on Draft WAIRE Menu Technical Report and Proposed Rule 2305 Warehouse Indirect Source Rule Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program

Dear Mr. MacMillan:

In reviewing the WAIRE Menu Technical Report and the draft Rule, staff is concerned that the complexity of the methodology would make it costly for operators to administer and comply with the rule. While staff understands that the subject is complex, a more streamlined methodology would reduce administrative costs for operators. It is also important to build into the methodology an incentive for buying or using zero or near-zero emissions equipment. Unless there is a financial advantage of buying and/or using the zero or near-zero emissions equipment, operators may simply not buy or upgrade equipment, and will instead choose to pay the mitigation fee. Since the objective is to reduce air quality emissions, it would seem to be most beneficial to encourage the purchase and use of zero and near-zero. Based on the details in the Technical Report and the draft Rule, there is not enough information to evaluate the impacts and costs of implementation for operators. The WAIRE Menu Technical Report should not be finalized until the draft Rule is further refined, and the mitigation fee is identified. 12-1 12-2 12-3 12-4

Staff requests to be notified of the availability of the draft Final Rule and the Socioeconomic Study, and all updates on the Rulemaking process. Also, just to let you know, the link to the Proposed Rule on the SCAQMD warehouse webpage is currently not working. Thank you for the opportunity to comment and we look forward to reviewing the forthcoming documents. If you have any questions or would like to discuss further, please feel free to contact Chris Ormsby, Senior Planner at (951) 413-3229, or by email at chriso@moval.org. 12-5 12-6 12-7

Sincerely,

Manuel A. Mancha
Community Development Director

c: Patty Nevins, Planning Official
Chris Ormsby, Senior Planner
Victor Juan, Program Supervisor SCAQMD

CENTER FOR COMMUNITY ACTION & ENVIRONMENTAL JUSTICE
EARTHJUSTICE
EAST YARD COMMUNITIES FOR ENVIRONMENTAL JUSTICE
SIERRA CLUB
TEAMSTERS LOCAL 1932

May 1, 2020

Ian MacMillan
Planning and Rules Manager
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: Comments on Draft WAIRE Menu Technical Report for Warehouse Indirect Source Rule (Proposed Rule 2305)

Dear Mr. MacMillan:

On behalf of the undersigned coalition of community and environmental organizations, we submit these comments on the draft "WAIRE" menu technical report released on March 3, 2020 for the warehouse indirect source rule. Our coalition continues to appreciate the robust work done so far to develop a strong warehouse rule. We also remain concerned, however, that the draft rule still does not reflect the reality of warehouse operations and the pollution crisis in the South Coast air basin. The Air District cannot afford to waste this opportunity to ensure effective and meaningful regulation of the warehouse industry, and our communities cannot afford a weak rule. Indeed, our lives literally depend on a strong and equitable warehouse rule that will achieve necessary emissions reductions in the region—particularly as the COVID-19 pandemic exacerbates the health impacts of air pollution in our communities. 13-1

We request that Air District staff update the draft rule and WAIRE menu to reflect our comments below prior to submitting them to the Air District's Governing Board for adoption. These comments emphasize again many of the concerns and nuances we have repeatedly raised throughout this rulemaking process, some of which continue to go unaddressed. We hope this additional input helps strengthen this life-saving regulation.

I. The Rule Must Prioritize Zero-Emissions Technology.

We have repeatedly emphasized to Air District staff that zero-emissions technology is the only solution to truly address the air quality and health crises caused by the warehouse industry. Any investment in "near-zero" equipment will likely slow the transition to a zero-emissions freight sector. Such investments will compete with the zero-emissions technologies we need, create concerns about stranding assets, and thus disincentive a zero-emissions future. We therefore commend the Air District's decision to give nearly double the compliance points for the purchase of zero-emissions trucks compared to near-zero trucks in the current WAIRE menu 13-2

of on-site investments. We support this points distribution and encourage an even greater points value to reflect the sizeable emissions benefits possible from zero-emissions trucks. 13-2(cont'd)

Unfortunately, zero-emissions truck trips continue to earn nearly the same number of points as near-zero truck trips in the menu, particularly for Class 4-7 trucks. This is partly due to underestimating regional (NOx) emissions reductions from switching to zero-emission trucks, while overestimating the NOx reductions possible from switching to near-zero trucks. In addition, we oppose the fact that the assessment assumes the local (DPM) benefits of zero-emission trucks are the same as near-zero trucks. This is just not the case. Importantly, the 13-3

current WAIRE menu also reflects overly conservative cost estimates for zero-emission truck trips, even in the face of more and more data on declining battery, maintenance, and fuel costs.[1] The Union of Concerned Scientists recently summarized the results of studies conducted by the California Air Resources Board, the International Council on Clean Transportation, and ICF, all of which concluded that the total cost of ownership for Class 6 and 8 electric trucks is competitive or lower than diesel today, and are estimated to be lower than diesel in the next decade, even without financial incentives.[2] 13-4

Ultimately, the gulf between zero and near-zero technologies is wider than industry representatives claim, with "near-zero" just a code for traditional combustion technologies burning methane gas. Our communities refuse to continue to bear the disproportionate burdens of the natural gas and oil infrastructure that propagates these combustion technologies. 13-5

The continuing development of zero-emissions technologies has been stunning, and the evidence is growing that these technologies will be more widely available and commercially feasible by the time compliance obligations begin for this rule. The Air District has the opportunity to take bolder action here, and implement a vision for transitioning to a zero-emissions future that reflects the directives and plans adopted at the regional, State, and global level. As currently drafted, the proposed rule and WAIRE menu give no indication for when communities can expect the complete phase-out of natural gas and combustion technologies that cause negative climate and health impacts.[3] Without clear targets and goals, there is no reason to have confidence the final rule will meaningfully regulate the warehouse industry, or help us meet our greenhouse gas reduction targets and air quality requirements. 13-6

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[1] See, e.g., Bloomberg, *How Big Will the Battery Boom Get? Try $548 Billion, BNEF Says* June 19, 2018) (reporting "[b]attery prices are expected to fall to $70 a kilowatt-hour by 2030, down 67 percent from today").

[2] Union of Concerned Scientists, *Ready for Work: Now is the Time for Heavy-Duty Electric Vehicles* (Dec. 2019) at pp. 12-13 ("With California's policies and incentives, however, the total cost of ownership is lower than diesel today for 19 of 20 vehicle scenarios examined in the three studies.").

[3] European Federation for Transport & Environment, *Do Gas Trucks Reduce Emissions?* Sept. 2019) at p. 10 ("Gas vehicles deliver negligible GHG benefits compared to diesel.").

II. Warehouses Near Environmental Justice Communities Must Reach Zero-Emissions Operations Faster.

We understand that Air District staff are still developing the stringency value and annual variable for the final rule. We want to ensure at this point, however, that these factors are adjusted appropriately so that the points obligation for each warehouse accounts for nearby sensitive receptors. In other words, facilities located in environmental justice communities and/or those neighboring sensitive receptors must either receive a higher points obligation or attain zero-emissions operations on an accelerated timeline. We appreciate the Air District's recognition that a just and equitable warehouse rule will require such facilities to clean up their operations faster by including compliance points for local emissions reductions. 13-7

Nonetheless, the current proposed range for the stringency factor creates potentially wide differences in the annual points compliance obligation for the same facility, with lower stringencies allowing facilities to comply using just one WAIRE menu item annually.[4] Providing such compliance pathways renders the menu useless in the face of otherwise low points obligations and will ultimately fail to reduce region-wide emissions. Our communities should not be forced to accommodate low stringency values from the get-go because facilities want to skirt meaningful compliance as long as possible. We have waited long enough for warehouses to clean up their toxic pollution in our neighborhoods. 13-8

The draft rule materials still do not define "sensitive receptors," which should encompass residential areas, schools, hospitals, daycare facilities, nursing homes, parks, or other areas where occupants are more susceptible to the negative impacts of pollution. 13-9 We also note that the current menu of WAIRE items continues to omit designated on-site resting areas for workers and truck drivers that prevent parking and idling in nearby communities. This item would address one of the major impacts of freight operations in our communities. 13-10

III. Facilities Should Not Be Allowed to Pay Their Way Out of Compliance.

The latest draft rule materials indicate a mitigation fee set at $1000 per WAIRE point. We are deeply concerned that this fee option will become a "pay to pollute" alternative, with facilities simply paying their way out of their compliance obligation each year rather than investing in the on-site menu items. The compliance examples provided by Air District staff alarmingly seem to provide for just such an alternative, listing fee totals that would satisfy a facility's entire points obligation for a compliance year.[5] Some of these total fees are as low as a few thousand dollars for a facility to comply.[6] In the face of such a generous compliance option, we do not doubt that facilities will choose to pay rather than change their operations or invest in long-term emissions reduction measures. 13-11

[4] SCAQMD, *Warehouse ISR Working Group Presentation* Mar. 3, 2020), slides 16-18.

[5] *Id.* at slides 16-20.

[6] *Id.* at slides 19-20.

The mitigation fee must therefore be limited, and designed to incentivize meaningful investments in technologies that can instead address the region's freight pollution crisis. Importantly, any points generated per dollar must be appropriately discounted for those facilities located near sensitive receptors and/or in environmental justice communities. And we reiterate that the final rule should also specify how and where the mitigation fees generated each year will be used. Given that our members bear the brunt of this industry s operations, we expect such fees will fund emissions reduction projects in our communities. 13-12

IV. The Rule Must Prioritize Zero-Emissions Charging Infrastructure.

We appreciate the inclusion of compliance points for zero-emissions charging infrastructure, which will serve as a necessary push for the freight sector to invest now in zero-emissions technology. We request the inclusion of additional cost points for charger installation activity that includes installation of onsite generation, distributed energy resources, and battery energy storage for electric transportation. This will reduce grid demand, support peak shaving, and support increased and efficient integration of renewables into our transportation system. 13-13

V. The Socioeconomic Analysis Should Address Community Impacts.

We understand the Air District's socioeconomic analysis must include costs to industry and potential industry responses as part of this rulemaking process. Yet any analysis of this industry is incomplete without consideration of its real health impacts on surrounding communities. Any discussion of potential impacts to jobs and the local economy must reflect data on health risks from ozone and fine particulate matter pollution and the reality that our community members are falling ill and dying because of this industry. Moreover, the analysis should include job benefits from implementation of cleaner technologies at warehouses. For example, the Los Angeles Economic Development Corporation recently determined that jobs in the electric vehicle space are a significant source of employment in Los Angeles County.[7] We cannot focus on impacts to the industry alone at the exclusion of understanding the demographics and health data in nearby communities. 13-14

VI. This Rulemaking is Critical for Public Health.

Our coalition has advocated for years for a strong warehouse rule. It is a critical rule to protect communities adjacent to warehouses. We understand that Air District staff are working hard to push this rule forward, however, we also live in communities long burdened by disproportionately high levels of air pollution and are now more than ever at greater risk of serious illness and death in the ongoing COVID-19 pandemic.[8] We ask that this rule be adopted by March of 2021. 13-15

[7] Los Angeles Economic Development Corporation, *California and SoCal EV Industry is Growing, Giving Region Global Competitive Advantage* (Mar. 1, 2020).

[8] Wu et al., *Exposure to Air Pollution and COVID-19 Mortality in the United States* (Apr. 5, 2020).

We appreciate your consideration of these comments, and look forward to continuing to work with the Air District to strengthen the warehouse rule.

Sincerely,

Michelle Ghafar
Adrian Martinez
Earthjustice

Andrea Vidaurre
Center for Community Action & Environmental Justice

Taylor Thomas
East Yard Communities for Environmental Justice

Carlo De La Cruz
Sierra Club

Randy Korgan
Teamsters Local 1932

cc:

Wayne Nastri
Executive Officer
South Coast Air Quality Management District

May 1, 2020

Via Email ONLY

Ian MacMillan
Planning and Rules Manager
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: Comments on Draft WAIRE Menu Technical Report for Warehouse Indirect Source Rule (Proposed Rule 2305)

Dear Mr. MacMillan:

Thank you for the opportunity to submit these comments on the draft "WAIRE" menu technical report released on March 3, 2020 for the warehouse Indirect Source Rule. Undoubtedly, voluminous work has been done to get us to this point. We provide the following comments to continue to move us toward better air quality, health outcomes and clean job careers as follows: 14-1

I. The Rule Must Prioritize Zero-Emission Charging Infrastructure and Related Resiliency technologies:

The Rule should allocate points for zero emission charging infrastructure and allocate additional points for warehouses that install distributed energy resources ("DER"), such as on-site solar generation, battery energy storage and micro-grids. These related technologies will offset the costs of their fuel (electricity). DER can and will provide opportunities to peak shave, as well as provide much-needed resiliency. SCAQMD can and should help encourage warehouses to invest in clean technologies that provide cost, climate, and job creation benefits. 14-2

II. The Rule Should Prioritize Projects that are done via a Project Labor Agreement with local and targeted hiring provisions:

Moving away from fossil-fuel dependent transportation necessitates considering workforce development in the clean, green economy. SCAQMD can encourage apprenticeship-based job creation by allocating a high point value to jobs that commit to using a Project Labor Agreement that includes features such as prevailing wage, Veteran hire, Disadvantaged Community member, and local hiring commitments. The latter (local hiring) ensures targeted efforts to ensure that the workforce is derived from communities around the warehouse, ensuring less driving by workers to get to a job site. Put simply: less workers driving from far away distances to a job site results in less emissions, specifically nitrogen oxides. 14-3

While the AQMD is considering how an Indirect Source Rule and other actions impact goods movement industry, we respectfully request it similarly consider the tremendous workforce potential these actions can have on local job creation and take a leadership role accordingly

III. The Mitigation Fee should be higher and cost-prohibitive.

The latest draft indicates a mitigation fee set at $1000 per WAIRE point. An incredibly low fee ensures companies will likely consider the cost-benefit analysis of simply paying the fee versus taking meaningful action in the right direction to improve good air quality and simultaneously create good green jobs along the way. 14-4

Finally, any Mitigation Fees earned should be joined with the Port of Los Angeles and Port of Long Beach's Clean Trucks Program for purposes of transitioning our goods movement trucking fleet to a zero-emission fleet. 14-5

We appreciate your consideration of these comments, and look forward to continuing to work with the Air District to strengthen the warehouse rule.

Sincerely,
Jennifer J. Kropke, Esq.
Director of Workforce and Environmental Engagement,
International Brotherhood of Electrical Workers, Local Union Eleven and National Electrical Contractors Association, Los Angeles Chapter, Labor Management Cooperation Committee

cc:

Wayne Nastri
Executive Officer
South Coast Air Quality Management District

Joshua T. Bledsoe
Direct Dial: 714.755.8049
joshua.bledsoe@lw.com

650 Town Center Drive, 20th Floor
Costa Mesa, California 92626-1925
Tel: +1.714.540.1235 Fax: +1.714.755.8290
www.lw.com

LATHAM & WATKINS LLP

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File No. 053552-0069

May 1, 2020

VIA EMAIL

South Coast Air Quality Management District
Attn: Ian MacMillan and Victor Juan
21865 Copley Drive
Diamond Bar, CA 91765

Re: Discussion Draft Rule 2305, Warehouse Indirect Source Rule (ISR) and Draft WAIRE Menu Technical Report

Dear Messrs. MacMillan and Juan:

Lineage Logistics ("Lineage") is the world's largest temperature-controlled logistics company handling the storage and distribution of significant portions of the nation's food supply from harvest to local distribution centers. Lineage's business operations include cold storage, packaging solutions, and transportation management for over 5,000 customers. Lineage owns and/or operates over two hundred warehouse facilities globally, including over 40 facilities within the State of California, a majority of which are within the South Coast Air Basin.

Lineage is at the forefront of efficiency and technological advances in the logistics industry, striving to operate its facilities as efficiently and sustainably as possible. The Lineage Applied Sciences team, consisting of scientists, mathematicians and engineers, designs and applies cutting-edge technology at Lineage facilities. Lineage looks forward to working with the South Coast Air Quality Management District "District") on promulgation and implementation of Proposed Rule ("PR") 2305, Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions ("WAIRE") Program ("Warehouse ISR") and seeks an open and constructive dialogue with District Staff. 15-1

The logistics sector in Southern California represents over 580,000 jobs[1] and contributes $224.6 billion per year of economic activity.[2] It is essential that the Warehouse ISR does not 15-2

[1] Institute for Applied Economics, Los Angeles County Economic Development Corporation, *Goods on the Move! Trade and Logistics in Southern California* at ii (May 2017). This total includes Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties, with roughly 90% of those jobs in Los Angeles, Riverside and San Bernardino counties.

[2] *Id*. at iii.

adversely impact the logistics sector's ability to maintain and grow those jobs and sustain their critical role in the region's economy. 15-2 (continued)

As part of the PR 2305 rulemaking, the District released preliminary draft rule language for PR 2305 on November 13, 2019. The District also released the Draft WAIRE Menu Technical Report "Technical Report") on March 3, 2020, and requested comments by April 3, 2020. Due to the ongoing COVID-19 crisis, that comment deadline was extended to May 1, 2020. Lineage would like to thank the District for extending the comment deadline due to these unusual and trying circumstances. As the logistics industry is designated as one of a handful of critical infrastructure sectors, Lineage has continued its work in the face of this global pandemic to ensure our customers' products are safely and efficiently stored and distributed, contributing to the security of the world's food supply chain. 15-3

Lineage respectfully submits the following comments on the Technical Report and the preliminary draft rule language for PR 2305.

I. DRAFT WAIRE MENU TECHNICAL REPORT

The Technical Report provides the underlying basis for how WAIRE Point values are calculated for each action on the WAIRE Menu. PR 2305 operates by requiring each warehouse operator to accumulate sufficient WAIRE Points to meet its WAIRE Points Compliance Obligation ("WPCO") for the annual compliance period. As such, proper calculation of WAIRE Points is critical in two respects. First, the ability to earn WAIRE Points for particular activities and capital expenditures provide a key incentive for warehouse operators. Second, environmental benefits sought by PR 2305 could be diminished if the WAIRE Menu incentivizes inefficient activity and investment. 15-4

A. Role of Utility Incentives

Section 1b of the Technical Report states that the costs for each WAIRE Menu action do not include incentive funds. Certain available incentive funds are limited by statute or regulation such that they may only be used for actions that are above and beyond any existing regulatory requirements, and thus may not be used to purchase equipment for compliance with the Warehouse ISR.[3] Lineage requests clarification that this limitation depends on the source of the incentive funds, and it is not a limitation of the Warehouse ISR itself that incentive funds may not be used to earn WAIRE Points. For instance, certain facilities may receive incentives or rebates from electric or gas utilities and wish to use those funds to purchase equipment that would earn WAIRE Points. Lineage would like to ensure that if the utility does not place restrictions on how the funds may be used, those funds may be put toward WAIRE Menu items to earn WAIRE Points. 15-5

[3] *See* Health & Saf. Code §§ 44281(b) (Carl Moyer Memorial Air Quality Standards Attainment Program), 44391.4(a) (Greenhouse Gas Reduction Fund), 44271(c) Alternative and Renewable Fuel and Vehicle Technology Program ; 13 CCR § 2353(c)(4) (AB 118 Air Quality Improvement Program Funding Plan).

B. When Are WAIRE Points Earned?

Certain equipment that could be purchased and installed at a warehouse to earn WAIRE Points and comply with the WPCO may require a significant lead-time between the time of purchase and the time of delivery. WAIRE Menu items for installing onsite zero-emission "ZE") charging or fueling infrastructure include three milestones to account for the lengthy process and to award WAIRE Points for partial completion of installation during a compliance year.

However, it is unclear when WAIRE Points are earned, and thus available for compliance, for other potentially long-term items, such as installing onsite energy systems. Lineage proposes that all current and future WAIRE Menu items that involve purchasing equipment earn the associated WAIRE Points at the time of purchase, regardless of the time for delivery, which is not fully within the control of the warehouse. For complex WAIRE Menu items that involve purchase, construction, and permitting similar to installing ZE charging infrastructure, Lineage requests that the District similarly break the WAIRE Menu item down into milestones to provide for WAIRE Points throughout the process. This segmentation would encourage these larger-scale WAIRE Menu items by rewarding warehouse operators for incremental progress achieved during a compliance period. 15-6

C. Staff Analysis of Annual Average Cost of Electricity

The costs of using charging stations provided in Table 17 of the Technical Report appear to represent a simplified accounting of energy costs. The given scenarios assume fleets of three 3) to twenty (20) trucks utilizing 150-kilowatt ("kW") chargers, with equal amounts of charging in each time window. The actual energy consumption of large warehouse facilities with dozens to hundreds (depending on Facility throughput) of different vehicle visits per day will be much more complex.

Demand charges will be important for the loads considered in these scenarios, and it is not clear from the Technical Report whether these charges have been included. Although the SCE TOU-EV-9 rate schedule currently waives demand charges until March 1, 2024, demand charges will be phased-in after that time.[4] Additionally, the SCE TOU-8-RTP rate schedule is more nuanced than the "on-peak," "mid-peak," and "off-peak" breakdown presented in Table 17, as the prices for a given hour of a given day are set based on the previous day's temperature in Los Angeles. For example, the listed demand charge for SCE's TOU-8-RTP rate schedule is $12.61/kW. Applying that demand charge to the aforementioned scenarios presented in the Technical Report would result in demand charges of approximately $5,674 to $37,830/month, assuming the TOU-EV-9 rate schedule will be similar to the TOU-8-RTP rate schedule. 15-7

Lineage respectfully requests additional detail on the charging scenarios used to determine the annual average cost of electricity. In particular, Lineage requests the

[4] *See* SCE Schedule TOU-EV-9, March 22, 2019 (available at: https://library.sce.com/content/dam/sce-doclib/public/regulatory/tariff/electric/schedules/general-service-&-industrial-rates/ELECTRIC_SCHEDULES_TOU-EV-9.pdf .

comprehensive set of information used to arrive at the costs presented in Table 17 of the Technical Report. If Lineage were to receive the requested information, then it would be happy to calculate a more precise estimate of demand charges and share that estimate with the District. 15-7 (continued)

II. PROPOSED ADDITIONAL ITEMS FOR WAIRE MENU

Lineage has vast experience and has invested extensive resources in identifying the most efficient equipment and modes of operation at their warehouses. Based on Lineage's experience designing and applying cutting-edge technology at its facilities, Lineage would like to propose additional items for the WAIRE Menu. These actions and investments will reduce emissions and accordingly should be eligible to earn WAIRE Points. Lineage welcomes further discussions with the District to discuss these proposals, and any technical questions, in more detail. 15-8

A. Installation and Use of Non-Diesel Emergency Generation

In order to address the growing wildfire risk in California, and to reduce the likelihood of utility infrastructure igniting fires, the State's investor-owned utilities have begun to implement Public Safety Power Shut-offs ("PSPS") to protect public safety when fire risk is high. The nature of Lineage facilities is that the goods stored in its warehouses are required to be maintained in cold storage to meet food safety standards, and such storage conditions require power. As the occurrence of PSPS becomes more common, warehouse owners and operators, including Lineage, are currently and will continue to be required to invest in backup generation systems that were not previously necessary.

15-9

While diesel-fueled emergency generators are common, Lineage is evaluating potential non-diesel emergency generation systems. Such systems are efficient and have lower emissions than diesel generators. However, they also are significantly more expensive than diesel-fired systems. Lineage proposes that warehouse owners or operators who choose to invest in non-diesel emergency generation systems should earn WAIRE Points in order to incentivize the installation of these lower-emitting generation systems despite their increased cost. Lineage proposes WAIRE Menu items for: (1) purchase and installation of a non-diesel emergency generator, based on the incremental cost beyond that of a traditional diesel-fired system; and (2) usage of the non-diesel emergency generator, based on the annual hours of operation and the quantifiable reductions in nitrogen oxides ("NOx") and diesel particulate matter ("DPM") compared to equivalent operation of a diesel-fired system.

B. Measures to Improve Efficiency of Refrigeration and Reduce Facility Power Consumption

Significant emissions can be associated with the energy consumption of cold storage warehouses depending on the mix of generation sources on the grid at the time energy is consumed. One of the main drivers for proposing the Warehouse ISR is the need for greater NOx reductions in the South Coast Air Basin to meet state and federal ambient air quality standards.[5] The most recent version of the WAIRE Menu would award WAIRE Points for 15-10

[5] *See* SCAQMD, Warehouse ISR Working Group Presentation at 9 (March 3, 2020).

installation and use of onsite solar panel energy systems, though the quantity of WAIRE Points remains "to be determined." Lineage assumes the WAIRE Points will be assigned based on the emissions reductions realized by utilizing onsite solar power that displaces power from the electricity grid. Just as use of onsite solar panels will reduce a warehouse's grid electricity consumption and thereby reduce indirect emissions from electricity generating facilities, reductions in a warehouse's electricity consumption similarly will achieve regional emission reductions.

Lineage has studied several aspects of its operations that could deliver energy savings. For instance, the primary point of heat entry into a refrigerated warehouse, which then requires additional thermal work by the refrigeration system to maintain the necessary temperature, are warehouse dock and room doors. Lineage has performed studies to assess the thermodynamic impact of cold storage doors, and developed the means to improve doors and reduce facility power consumption, albeit at significant cost.

Additionally, blast freezing is an energy-intensive process that occurs at the beginning of the supply chain, shortly after harvest. Lineage has been using airplane and automobile design methodologies to increase the efficiency of blast cells at its facilities. The benefits of this method for blast freezing are that it cycles trucks faster through the facility, reduces overall facility power consumption, and decreases food waste.[6] Improved blast cells for more efficient freezing have many emission-reducing benefits, but adoption of such improved technology would not currently earn WAIRE Points. 15-10

Lineage proposes the addition of two new WAIRE Menu items to account for the emission reductions due to reducing overall facility energy consumption at cold storage facilities. First, Lineage proposes a WAIRE Menu item to earn WAIRE Points for the installation of equipment that will increase facility energy efficiency and reduce energy demand. This item would be based on the incremental cost of the high-efficiency investment, such as the higher cost of efficient room doors compared to a standard room door.

Second, Lineage proposes a WAIRE Menu item for usage of the high-efficiency improvements. Just as the use of onsite solar energy systems would earn WAIRE Points based on the kilowatt-hours of energy consumed onsite, and thus reducing an equivalent amount of demand from the grid, Lineage proposes that the WAIRE Menu include an item based on improved facility energy efficiency, measured by normalizing facility energy consumption by facility square footage, which is a metric already utilized by the U.S. Energy Information Administration "EIA") in their periodic Commercial Buildings Energy Consumption Survey to compare cold storage warehouses of different sizes.[7] This measurement would focus on relevant

[6] Reducing food waste reduces emissions associated with growing, harvesting, and transporting food. In addition, reducing food waste avoids methane emissions from landfills where wasted food often decomposes anaerobically.

[7] *See* https://www.eia.gov/consumption/commercial/.

warehouse load such as for refrigeration, but exclude any increased electricity consumption due to electric vehicle charging and utilization of transport refrigeration unit ("TRU") plugs.

The WAIRE Menu item would incentivize energy efficiency by classifying facilities into energy performance levels according to annualized kWh per square foot, awarding more WAIRE Points to higher performing facilities. Facilities are able to achieve higher energy performance ratings, and thus more WAIRE Points, by seeking means through which to reduce their energy usage. The WAIRE Points would be calculated based on NO_X emissions reductions ("Regional Benefit") and DPM emissions reductions ("Local Benefit") created by energy savings, using the same methodology that the District proposes for calculating WAIRE Points earned by the usage of onsite solar energy systems.[8] 15-10 (Cont'd)

C. Expanding "Battery Storage" to "Energy Storage"

The WAIRE Menu currently includes items for both installation and use of battery storage. Lineage requests that this item in the WAIRE Menu be broadened beyond traditional battery systems (e.g., lithium-ion batteries) to include the different types of energy storage, including thermal energy storage.

Thermal flywheeling is a means of scheduling energy consumption by essentially turning the cold storage warehouse into a thermal battery. The warehouse is super-cooled during off-peak hours – the thermal battery "charging." During times of peak energy demand on the grid (particularly times when natural gas peaker plants are operating), the warehouse is able to lower or turn off the refrigeration system, relying on the "excess cold" of the warehouse contents to maintain temperatures in compliance with food quality and safety requirements – the thermal battery "discharging." This flywheeling enables a cold storage facility to avoid drawing power from the grid during periods of peak demand—and peak emissions—on the grid. 15-11

While typically utilized to reduce energy costs by avoiding peak electricity rates, thermal flywheeling could be deployed to also shift energy usage to times of day when the mix of energy sources on the grid is cleanest, and away from times of day when emissions associated with the grid are highest. Cold storage warehouses require significant amounts of energy for refrigeration. Based on the estimated square footage of cold storage warehouses[9] and the EIA's reported energy consumption metrics for "large cold storage areas,"[10] cold storage warehouses consume approximately 200,000,000 to 300,000,000 kWh per year in the South Coast Air Basin. Utilizing those warehouses as thermal batteries would achieve substantial regional emission reductions. The annualized metric for thermal energy storage could be the same as for lithium-ion battery storage, with a warehouse operator presumably reporting to the District the capacity

[8] The Technical Report does not address the calculation methodology for "Usage of onsite energy systems" and the Point values in the WAIRE Menu currently are "TBD."

[9] *See* http://www.scag.ca.gov/Documents/Task2_FacilityInventory.pdf.

[10] *See* https://www.eia.gov/consumption/commercial/data/2012/c&e/cfm/c14.php.

of the battery installed, the charge/discharge rate, and the kWh per year of usage.[11] In other words, WAIRE Points for thermal energy storage could be awarded according to the same methodology that the District ultimately adopts for lithium-ion battery storage.

15-11 (Cont'd)

Lineage welcomes discussions with the District regarding the potential for cold storage warehouses across the South Coast Air Basin to use thermal flywheeling to reduce regional emissions and how such actions could generate WAIRE Points.

III. WAIRE MENU SHOULD ALLOW FOR EVOLVING TECHNOLOGY

A mechanism should be included in the WAIRE Menu that will allow warehouse operators to utilize new, or newly affordable, emissions reduction technology. As it stands, the WAIRE Menu is static and means of compliance are limited to implementing pre-determined items. Over time this approach is likely to become inefficient and more costly than necessary, and potentially unworkable. As technology evolves, a process for updating the WAIRE Menu over time will allow facilities the flexibility to choose the most efficient and affordable emission reduction actions.

15-12

One potential approach is to use the existing framework that District Staff is considering for calculating WAIRE Points and apply it to novel emission-reducing actions over time. Recent Staff presentations have proposed a calculation methodology that would assign the WAIRE Menu item's cost, Regional Benefit, and Local Benefit to a "bucket" of WAIRE Point values, which are summed for a total WAIRE Point value for that item.[12] A mechanism could be built into the WAIRE Menu that would allow an operator to approach the District with a proposed action, documentation of its cost, documentation of NO_X and DPM emission reductions, and proposed WAIRE Points based on the established and pre-approved calculation methodology. In this way, the WAIRE Point values assigned to cost and emission reductions are pre-approved through the PR 2305 rulemaking process, and the flexibility of allowing for novel WAIRE Menu items can be achieved without overly taxing District resources.

15-13

Lineage believes that some mechanism to account for the evolution of technology, and the changing costs of compliance, is necessary and would welcome discussions with the District on how best to achieve this flexibility.

IV. REMOVAL OF LIMITATIONS ON TRADING AND BANKING

The purposes of the Warehouse ISR can best be achieved if the limitations on trading and banking of WAIRE Points are removed or modified. These modifications can be achieved without reducing the effectiveness of the PR 2305, will minimize overall costs of compliance, and all WAIRE Points used for compliance would continue to represent real, surplus emission reductions.

15-14

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[11] Lineage notes that the discharge rate of a thermal battery likely is not subject to the same constraints as discharge rates for lithium-ion batteries.

[12] *See* WAIRE Menu Technical Report_DRAFT_3-3-20.pdf at p. 3.

Limiting a warehouse operator's ability to comply with the Warehouse ISR by restricting the trading and banking of WAIRE Points does not ensure greater emission reductions; it only serves to increase the cost of compliance. Time and again it has been shown that market-based mechanisms can effectively and efficiently achieve emission reductions. SCAQMD's own RECLAIM program, a market-based compliance program for the largest sources of NO_X and oxides of sulfur, achieved greater reductions at RECLAIM sources than non-RECLAIM sources. In the period of 1994 – 2012, reported emissions of NO_X decreased by 69% at RECLAIM sources, and 44% at non-RECLAIM stationary sources.[13]

The ability to trade compliance instruments in cap-and-trade programs has shown numerous benefits to the regulated community as well as consumers, in particular the ability to achieve the set amount of emission reductions at the lowest cost.[14] Both the US Acid Rain Program and the EU Emissions Trading System have demonstrated in practice that emission reductions can be achieved at a lower cost than expected when trading is allowed and encouraged.[15] Such trading allows individual facilities to assess whether the cost of purchasing a compliance instrument (similar to WAIRE Points) is more or less economical than actions they can take themselves that would achieve the same amount of emissions.

15-14 (cont'd)

Trading mechanisms in the Warehouse ISR will set a price signal against which warehouse operators can measure the WAIRE Menu items that are potentially feasible at its facility, and thus determine the most economical way to meet its WPCO. The level of overall emission reductions is achieved at the lowest cost possible because the WAIRE Point price provides an economic incentive to find the mix of on-site emission reductions and WAIRE Point purchases that minimize costs.[16]

Lineage understands that the District and other stakeholders may have concerns that trading could reduce the benefits of PR 2305 in communities in close proximity to warehouses under the theory that emission reduction activities may not be conducted at such facilities. To alleviate these concerns, Lineage proposes that the District: 1) prohibit trading of any WAIRE Points earned from Local Benefit; and (2) require each warehouse operator to satisfy a specified percentage of its WPCO using WAIRE Points earned from Local Benefit. This would require that operators and the District track two buckets of WAIRE Points – those from the "Cost" and "Regional Benefit" columns ("Tradable") in the WAIRE Menu, and those from the "Local

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[13] John Heintz and Aron Potash, *Southern California's Once Groundbreaking Cap and Trade Program is Now Riding Towards the Sunset*, 26 ENVTL. LAW NEWS 35, 36 (2017).

[14] *See* IETA, *Benefits of Emissions Trading*, https://www.ieta.org/resources/Resources/101s/Benefits%20of%20Emissions%20Trading.pdf March 2019).

[15] *Id*.

[16] Mac Taylor, Legislative Analyst's Office, Cap-and-Trade Revenues: Strategies to Promote Legislative Priorities 10-11 (Jan. 21, 2016).

Benefit" column ("Non-Tradable"). Thereafter, only Tradable WAIRE Points could be traded to other operators or warehouses.[17] 15-14 (cont'd)

To ensure emission reduction benefits to local communities, at the end of each compliance year a warehouse operator would need to satisfy a specified percentage of its total WPCO with Non-Tradable Points, and could satisfy the remaining portion of the WPCO using WAIRE Points earned on-site or purchased Tradable Points from other warehouse owners or operators. In this way, the local benefits of PR 2305 are protected, while allowing trading to help drive emissions reductions at the lowest cost.

Below is a table of requested modifications to PR 2305 that would facilitate compliance flexibility for warehouse operators, increasing the likelihood that PR 2305 achieves its regulatory goals. 15-15

PR 2305 Citation	Current Content	Lineage Recommendation	Reasoning
d)(3)(A)	Allows a warehouse operator to transfer excess WAIRE Points in a given compliance year to another warehouse under the same operational control	Allow for transfer to owners or operators in other warehouses under different operational control, subtracting WAIRE Points earned from Local Benefit	Operational control should not limit the trading of WAIRE Points. Free trading among warehouse operators will encourage more numerous, larger, and earlier actions to earn WAIRE Points, and should be encouraged.
d)(3)(B)	Allows a warehouse operator to bank excess WAIRE Points in the same warehouse in any of the next three compliance years	Allow banking of WAIRE Points without a temporal limit, subject to the requirement that the banked WAIRE Points be surplus when used for compliance.	Certain WAIRE Menu items may provide substantial emission reductions and more WAIRE Points than a warehouse operator requires. A temporal limit of three years may eliminate the incentive to take larger actions if the warehouse operator is not able to utilize all of the WAIRE Points within three years.

[17] Lineage notes that Cost, Local Benefit, and Regional Benefit of WAIRE Menu likely will be tracked for purposes of compliance with the Air Quality Management Plan (AQMP). Therefore, the incremental demand on District Staff resources would be marginal and outweighed by the economic benefits trading would accrue.

PR 2305 Citation	Current Content	Lineage Recommendation	Reasoning
d)(3)(C)	Allows a warehouse owner to earn WAIRE Points or have WAIRE Points transferred to them from an operator in the same warehouse; also allows a warehouse owner to transfer WAIRE Points to any operator in the warehouse where the WAIRE Points were earned, within three years	Allow warehouse owners to transfer WAIRE Points to any owner or operator, even if unrelated to the owner, in any future compliance year. If the WAIRE Points are utilized at a different warehouse, subtract WAIRE Points earned from Local Benefit.	For the reasons stated above, free trading among different warehouse operators and the ability to bank WAIRE Points over time will encourage more numerous, larger, and earlier actions to earn WAIRE Points and thus achieve greater emission reductions.

15-15 (cont'd)

V. POTENTIAL OVERLAP WITH CARB TRU REGULATION

The California Air Resources Board ("CARB") currently is promulgating a new TRU Regulation that would apply to warehouses or distribution centers with a building size greater than 20,000 square feet "Applicable Facilities"). The most likely means of compliance with the TRU Regulation for warehouse will be the installation of TRU Plugs, and to ensure that Trailer TRUs and TRU Generator Sets on-site utilize those TRU Plugs when stationary for more than 15 minutes.

15-16

The majority of Lineage's facilities in California are in the South Coast Air Basin. In order to assess its regulatory burden and means of compliance with all relevant state and local regulations, Lineage requests clarification regarding the potential overlap between the TRU Regulation and the Warehouse ISR. At what point would an action become ineligible for WAIRE Points because the District would interpret it to be an "action or investment required by a separate USEPA, CARB, or South Coast AQMD regulation during the compliance year"?[18]

For instance, facilities subject to both Warehouse ISR and the TRU Regulation may purchase and install TRU Plugs. However, it is not clear at what point such an action and investment would be considered "required" for compliance with the TRU Regulation, and thus ineligible for WAIRE Points. Would submitting a compliance plan to CARB stating that the facility intends to comply with the TRU Regulation by installing TRU Plugs be enough to render that action no longer eligible for WAIRE Points?[19] Or would the action be "required" by CARB

[18] PR 2305(d)(2)(A).

[19] *See* TRU Regulation, Discussion Draft Section 2478.14 (stating that by December 31, 2022, Applicable Facility Owners shall submit a compliance plan to CARB).

only once the Applicable Facility is required to provide infrastructure for TRUs to utilize a mode of Zero-Emission Operation?[20]

15-16 (cont'd)

Additionally, the draft WAIRE Menu released as part of the WAIRE User Calculator on March 3, 2020, notes that for the WAIRE Menu Item "Use onsite ZE charging or fueling infrastructure" the reporting metric is "kWh of dispensed electricity beyond CARB requirements." Lineage respectfully requests clarification as to what dispensed electricity would be "beyond CARB requirements."

15-17

VI. CONCLUSION

We would like to thank the District for this opportunity to submit comments on the Draft WAIRE Menu Technical Report and PR 2305. Lineage looks forward to continued collaboration with District Staff on this rulemaking.

15-18

Best regards,



Joshua T. Bledsoe
Latham & Watkins LLP

[20] *See* TRU Regulation, Discussion Draft Section 2478.10(a)(2) (stating that by December 31, 2023, Applicable Facility Owners shall not permit a new Trailer TRU or TRU Gen Set to operate longer than 15 minutes while stationary unless in Zero-Emission Operation).

May 8, 2020

Ian MacMillan, Manager
South Coast Air Quality Management District
2165 Copley Dr.
Diamond Bar, CA 91765

Submitted Electronically

Dear Mr. MacMillan:

Thank you for the opportunity to submit comments on the South Coast Air Quality Management District Air Quality Management District (SCAQMD) Draft WAIRE Menu Technical Report. 16-1

First, we would like to thank SCAQMD for extending the comment period in response to the ongoing COVID-19 crisis. We are glad for the opportunity to submit technical comments, however, the CTA continues to have serious concerns about the legality and efficacy of the proposed rule. These comments should not be construed to indicate support or an endorsement of this flawed approach.

Furthermore, we submit these comments in the midst of a generational economic crisis.

COVID-19 Crisis is Unprecedented

The still unfolding COVID-19 pandemic and associated economic crises are unlike anything our State and Nation have faced in its history. While the full scope of the economic impact from this sudden, unplanned shuttering of large swaths of commerce is yet to be fully understood, there are some clear warning signs already emerging. 16-2

As of mid-April 2020:

- 30 million Americans have filed for initial unemployment since mid-March. The 4-week moving average, which removes week-to-week volatility, jumped to an all-time high of 5.509 million, while continuing jobless claims hit a record 11.976 million in the week ended April 4th.

Fig. 1: Initial Jobless Claims 1967–2020 ***Note: shaded regions = recessions*** **(Source: Macrotrends.net)**

16-2
(cont'd)

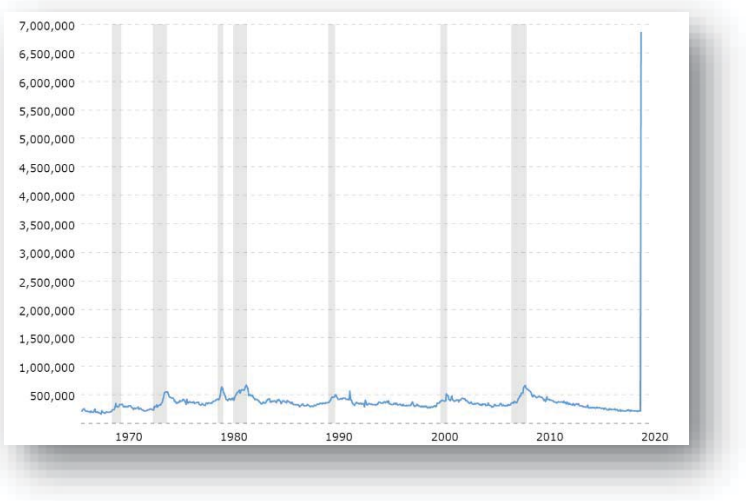
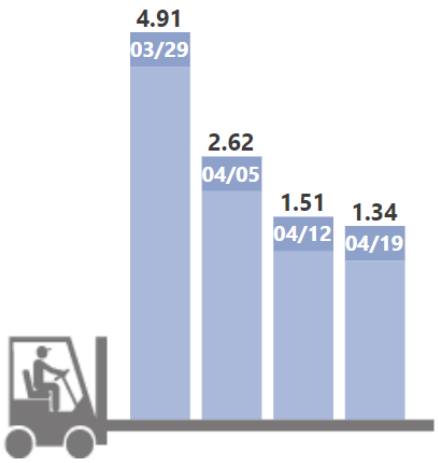


Fig. 2: Load-to-Truck Ratio (Source: DAT)



- After a several week-long spike in demand, general economic conditions have taken its toll on freight demand, with demand and rates falling precipitously.
- CTA has been made aware of furloughs already occurring in the trucking industry.
- Market analyst IHS estimates that 2020 Class 8 tractor sales will fall by 50% compared to 2019[1]. How quickly the economy will recover is dependent on many factors which cannot be easily predicted at this time. The Legislative Analyst Office[2] preliminary assessment states that California is already in a recession and forecasts a possible "L-shaped" recovery marked by prolonged depressed economic activity and high unemployment.

[1] https://www.ttnews.com/articles/commercial-vehicle-production-fall-20-globally-ihs-says
[2] https://lao.ca.gov/handouts/FO/2020/Preliminary-Assessment-of-the-Economic-Impact-of-COVID-19-041620.pdf

- The Department of Finance (DOF) projects a $54.3 billion budget deficit through FY 20-21. DOF states that: "The rapid onset of the COVID-19 pandemic has had an immediate and severe impact on the global, national, and state economies. In California, COVID-19 has led to the following:
    - In the last one-week reporting period, nearly 478,000 claims were filed in California for state and federal unemployment benefits. Since mid-March, more than 4.2 million claims have been filed.
    - Job losses that have occurred disproportionately in the lower-wage sectors of the economy—amplifying the wage disparity that existed before the pandemic. Finance projects that the 2020 unemployment rate will be 18 percent, a much higher rate than during the Great Recession."[3]

16-2 (cont'd)

Technical Comments (by Section)

Please see the below substantive comments on the Draft WAIRE Menu Technical Report.

16-3

Section 1a) WAIRE MENU ANNUALIZED UNITARY METRICS AND BINS

- Please explain the rationale of the relative weight given to NOx vs. PM reductions. Given the use of Carl Moyer Guidelines throughout the document, it is of note that the Carl Moyer Program applies a 20x weighting factor for PM reductions[4] while the proposed WAIRE program would apply a 100x weighting factor to NOx reductions.
- AQMD's proposed point system includes specific points for specific emission reduction technologies. However, there is no clear avenue or method for new or emerging technologies that may also reduce emissions. The proposal should create a clear and expedient pathway for allowing new technologies to be included in scheme without adding unnecessary barriers or hurdles.

16-4

Section 1b) COSTS

- Please elaborate on why staff believes NZE/ZE trucks purchased with restricted use state grants, such as the Carl Moyer Program, would be able to obtain WAIRE points for the usage, but not purchase, of that vehicle? Programs such as Carl Moyer typically have minimum annual usage for the life of the contract. Any usage up to the required annual minimum miles would not be considered surplus for the purposes of such a determination. And requiring such a determination by regulated entities would be infeasible for the purposes of this program.

16-5

Section 1c) REGIONAL EMISSION REDUCTIONS:

- What is the justification for using the Optional Advanced Technology Moyer cost-effectiveness threshold as the basis for calculating the value of WAIRE points? We are not aware of any statutory authority to use this cost-effectiveness threshold to set a price on NOx in the context of a regulation.

16-6

[3] http://www.dof.ca.gov/Budget/Historical_Budget_Publications/2020-21/documents/DOF_FISCAL_UPDATE-MAY-7TH.pdf

[4] https://ww3.arb.ca.gov/msprog/moyer/guidelines/2017gl/2017_gl_appendix_c.pdf

- $100,000 per ton of NOx is out of line with recent regulations to reduce NOx. The most recent version of the California Air Resources Board's Statewide Truck and Bus Rule's cost-effectiveness was $3,820 per ton of NOx[5]. 16-7

SECTION 2) Zero and Near-Zero Emission Truck Visits and Truck Acquisitions

- Please cite the authority under which the SCAQMD seeks to establish regulatory standards relating to the control of emissions from new motor vehicles or new motor vehicle engines. 16-8
- Please indicate whether the SCAQMD intends to pursue a Section 209 waiver. 16-9

SECTION 2b) Truck Visit

- The approach of using an average of the EMFAC inventory for the cited subcategories to establish baseline emissions for the purpose of calculating the value of zero and near-zero emission truck acquisitions and use may be problematic as early as 2024. Due to the impact of CARB's Low NOx and Advanced Clean Truck (ACT) Regulations, assumptions about the acquisition of these vehicles through natural turnover and mandated sales percentages, respectively, will be incorporated into the baseline year emissions in future revisions of EMFAC. Functionally, it will be impossible to distinguish emission reductions attributed to mandated sales percentages under the ACT and a truck visit to a regulated facility under the WAIRE program. 16-10
- The value of each truck visit will decrease on an annual basis as the weighted annual emissions of the fleet decreases. 16-11
- It is also unclear whether SCAQMD is in fact proposing the above approach or simply utilizing a baseline year of 2023. A static baseline also creates issues of additionality. In any event, SCAQMD should be clear as to how this calculation will work. 16-12
- Related to the use of EMFAC, this adds just another (more opaque) level of uncertainty for the regulated community. There are several aspects of the rule that present a moving target, as they are subject to change during the life of the rule. At the time of promulgation, a rule should provide the regulated community with a level of understanding and certainty of what their obligations are, and this rule will not do that. 16-13
- How will the SCAQMD determine deterioration for truck visits? 16-14
- As the purpose of the rule is to accelerate fleet turnover and preferentially replace retired vehicles with electric vehicles, the use of incremental cost is inappropriate, because it assumes that a fleet was already planning to purchase a new truck, at a given time. The rule is designed to use warehouse operators to pressure fleets to purchase vehicles on a timeline that is most beneficial to the 16-15

[5] https://www.arb.ca.gov/msprog/onrdiesel/background/2014/2014_pm_nox_cost.xls?_ga=2.54243629.481378052.1588276844-228088285.1525364940

warehouse achieving compliance, rather than by the business needs of the fleet. Therefore, calculations should be based on the total purchase price.

16-15 (cont'd)

- The variation in in duty cycles and applications has always presented issues when trying to estimate emissions and apply regulation to on-road trucks. A homogeneous treatment of the sector results in a disconnect between the costs and emission reductions as translated into points, and the reality of the costs and emissions associated with each truck purchase. This is exacerbated by the calculations of point values across the "bins." There is an inconsistent application of metrics and methodologies across the bins e.g. annual mileage). The extensive use of averaging and various assumption result in a methodology that it is impossible to as it applies to an individual regulated entity. In the effort to simplify the rule, its application seems almost arbitrary at the facility and fleet level.

16-16

SECTION 3) Electric Charger Usage and Installation and SECTION 4) Hydrogen Filling Station Installation and Usage

- AQMD's proposed point system has not clearly outlined how points will be assigned for investments made to reduce emission not located on the site of a warehouse. For example, if a warehouse operator develops a charging hub for multiple vehicles or hydrogen fueling station offsite, how will points be assigned for those investments?
- AQMD's proposed point system has not included methods for assigning points to entities that work together to deploy zero emission infrastructure which are not on-site. For example, we can foresee an instance where several warehouse operators work together to finance or develop a fueling station for low or zero emission fuel vehicles. If this project is offsite and shared between warehouse operators, it is unclear how points would be assigned to the different actors involved in the project.

16-17

If you have any questions please feel free to contact Chris Shimoda at cshimoda@caltrux.org.

16-18

Thank you,



Chris Shimoda, Vice President of Government Affairs
California Trucking Association

PROPANE education & research COUNCIL

T 202-452-8975
F 202-452-9054

1140 Connecticut Ave. NW, Ste. 1075
Washington, DC 20036

Mr. Ian MacMillan
Planning & Rules Manager
imacmillan@aqmd.gov
Mr. Victor Juan
Program Supervisor
vjuan@aqmd.gov

October 7, 2020

Recommendation to Include NZE Yard Tractors as Compliance Option Under Proposed Rule 2305

Dear Mr. MacMillan and Mr. Juan,

The Propane Education & Research Council (PERC) is pleased to provide input about how to best achieve fast, cost-effective NOx reductions under SCAQMD's Proposed Rule 2305. We submit these comments in advance of the Warehouse ISR Working Group Meeting scheduled for Friday October 9, 2020. We appreciate that SCAQMD staff has been willing to consider alternative ways to accomplish your essential end goal: to restore healthful air quality to the South Coast Air Basin and attain the federally mandated National Ambient Air Quality Standard for ozone.

Authorized by the U.S. Congress in 1996, PERC (https://propane.com/) is a nonprofit organization that invests in research, development and commercialization of clean-burning low-emission propane-powered technologies. PERC partners with a variety of trade associations, advocacy groups, and government agencies to promote safety and the adoption of propane as a clean domestic fuel source. Our organization supports clean-fuel/low-emission programs in applications that include transportation, agriculture, commercial landscaping, residential, and commercial buildings. For decades we have helped regional government agencies like SCAQMD to identify, assess, and widely deploy clean propane engines in these applications (see additional details at https://propane.com/environment/). 17-1

SCAQMD's webpage addressing facility-based mobile source measures (FBMSMs) states that the goal of PR 2305 "*is to assess and identify potential actions to further reduce emissions associated with emission sources operating in and out of warehouse distribution centers*" in the South Coast Air Basin. Our comments and inputs submitted today are fully compatible with -- and designed to strongly advance -- that important goal.

Proposed Expansion of PR 2305 to Allow NZE Yard Trucks as Compliance Options

As you know, CARB-certified near-zero-emission (NZE) propane engines are now available as commercially proven powerplants for HDVs that can deliver 90 percent (or better) NOx reductions in the two key mobile sources targeted under PR 2305: 1) Class 8 on-road heavy-duty trucks and 2) their off-road counterparts, yard trucks. Because PR 2305 already includes allowance for warehouse operators to comply using NZE on-road trucks, our recommendation to SCAQMD is to adopt a similar and parallel inclusion for NZE off-road yard trucks. 17-2

Our comments are not meant to be exclusionary about other ultra-clean fuel-technology platforms for HDVs. In fact, OEMs that manufacture NZE yard trucks are also working to commercialize ZE yard trucks using battery-electric and/or fuel cell architectures. Similarly, NZE yard truck OEMs are designing their products to

interchangeably use either NZE propane or natural gas engines, depending on their customers' site-specific needs and considerations. In summary, when it comes to OEM development and commercialization efforts, there is *significant synergy* between ZE yard tractors and NZE yard trucks, whether fueled by propane or natural gas. PERC is specifically advocating for inclusion of propane-fueled yard trucks as a compliance option under PR 2305, but our position is fuel neutral and mutually supportive of ultra-clean natural gas yard trucks as a compliance option.

Why does PERC believe that inclusion of propane yard trucks is especially important to help SCAQMD achieve its goals for PR 2305? Simply put, NZE propane vehicle technology offers the fastest, easiest, most-cost-effective, infrastructure-friendly way for warehouse operators to rapidly deploy terminal tractors that emit NOx at levels equivalent to (or lower than) the grid-related emissions of battery-electric tractors.[1] Moreover, there is important synergy between deploying NZE yard trucks in the Basin and deploying NZE school buses. For example, the PSI 8.8L NZE propane engine that is now being incorporated into an OEM yard truck (from TICO) is also being incorporated into at least one OEM school bus model. In both cases, the specific focus of commercialization and deployments are on the South Coast Air Basin.

17-2 (cont.)

Collateral Benefits Major Fuel-Cycle GHG Reductions

We recognize that PR 2305 is focused on reducing NOx to help the Basin attain ozone standards. However, NZE yard trucks can also deliver a major collateral benefit: full-fuel-cycle GHG reductions. This is achieved by fueling NZE engines with drop-in renewable versions of conventional propane (or natural gas), which are CARB-verified to have very low carbon intensity. As you know, renewable natural gas is already widely used to fuel heavy-duty NGVs in California, and renewable propane is already co-produced at biofuel plants like the World Energy plant in Paramount. Renewable propane is now becoming available for transportation uses like terminal tractors and school buses. In fact, the propane fuel industry has committed to use 100 percent renewable propane in California transportation applications by 2030 (see the Western Propane Gas Association press release of September 25, 2020[2]).

17-3

And in another significant development, Suburban Propane recently announced a deal to purchase a 39 percent stake in Oberon Fuels, Inc. (Oberon) based in San Diego.[3] Oberon's development-stage production of low-carbon renewable dimethyl ether (rDME) as a transportation fuel has important synergy with the propane industry's efforts to develop a practical and affordable pathway for low-pressure renewable fuels that can be "dropped in" to NZE propane engines.

Details About Our Proposed Changes to PR 2305

Accompanying this cover letter are the following attachments, designed to assist SCAQMD staff in reviewing our recommendation to add NZE yard trucks as compliance options under PR 2305:

17-4

[1] See the analysis by Gladstein, Neandross & Associates in its "Game Changer" white paper (funded partially by SCAQMD) at https://www.gladstein.org/gna_whitepapers/game-changer-next-generation-heavy-duty-natural-gas-engines-fueled-by-renewable-natural-gas/.
[2] https://www.prweb.com/releases/100_percent_renewable_propane_targeted_for_california_by_2030/prweb17426932.htm.
[3] Cision PR Newswire, "Suburban Propane Partners, L.P. Announces Deal to Acquire 39% Stake in Oberon Fuels and Additional Investments to Support the Ongoing Development of Innovative Solutions to Reduce Carbon Emissions," press release, September 17, 2020, https://www.prnewswire.com/news-releases/suburban-propane-partners-lp-announces-deal-to-acquire-39-stake-in-oberon-fuels-and-additional-investments-to-support-the-ongoing-development-of-innovative-solutions-to-reduce-carbon-emissions-301133443.html.

PROPANE education & research COUNCIL

T 202-452-8975
F 202-452-9054

1140 Connecticut Ave. NW, Ste. 1075
Washington, DC 20036

1. MS Word document with suggested modifications to "WAIRE Technical Menu Report" (March 3, 2020)

Using the "Track Changes" feature, we have modified this draft Staff report to add narrative incorporating NZE yard trucks as a compliance option under PR 2305. As you will see, we marked up only "SECTION 5) Zero Emissions Yard Truck Acquisition and Usage." We used parallel language and rationale as applied by Staff in allowing NZE on-road trucks to serve as compliance options, along with a ZE on-road trucks. Just as Staff made the case for the commercial maturity and product availability of ZE yard trucks, we have proposed parallel language as rationale for adding NZE yard trucks, using credible documentation. We believe our proposed mark-up and additions provide Staff with a solid and accurate head-start on language to make this modification to PR 2305. As noted above, this will significantly enhance the District's ability to rapidly attain cost-effective NOx reductions through implementation of this important new FBCM.

2. MS Excel spreadsheet "WAIRE User Calculator with NZE Yard truck calculations"

Using Staff's information provided in SCAQMD's slide presentation "WAREHOUSE ISR WORKING GROUP" dated March 3, 2020, we have reproduced in MS Excel the District's WAIRE point system. We created a parallel, justifiable point system for adding NZE yard trucks as a compliance option. As you will see in the middle tab titled "Waire Menu," we have added two new lines of calculations under "Acquire NZE Yard Truck" and "Use NZE Yard Truck." We used the same methodology and formulas that Staff used to establish the relative WAIRE points for NZE on-road trucks versus ZE on-road trucks. This results in calculated total points for Acquiring and Using NZE yard trucks. The result is that -- in similar fashion to the on-road case-- NZE yard trucks get significantly fewer points than ZE yard trucks for the "Acquire" category, but nearly the same points for the "Use" category. We believe our methodology and calculations are both logical and defensible. Of course, our team would be pleased to discuss this recommendation and the methodology in a follow-on virtual meeting with Staff, if deemed useful.

17-4
Cont'd

PERC greatly appreciates the District's willingness to review our proposed modifications to PR 2305's technical documentation and the WAIRE points system, designed to improve the speed and cost-effectiveness of achieving NOx reductions by introducing NZE yard trucks as compliance option. For all the reasons described above, we believe it represents good, defensible public policy for the District to pursue under the new in-direct source rule. We look forward to participating in Friday's Working Group meeting, and our team will be pleased to meet with Staff to further work through the concept laid out in this letter and attachments.

If you have any questions about our proposed changes to PR 2305, please give me a call. I can be reached at 804.338.0202 (cell) and 202.452.8975 (main).

Sincerely,



Tucker Perkins
President & Chief Executive Officer

Definition of NZE Yard Truck – SCAQMD states the following in the technical report:

"For PR 2305 a Near Zero Emission (NZE) truck is one in which the engine meets CARB's lowest Optional Low NOx standard of 0.02 g/hp-hr NOx."

Thus, this is an easy extrapolation to the very synonymous case of NZE yard trucks:

"For PR 2305 a Near Zero Emission (NZE) yard truck is one in which the engine meets CARB's lowest Optional Low NOx standard of 0.02 g/hp-hr NOx."

SECTION 5) Zero Emissions (ZE) and Near Zero Emissions (NZE) Yard Truck Acquisition and Usage

Description: Yard trucks (also called yard tractors, terminal trucks, hostlers, yard jockeys, or yard goats) move trailers and containers around warehouse facilities. Most yard trucks at warehouse facilities are diesel fueled and emit NOx, DPM, and other pollutants. Duty cycles for yard trucks vary depending on use, with heavier use at railyards and port facilities and lighter use typically at warehouses and manufacturing plants, as defined by hours of use and diesel consumption rates. CARB has limited population data for about 1,100 yard tractors operating statewide through its DOORS reporting program for off-road vehicles, but it is unclear how many of these operate at warehouses in South Coast AQMD. In addition, many yard tractors can be on-road vehicles, which are not required to be reported through the DOORS system. For example, about two thirds of the roughly 1,600 yard tractors at the ports of Los Angeles and Long Beach are on-road vehicles.

Commercial Availability:

ZE Yard Tractors: Many battery-electric yard tractor demonstration projects have taken place in the past several years, including in the South Coast AQMD. Following these efforts, multiple manufacturers have begun offering battery-electric ZE yard trucks for sale commercially including OrangeEV, Kalmar Ottawa, and BYD.

NZE Yard Tractors: Natural gas and propane yard tractors have been also been demonstrated for many years; until recently, this was done in a pre-commercial status. However, key advancements were achieved in 2019, and as of mid-2020, OEM-built models are commercially available with NZE engines (certified to CARB's lowest tier OLNS of 0.02 g/bhp-hr). For example, UPS already operates (or has ordered) at least 300 propane-fueled NZE yard tractors built by TICO.[1] A 2019 feasibility assessment released by the San Pedro Bay Ports found that natural gas NZE yard tractors -- even when used in very tough marine terminal duty cycles – achieve "all four parameters that collectively define commercial feasibility." The Ports' joint assessment rated "overall feasibility" for NZE yard tractors (across technical, operational, infrastructure, and economic parameters) as equivalent to ZE yard tractors. Since that report was released, twenty-two natural gas NZE yard tractors (built by Capacity Trucks, with 6.7 and 8.9 liter CWI engines) have been demonstrated at the Port of Los Angeles for more than a year, enabling the "technology readiness" rating of this fuel-

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17-9

[1] Freight Waves, "UPS to add 6,000 natural gas vehicles over next 3 years," October 9, 2019 https://www.freightwaves.com/news/ups-to-add-6000-natural-gas-vehicles-over-next-3-years

technology platform to move into the threshold of full commercialization.[2] In mid-2020, the University of California-Riverside conducted chassis dynamometer emissions testing on a natural gas NZE yard tractor, documenting that the in-use NOx emissions benefits of NZE yard tractors (relative to a state-of-the-art diesel control tractor) was even greater than the 90% reduction derived by comparing certification levels.[3]

A variety of different NZE engines – using either natural gas or propane – are now being equipped in OEM yard tractors. In addition to Capacity's incorporation of two different Cummins Westport NZE natural gas engines (L9N and B6.7N) in yard tractors, TICO has joined with engine provider Power Solutions International (PSI), to develop and commercialize NZE propane yard tractors for typical warehouse and distribution center service. Roush CleanTech's NZE 6.8L propane engine can also be sourced by OEMs for their yard tractor models. And, Cummins is working on an advanced-technology propane yard tractor engine that will meet the NZE threshold, as well.[4]

17-9 Cont'd

While PR 2305 is focused on reducing NOx to help the Basin attain federal ozone standards, NZE yard tractors can also deliver an important collateral benefit: full-fuel-cycle GHG reductions. This is achieved by fueling NZE engines with drop-in renewable versions of conventional natural gas or propane that are verified to have very low carbon intensity. Renewable natural gas is already widely used to fuel heavy-duty NGVs in California, and renewable propane is now becoming available. The propane fuel industry has committed to use 100% renewable propane in California transportation applications by 2030).[5]

Operation: Operation of yard trucks can be tracked by hours of use, with hourly usage varying from <1,000 hours/year up to 6,000 hours/year. The diesel reductions were calculated by using the horse power, hours of use, the load factor, and the pollutant emission factor.

SECTION 5a) ZE Yard Truck Acquisition

WAIRE Points from ZE Yard Truck Acquisition: ZE yard trucks currently cost about $310,000 while their diesel equivalent costs about $100,000[6]. This incremental cost of $210,000 would earn nine WAIRE Points per ZE yard truck purchased. Similar to the methods used for on-road truck acquisitions, at $100,000 per ton cost effectiveness, a ZE yard truck acquisition would earn 168 Points for regional emission reductions.

WAIRE Points from NZE Yard Truck Acquisition: NZE yard trucks currently cost about $150,000 while their diesel equivalent costs about $100,000[7]. This incremental cost of $50,000 would earn three WAIRE Points per NZE yard truck purchased. Similar to the methods used for on-road truck

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[2] San Pedro Bay Ports, 2018 Feasibility Assessment for Cargo-Handling Equipment, September 2019, https://cleanairactionplan.org/documents/final-cargo-handling-equipment-che-feasibility-assessment.pdf/
[3] UC-Riverside College of Engineering – Center for Environmental Research & Technology, "Interim Report for the 8.9 liter LNG and Diesel Yard Tractor Emissions Testing," CEC Agreement #PIR-16-016, July 2020.
[4] Cummins, "LPG Direct Injection Engine for Medium Duty Trucks," presentation by Sam Geckler and Saradhi Rengarajan, PERC Webinar, May 28, 2020.
[5] https://www.prweb.com/releases/100_percent_renewable_propane_targeted_for_california_by_2030/prweb17426932.htm.
[6] https://cleanairactionplan.org/documents/final-cargo-handling-equipment-che-feasibility-assessment.pdf/.
[7] https://cleanairactionplan.org/documents/final-cargo-handling-equipment-che-feasibility-assessment.pdf/

acquisitions, at $100,000 per ton cost effectiveness, a NZE yard truck acquisition would earn 40 Points for regional emission reductions.

SECTION 5b) ZE Yard Truck Usage

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Emissions: From the DOORS data, the most common yard trucks operate a 175 hp, Tier 3 engine. Table 21 below shows the emission factors from the Carl Moyer Guidelines[8] for this type of yard truck. Assuming that this type of yard truck operates 1,000 hours per year, and has operated for ten years, the emission reductions from switching to a ZE yard truck are shown in Equation 7 below.

Pollutant	Emission Factor (EF) g/hp-hr	Deterioration Rate (DR) g/hp-hr-hr	Load Factor (LF)
NOx	2.32	0.00003	0.39
PM	0.088	0.0000044	

Equation [7]

Equation [7]

$$Emissions = (hp) \times (LF) \times [((total\ hrs\ of\ use) \times (DR)) + (EF)] \times (hrs\ of\ use) \div 453.59_{(g/lb)}$$

Emissions Benefits of ZE Yard Truck

Equation 7a NOx: 175 × 0.39 × [((10 × 1,000) × 0.00003) + 2.32] × 1,000 ÷ 453.59 = 394 lbs

Equation 7a DPM: 175 × 0.39 × [((10 × 1,000) × 0.0000044) + 0.088] × 1,000 ÷ 453.59 = 19.9 lbs

Thus, since a ZE yard truck eliminates all the emissions of the baseline diesel yard truck, 394 lbs of NOx and 19.9 lbs or PM are the emissions benefits that are eligible for WAIRE points under the two categories of regional and local emissions reductions, respectively.

17-9 Cont'd

Analogous to the on-road truck case in Section 1, regional emission reductions from switching to NZE yard trucks are assumed to equal 90% of the reduction compared to ZE yard trucks. Local emission reductions are assumed to be the same between ZE and NZE platforms; this is because NZE yard trucks (whether fueled by natural gas or propane) do not emit DPM.

Equation 7b (a version of Equation 7a for the baseline diesel vs. ZE yard truck) confirms the emissions benefits of an NZE yard truck. As indicated, the EF for NOx has been adjusted to be 90 percent lower than the baseline diesel EF. The DR used in Equation 7b had also been adjusted, to account for spark-ignition engine technology used for NZE engines (natural gas or propane) relative to a baseline diesel engine to which it is being compared. For the new DR, the same 90 percent factor is used, yielding a DR of 0.0003 X .1 = 0.0000030. Below, we plug these changes into Equation 7b.

Emissions Benefits of NZE Yard Truck

Equation 7b NOx: 175 × 0.39 × [((10 × 1,000) × 0.000003) + 2.32*.1] × 1,000 ÷ 453.59 = 39.2 lbs

Equation 7b DPM: 175 × 0.39 × [((10 × 1,000) × 0.0000044) + 0.088] × 1,000 ÷ 453.59 = 19.9 lbs

[8] https://ww3.arb.ca.gov/msprog/moyer/guidelines/current.htm

Thus, since an NZE yard truck eliminates 90% of the NOx emissions and 100% of the DPM emissions relative to the baseline diesel yard truck, the emissions benefits that are eligible for WAIRE points under the two categories of regional and local emissions reductions, respectively are as follows:

Regional Emission Reductions = 394 lbs NOx – 39.4 lbs NOx = 354.6 lbs NOx

Local Emissions Reductions = 19.9 lbs DPM – 0 lbs DPM = 19.9 lbs DPM

ZE Yard Truck Costs: Although purchase prices for ZE yard trucks are higher than their diesel equivalent, once purchased the operational costs are expected to be lower. An analysis by the ports of Long Beach and Los Angeles evaluated the Total Cost of Ownership (TCO) for battery-electric ZE yard trucks in comparison to diesel[39]. This analysis found a TCO for ZE yard trucks to be about $450,000 (not including infrastructure costs) while equivalent diesel had a TCO of about $375,000. Assuming a ~12,000 useful life of a yard truck, the annual incremental cost of operating a ZE yard truck for 1,000 hours is shown in Equation 8.

17-9 Cont'd

Equation [8]: ($450,000 - $375,000) × 1,000 hrs ÷ 12,000 hrs = $6,250

NZE Yard Truck Costs: Similarly, the purchase price for NZE yard trucks are higher than their diesel equivalent yard trucks, but operational costs are expected to be lower. The same analysis by the ports of Long Beach and Los Angeles evaluated the Total Cost of Ownership (TCO) for natural gas NZE yard trucks in comparison to diesel[39]. This analysis found the TCO for NZE yard trucks to be about $402,000 (not including infrastructure costs) while equivalent diesel had a TCO of about $375,000. Assuming a ~12,000 useful life of a yard truck, the annual incremental cost of operating an NZE yard truck for 1,000 hours is shown in Equation 8.

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Equation [8]: ($402,000 - $375,000) × 1,000 hrs ÷ 12,000 hrs = $2,250

WAIRE Points from Using ZE Yard Trucks: Following the results from Equation 7a, using a ZE yard truck would earn 16 Points for regional emission reductions and 80 Points for local emission reductions. One cost Point would be earned following the results of Equation 7. Similar to the approach for on-road truck visits, a multiplier of three is applied to the sum of cost, regional, and local Points. Therefore the total Points for 1,000 hours of ZE yard truck usage is: (16 + 80 + 1) × 3 = 291 Points.

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WAIRE Points from Using NZE Yard Trucks: Following the results from Equation 7b, using a NZE yard truck would earn 15Points for regional emission reductions and 80 Points for local emission reductions. One cost Point would be earned following the results of Equation 7b. Similar to the approach for on-road truck visits, a multiplier of three is applied to the sum of cost, regional, and local Points. Therefore the total Points for 1,000 hours of NZE yard truck usage is: (15 + 80 + 1) × 3 = 288 Points.

Commented [JL2]: SCAQMD wrote Equation 6 in the draft technical report. Victor Juan confirmed by email that this is a mistake, and should read "Equation 7"

Version 3/3/2020

WAIRE Menu Item	WAIRE Menu Sub-Item			Reporting Metric	Annualized Metric	Annualized Incremental Cost ($/metric)	Annualized Regional Emissions Reduction (lb NOx/ metric)	Annualized Local Benefit (lb DPM/ metric)	Cost	Regional Emission Reduction	Local Emission Reduction	WAIRE Points
Acquire NZE/ZE Trucks in Warehouse Operator Truck Fleet	Acquisition (Purchase Truck)	Class 8 Truck	NZE	Number of trucks	1 truck purchased	$65,000	0	0	3	52	0	55
		Class 4 - 7 Truck				$30,000	0	0	2	24	0	26
		Class 8 Truck	ZE			$150,000	0	0	6	120	0	126
		Class 4 - 7 Truck				$80,000	0	0	4	64	0	68
NZE/ZE Truck Visits	Use (One-way trips)	Class 8 Truck	NZE	Number of trips	365 truck visits	$3,825	162.3	1.3	3	21	18	42
		Class 4 - 7 Truck				$13,928	26.3	0.1	3	6	3	12
		Class 8 Truck	ZE			$54,400	180.3	1.3	9	24	18	51
		Class 4 - 7 Truck				$701	29.2	0.1	3	6	3	12
Acquire ZE Yard Truck	Acquisition: Purchase Yard Truck		ZE	Number of yard trucks	1 truck purchased	$210,000	0	0	9	168	0	177
Use ZE Yard Truck	Use: Onsite Yard Truck Use		ZE	Hours of use	1000	$6,250	394	19.9	3	48	240	291
	GNA Creation if NZE Hostlers are Added as Option											
Acquire NZE Yard Truck	Acquisition: Purchase Yard Truck		NZE	Number of yard trucks	1 truck purchased	$50,000	0	0	3	40	0	43
Use NZE Yard Truck	Use: Onsite Yard Truck Use		NZE	Hours of use	1000	$2,250	355	19.9	3	45	240	288
										Relative % to ZE		70.7%

17-11

CENTER FOR COMMUNITY ACTION & ENVIRONMENTAL JUSTICE
EARTHJUSTICE
EAST YARD COMMUNITIES FOR ENVIRONMENTAL JUSTICE
INLAND COALITION FOR IMMIGRANT JUSTICE
INLAND CONGREGATIONS UNITED FOR CHANGE
LONG BEACH ALLIANCE FOR CHILDREN WITH ASTHMA
NATURAL RESOURCES DEFENSE COUNCIL
SAN PEDRO & PENINSULA HOMEOWNERS COALITION
SIERRA CLUB
WEST LONG BEACH ASSOCIATION
WAREHOUSE WORKER RESOURCE CENTER

October 8, 2020

Wayne Nastri
Executive Officer
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: Comments on the Warehouse Indirect Source Rule Proposed Rule 2305)

Dear Mr. Nastri:

On behalf of the undersigned coalition of community and environmental organizations, we submit these comments on the warehouse indirect source rule. Our coalition represents the communities living and working adjacent to warehouses, who continue to be disproportionately harmed by the freight industry every single day. We appreciate the Air District staff's continued work on the warehouse indirect source rule and request that the agency move expeditiously in the development and adoption of this important regulation. 18-1

For decades, the freight industry has been polluting communities living near warehouses. These communities are exposed to toxic pollution from the warehouse industry and face unacceptable health risks as a result. While the covid-19 pandemic continues to exacerbate health impacts to communities most affected by this industry, warehouses have been profiting – and polluting – more than ever due to consumers' increased reliance on e-commerce,[1] further compounding existing health risks in nearby communities. These trends make clear that it is time to hold warehouses accountable for the harms imposed on countless residents living near these facilities. The warehouse indirect source rule is a critical measure that will address these growing disproportionate pollution burdens and provide communities 18-2

[1] *See* Justin Ho, *As imports boom, warehouses fill up, and businesses face a storage shortage*, Marketplace (Oct. 1, 2020 , https://www.marketplace.org/2020/10/01/imports-boom-warehouses-fill-up-businesses-face-storage-shortage-online-shopping-covid19/.

with the basic health protections they deserve. A rule that meaningfully regulates this industry must ensure that warehouses clean up pollution in all communities. 18-2 (cont'd)

An effective warehouse rule must prioritize zero-emissions technology and infrastructure, and create a real pathway to a zero-emissions future. Zero-emissions technology is the only solution that will meaningfully address this industry's air quality and health impacts. Our coalition does not support a rule that promotes investment in near-zero technologies, as this will only serve to slow the transition to a zero-emissions freight sector. Not only will the use of near-zero technology create barriers for zero-emissions operations and infrastructure, it will continue to perpetuate the harms imposed on our communities by the natural gas and oil industry and exacerbate the serious climate and health impacts. This rule must identify clear targets for the complete phase-out of natural gas and combustion technologies. The majority of air quality benefits will be attributable to the use and operation of trucks, and the Air District should take advantage of this opportunity to incentivize the shift towards zero-emissions trucks. 18-3 18-4

The Air District must also ensure the rule starts with sufficient stringency to provide relief to communities now. We remain concerned the compliance obligations will be paltry, which will not provide the necessary relief to communities breathing some of the dirtiest air in the nation. The industry will fight a regulation at whatever level it is set, so the Air District should let public health protection guide the stringency. 18-5

Moreover, the Air District must expand and clarify their concept of a "mitigation fund." As advocates concerned with seeing real change in communities suffering the worst impacts of air pollution, it is imperative that the mitigation fund is not used as a "pay to pollute" scheme. We need details on the Air District's strategy to ensure that warehouses actually adopt pollution abatement strategies, rather than paying their way to compliance. If the mitigation fund is used, we would like the Air District to consider requiring that the mitigation fund dollars enter the communities in which they are coming out of to provide real community benefits, such as EV subsidies for local residents. 18-6

Finally, we urge the Air District to move forward with this rule quickly. There have been numerous delays with this rulemaking process. Communities cannot continue paying for industry with their health, especially while we are still in the midst of a pandemic that puts communities suffering from poor air quality at even greater risk of serious illness and death. We respectfully request that the District ensure that community stakeholders are included in the rulemaking process, and to adopt the rule by March 2021. 18-7

We appreciate your consideration of these comments, and the staff's hard work on this important rule. We look forward to working with the agency to develop a strong warehouse indirect source rule that takes into account community needs and cleans up the warehouse industry. 18-8

Sincerely,

Regina Hsu
Adrian Martinez
Michelle Ghafar
Earthjustice

Esther Portillo
Center for Community Action & Environmental Justice

Taylor Thomas
East Yard Communities for Environmental Justice

Javier Hernandez
Inland Coalition for Immigrant Justice

Tom Dolan, Ph.D.
Inland Congregations United for Change

Sylvia Betancourt
Long Beach Alliance for Children with Asthma

Heather Kryczka
Natural Resources Defense Council

Peter M. Warren
San Pedro & Peninsula Homeowners Coalition

Carlo De La Cruz
Sierra Club

Andrea Vidaurre
Warehouse Worker Resource Center

Theral Golden
West Long Beach Association

cc:

Philip M. Fine, Ph.D.
Deputy Executive Officer
Planning, Rule Development & Area Sources

Sarah Rees
Assistant Deputy Executive Officer
Planning, Rule Development & Area Sources

Ian MacMillan
Planning and Rules Manager
Mobile Sources/ISR

From: Jiang, Hao
To: Ian MacMillan
Cc: Victor Juan
Subject: Warehouse rule - PR 2305
Date: Wednesday, November 04, 2020 5:21:34 PM

Ian,

I have following suggestions for you to consider.

(1) To eliminate possible perplexity in rule applicability. I suggest to revise the rule applicability as:
(b) Applicability
This rule applies to owners and operators of warehouses located in the South Coast Air Quality Management District (South Coast AQMD) jurisdiction with greater than or equal to 100,000 square feet of indoor floor space in a single building that *is* ~~*may be*~~ used for warehousing activities by one or more warehouse operators.

19-1

(2) For situations when a large building (>100,000 sq.ft.) owner installed a physical barrier or established policy to limit floor space for warehouse activity to less than 50,000 sq.ft., rule should exempt this as well.
(g) Exemptions
(1) Operators In Warehouses That Have Less Than 50,000 Square Feet That They May Use For Warehousing Activities
Warehouse operators who can only use less than 50,000 square feet of a warehouse for warehousing activities due to *physical limitation*, *self-imposed administrative control or* terms of their lease are not subject to the requirements in subdivision (d)(1) unless the same parent company owns or controls multiple operators in the same building who collectively use more than 50,000 square feet of space for warehousing activity.

19-2

(3) To assist regulated warehouses in complying with rule recordkeeping requirement, I suggest AQMD to create a recordkeeping template for warehouse to use.

19-3

Thank you

Hao Jiang, P.E.
Environmental Affairs
Disneyland Resort
714-781-4504
Hao.jiang@disney.com

CENTER FOR COMMUNITY ACTION ENVIRONMENTAL JUSTICE
EARTHJUSTICE
EAST YARD COMMUNITIES FOR ENVIRONMENTAL JUSTICE
SIERRA CLUB
URBAN ENVIRONMENTAL POLICY INSTITUTE
WEST LONG BEACH ASSOCIATION

December 3, 2020

Chair Burke and Members of the Governing Board
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: Warehouse Indirect Source Rule

Dear Chair Burke and Members of the Governing Board:

On behalf of the undersigned coalition of community and environmental organizations, we submit these comments on the warehouse indirect source rule. Our coalition represents the communities living and working adjacent to warehouses, who continue to be disproportionately harmed by the freight industry every single day. We appreciate the Air District staff's continued work on the warehouse indirect source rule and request that the agency move expeditiously in the development and adoption of this important regulation. 20-1

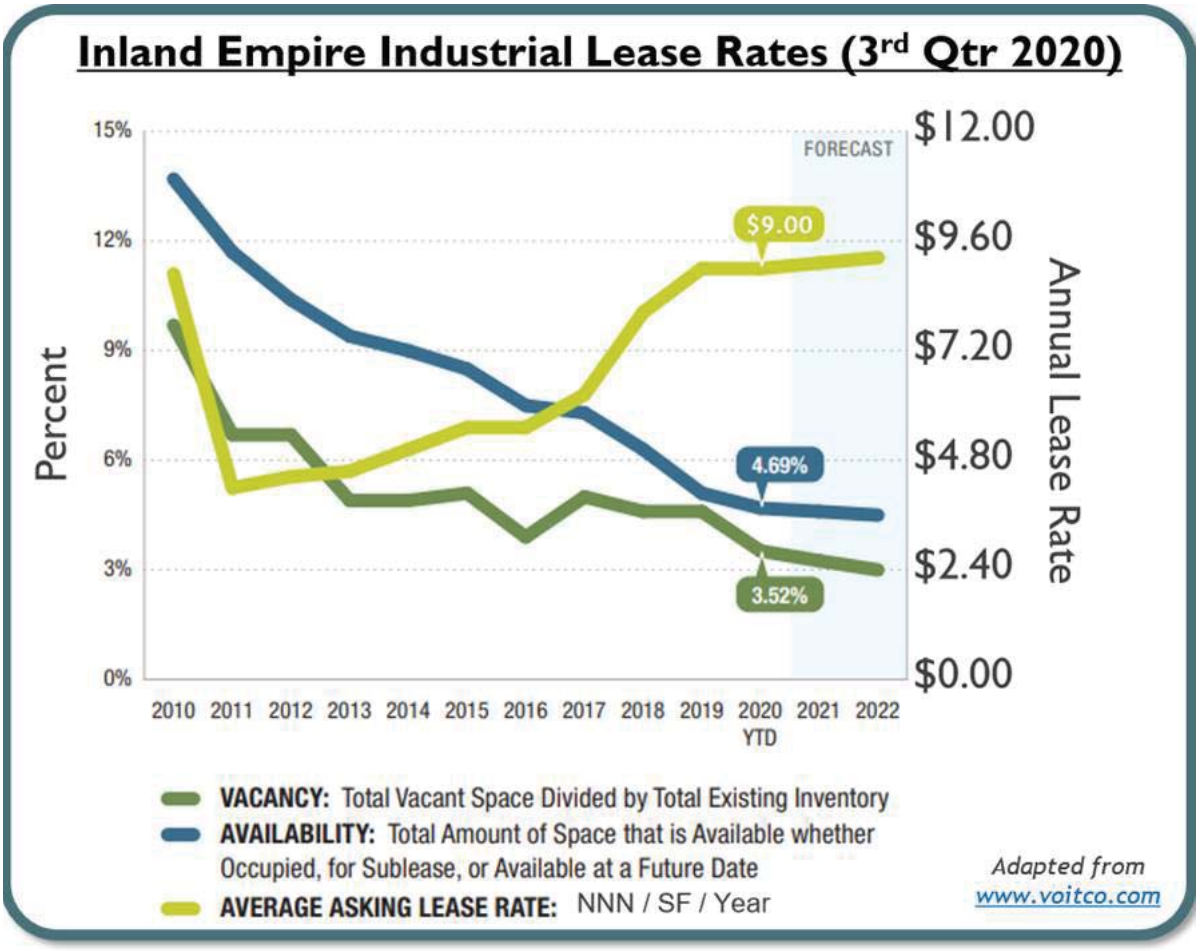
For decades, the freight industry has been polluting communities living near warehouses. These communities are exposed to toxic pollution from the warehouse industry and face unacceptable health risks as a result. The Governing Board's agenda is replete with information showing that mandatory programs to clean up the freight industry should be a top priority for 2021. First, the draft Community Emission Reduction Plan CERP) for Southeast Los Angeles in Agenda Item 28 identifies the warehouse indirect source rule as a critical element of the effort to address truck and traffic pollution.[1] This is similar to all the other CERPs the agency has completed under AB 617. Second, Agenda Item 5 notes that large quantities of incentive dollars targeted towards the freight industry have largely gone unused. This indicates that voluntary approaches are not sufficient because even when the Air District can pay industry to clean up, it does not necessarily avail itself of these funds. The fact that no marine projects in our region applied for the millions of dollars of available funding is offensive to communities forced to breathe the dirty diesel soot emanating from the ports. Finally, we are reminded in Agenda Item 30 that we have failed yet again to meet another federal air quality standard. These factors all point to the need for mandatory programs to clean up the freight industry with no rule more urgent to adopt than the warehouse indirect source rule. 20-2 20-3 20-4

While the covid-19 pandemic continues to exacerbate health impacts to communities most affected by this industry, the freight industry is expanding greatly. For example, the San Pedro Bay Ports have hit historic milestones of freight volumes during several months this year. In addition, warehouses have been profiting – and polluting – more than ever due to consumers' increased reliance on e- 20-5

[1] Draft CERP, at 5b-3, available at http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2020/2020-Dec4-028.pdf?sfvrsn_6.

commerce,[2] further compounding existing health risks in nearby communities. During the last Working Group meeting the AQMD Staff presentation included this graphic showing warehouse vacancy rates are very low even as lease rates are hitting the highest levels seen in a decade in the Inland Empire.

20-5 (cont'd)



These trends make clear that it is time to hold warehouses and other freight facilities accountable for the harms imposed on countless residents living near these facilities. The warehouse indirect source rule is furthest along and is a critical measure that will address these growing disproportionate pollution burdens and provide communities with the basic health protections they deserve.

20-5 (cont'd)

We appreciate your consideration of these comments, and the staff's hard work on this important rule. We look forward to working with the Governing Board to develop a strong warehouse indirect source rule that takes into account community needs and cleans up the warehouse industry.

20-6

Sincerely,

Ivette Torres
Center for Community Action & Environmental Justice

[2] *See* Justin Ho, *As imports boom, warehouses fill up, and businesses face a storage shortage*, Marketplace (Oct. 1, 2020 , https://www.marketplace.org/2020/10/01/imports-boom-warehouses-fill-up-businesses-face-storage-shortage-online-shopping-covid19/.

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East Yard Communities for Environmental Justice

Carlo De La Cruz
Sierra Club

Jessica Tovar
Urban & Environmental Policy Institute, Occidental College

Theral Golden
West Long Beach Association

cc:

Wayne Nastri
Executive Officer

Philip M. Fine, Ph.D.
Deputy Executive Officer
Planning, Rule Development & Area Sources

Sarah Rees
Assistant Deputy Executive Officer
Planning, Rule Development & Area Sources

Ian MacMillan
Planning and Rules Manager
Mobile Sources/ISR

Kevin Maggay
Environmental Affairs
kmaggay@socalgas.com
858-254-7556

SoCalGas
A Sempra Energy utility

January 14, 2021

Ian MacMillan
Planning & Rules Manager
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Dear Mr. MacMillan,

Thank you for the opportunity to provide comments on the Proposed Rule 2305: Warehouse Indirect Source Rule (ISR Rule). SoCalGas looks forward to working with the South Coast Air Quality Management District on this effort. While the rule is not in a formal comment period, SoCalGas would like to provide the following comments to assist in its further development. 21-1

Early emission reductions should be weighted

The concept of an ISR Rule was included in the 2016 Air Quality Management Plan (AQMP) with the purpose of achieving 2023 attainment. The early focus of the ISR Rule should remain on achieving State Implementation Plan (SIP) creditable emission reductions to meet 2023 attainment. With that in mind, the ISR Rule should include provisions that heavily weight actions to achieve early, creditable emission reductions. Truck trips with technologies cleaner than baseline diesel would be an example of an action that would get immediate SIP creditable emission reductions to help meet 2023 attainment and should therefore be awarded weighted Warehouse Action and Investments to Reduction Emissions (WAIRE) points. Actions to reduce greenhouse gases or that merely enable emission reductions such as solar panels and infrastructure, respectively, should not be eligible for weighted points because they do not direct achieve SIP creditable emission reductions. 21-2

The incremental cost of hydrogen is not included in the WAIRE point calculations

Zero emission trucks are grouped together regardless of the technology – plug-in or hydrogen – and generate the same number of WAIRE points per trip. However, the number of WAIRE points generated 21-3

are partly determined by the incremental cost. Hydrogen, which has a higher incremental cost than plug-in technologies should therefore generate more WAIRE points. The WAIRE menu should include a separate line item for hydrogen powered trucks and the WAIRE points should be recalculated based on its incremental cost. 21-3 (cont'd)

Emissions reduction calculations may be overestimated when relying on EMFAC assumptions 21-4

The emission calculations for heavy-duty truck trips are developed using EMFAC vehicle mile travelled (VMT) data based on existing diesel trucks. Plug-in heavy-duty trucks are significantly limited in the number of miles they can travel because of range capabilities as well as charging downtime. It is not realistic to believe that current plug-in truck technologies can do the same number of daily or annual VMTs as diesel trucks, therefore the emission reductions would be overstated. The amount of WAIRE points a plug-in truck can generate should be limited by its mileage. Other zero and near-zero emission technologies that have long range capabilities should be assumed to achieve the same VMT as diesel.

Entities should have options to claim more emission reductions and WAIRE points based on operations 21-5

The ISR Rule should include provisions that allow entities to claim more emission reduction and WAIRE points than the default based on operations. As an example, VMT is the metric that drives emissions and emission reductions. Trucks in longer range operations inherently achieve more emission reductions when being done by cleaner technologies. Operations that travel more miles than the default EMFAC VMT should have a mechanism to demonstrate that they are achieving more mileage and therefore more emission reductions. Achieving more emission reductions should then result in more WAIRE points.

Thank you again for the opportunity to comment and we look forward to working with you on this rule. 21-6

Sincerely,



Kevin Maggay
Environmental Affairs
SoCalGas

CC: Sarah Rees (SCAQMD)
Priscilla Hamilton (SoCalGas)
Dan McGivney (SoCalGas)

TESLA Summary of Comments on Draft Proposed Rule 2305

Page: 1

PROPOSED RULE 2305 WAREHOUSE INDIRECT SOURCE RULE – WAREHOUSE ACTIONS AND INVESTMENTS TO REDUCE EMISSIONS (WAIRE) PROGRAM

(a) Purpose

The purpose of this rule is to reduce local and regional emissions of nitrogen oxides and particulate matter, and to facilitate local and regional emission reductions associated with warehouses and the mobile sources attracted to warehouses in order to assist in meeting state and federal air quality standards for ozone and fine particulate matter.

(b) Applicability

This rule applies to n r and operators of warehouses located in the South Coast Air Quality Management District (South Coast AQMD) jurisdiction with greater than equal to 100,000 sq ar feett of indoor floor space in a single building ~~dedicated to~~that may be used for warehousinge activities by one or more warehouse operators.

Number: 1 Author: nderricksonSubject: Sticky Note Date: 12/16/2020 11:11:48 AM

One key issue we see here is if a warehouse owner/operator leases or contracts for but doesnt own) an all-electric fleet and uses off-site charging, there would not qualify for earning points. Could the owner/operator be in compliance if they demonstrate use of electric vehicles and charging without owning them on site?

Relatedly, since points can't be earned for activities required by CARB, would warehouse owners/operators already required to electrify their fleets and charging have to go above the CARB requirement for locating charging stations and vehicles at specific locations?

22-1

Number: 2 Author: nderricksonSubject: Highlight Date: 12/4/2020 5:27:39 PM

tractor is parked at a warehouse.

~~(11)~~ [1]LECTRIC CHARGER means an electric charging station for vehicles. Each unique plug that can charge an individual vehicle at any time, regardless of whether other electric chargers/plugs are operating, counts as one electric charger. This equipment is also referred to as Electric Vehicle Supply Equipment (EVSE).

~~(12)~~ FUEL TYPE means the fuel used to power a vehicle, such as electricity, hydrogen, natural gas, gasoline, or diesel fuel.

~~(12)~~(16) [2]EVEL 2 CHARGER means electric vehicle supply equipment (EVSE) that can deliver an electric charge up to a rate of 19.2 kilowatts (kW)). [3]

~~(13)~~(17) LEVEL 3 CHARGER means EVSE that can deliver an electric charge between 19.2 and 50 kW

~~(14)~~(18) LEVEL 4 CHARGER means an EVSE that can deliver an electric charge between 51 and 150kW

~~(15)~~(19) LEVEL 5 CHARGER means an EVSE that can deliver an electric charge ~~above~~ greater than 151 kW.

~~(16)~~(20) NEAR-ZERO EMISSIONS (NZE) TRUCKS means trucks or tractors with engines ~~that~~ meeting the California Air Resources Board's

Number: 1 Author: nderricksonSubject: Highlight Date: 12/16/2020 10:58:12 AM

This definition is confusing around unique plug. Some charging station stalls have two plugs, CCS and Chademo, and only one of the plugs can be used at a time to charge an EV.

We recommend using the definition outlined in the California Energy Code or something more similar to:

"Electric Vehicle Charging Station" or "Electric Vehicle Supply Equipment" means any level of equipment outlined in Article 625 of the California Electrical Code for the purpose of delivering electricity from a source outside an electric vehicle into a plug-in electric vehicle."

22-2

Number: 2 Author: nderricksonSubject: Highlight Date: 12/4/2020 6:05:51 PM

Number: 3 Author: nderricksonSubject: Sticky Note Date: 12/16/2020 11:00:42 AM

There are already legally established EV charging levels. These levels should be consistent with them.

LEVEL 1 CHARGER means EVSE that can deliver an electric charge at a rate up to 120-volts. Typically 1kW - 1.4 kW rating.

LEVEL 2 CHARGER means EVSE that can deliver an electric charge at a rate up to 240-volts. Typically 4.8kW to 17.3kW rating.

LEVEL 3 CHARGER or DIRECT CURRENT FAST CHARGER means EVSE that can deliver an electric charge at a rate up to above 480-volts. Typically up to 120+kW.

There may be a desire to also include a higher level charger that serves the Class 7/8 trucks which need charging beyond ~300kW. We should discuss this more given that the industry is working collaboratively on a universal high powered charger.

22-3

(d) Requirements

(1) Warehouse Points Compliance Obligation

Beginning with the Initial Reporting Date in Table ~~2~~1, a warehouse operator shall earn the applicable ~~2~~ AIRE Points, for the prior 12-month period from July 1 through June 30, in the amount identified in Table ~~1~~ 2 as specified in subparagraph (d)(1)(A). WAIRE Points shall be earned for actions and investments completed during the compliance period while the warehouse operator occupied the warehouse, except as specified in paragraph (d)(~~3~~6). ~~Subdivision (d) only applies to~~ Only warehouse operators in buildings with greater than or equal to 100,000 square feet of floor area ~~dedicated to warehousing~~ that may be used for warehousing activities and who operate

Number: 1 Author: nderricksonSubject: Highlight Date: 12/16/2020 11:08:20 AM

One conceptual issue is that the program seems to capture all trips to and from a warehouse, but doesn't distinguish between trucks that are or aren't actually domiciled at that warehouse. If, for example, a long-haul truck brings goods to a warehouse from 600 miles away, that would count as one trip even though there's currently no cost-effective way to electrify that trip it would require a public charging network, which is outside of the scope of the operator . Similarly, if you're going back and forth between two warehouses in their jurisdiction, would that count as 2 trips for each warehouse, 4 trips total? 22-4

Number: 2 Author: nderricksonSubject: Highlight Date: 12/4/2020 6:08:59 PM

It might be helpful to spell out what WAIRE stands for in the definition section. Does WAIRE mean Warehouse Compliance Obligation Points? 22-5

(B) The Weighted Annual Truck Trips (WATTs) at a warehouse include all actual truck trips that occurred at a warehouse while the warehouse operator was responsible for operations during the 12-month compliance period. If a warehouse is occupied by more than one warehouse operator, the WATTs are calculated only for truck trips to or from that operator. Actual truck trip data to a warehouse shall be collected by the warehouse operator and WATTs shall be calculated according to the following equation and as specified in the WAIRE Program Implementation Guidelines.

WATTs = [Class 4-2b to 7 truck trips] + [2.5 Class 8 truck trips]

Where:

Class 4-2b to 7 truck trips = All trucks or tractors that enteringed or exitinged a warehouse truck gate(s) or driveway(s) that are truck eClass 2b, 3, 4, 5, 6, or 7. If truck class

Number: 1 Author: nderricksonSubject: Highlight Date: 12/4/2020 6:13:44 PM
Does this mean all truck trip that occurred to and from the warehouse? Only from vehicles that are engaged in warehouse commercial operation? All trucks that leave or arrive at the warehouse? There could be some loop holes depending on how you write this.

Perhaps add in what is outlined below: "trucks are all straight trucks that entered or exited a warehouse truck gate s) or driveway(s)." 22-6

Number: 2 Author: nderricksonSubject: Highlight Date: 12/4/2020 6:12:58 PM
Is 2.5 based off of something particular? Or just a general approximation of emissions differences between lower classes and class 8? 22-7

(C) If a warehouse operator does not have information about the number of truck trips at a warehouse due to a force majeure event such as a destruction of records from a fire, the WATTs shall be calculated according to the following equation.

WATTs = Days per Year × Warehouse Size × WTTR

Where:

Days per Year = The number of days that the warehouse operator has operational control of the warehouse during the 12-month compliance period

Warehouse Size = Warehouse size in thousand square feet (tsf), as defined in subdivision (c)

WTTR = Weighted Truck Trip Rate, where:

Warehouses ≥200,000 = 0.95 trips/tsf/day

Warehouses ≥100,000 = 0.67 trips/tsf/day

Cold Storage Warehouses = 2.17 trips/tsf/day

(2) Earning WAIRE Points

WAIRE Points shall only be earned through completing actions in the WAIRE Menu in Table 3 and as described in (d)(3), or by completing actions in an approved Custom WAIRE Plan as described in (d)(4), or by choosing to pay a mitigation fee as described in (d)(5) in lieu of completing actions in the WAIRE Menu or in an approved Custom WAIRE Plan.

Number: 1 Author: nderricksonSubject: Sticky Note Date: 12/4/2020 6:17:10 PM
Should we add in an option for those warehouses who don't have the current capacity to track and report this data to also be able to use the formula? We could add in something like " or lack of internal capabilities". We would need to think through if companies would default to this and if this equation under estimates. It may be a good concession for some of the business interests on burdensome reporting.

22-8

Number: 2 Author: nderricksonSubject: Highlight Date: 12/4/2020 6:17:28 PM

Number: 1 Author: nderricksonSubject: Highlight Date: 12/4/2020 6:18:51 PM

(A) A description how the proposed actions will achieve quantifiable, verifiable, and real NOx and DPM emission reductions as quickly as feasible, bu later b than three years after plan approval; and

(B) A quantification of expected NOx and/or DPM emission reductions from the proposed project within the South Coast AQMD and within three miles of the warehouse; and

(C) A description of the method to be used to verify that the proposed project will achieve NOx and/or DPM emission reductions; and

(D) A schedule of key milestones showing the increments of progress to complete the proposed project; and

(E) A description of the location and a map of where the proposed project will occur; and

(F) Any expected permits or approvals required by other private parties, or South Coast AQMD, or other federal, state, or local government agencies to implement the proposed plan.

(iv) Any proposed plan that relies on VMT reduction must demonstrate that these reductions are surplus to what is included in the most recent approved Regional Transportation Plan (RTP) and Air Quality Management Plan (AQMP).

(B) Review of Custom Option Plan Applications

(i) A Custom WAIRE Plan application must be submitted at least 9 months before n Annual WAIRE Report is due for the year in which the Plan will earn Points.

(ii) Within 30 days of receipt of the Custom Option Plan, the Executive Officer will conduct an initial review of the Custom Option Plan and confirm receipt.

(iii) The Executive Officer shall approve or reject the Custom Option Plan within 3 months of submittal. If no formal approval or rejection is received by the applicant, the application is presumed rejected unless otherwise provided

Number: 2 Author: nderricksonSubject: Highlight Date: 12/4/2020 6:20:16 PM

That is quite a long time before. I wonder if there will be push back on this timing from business interests.

~~(4)~~(5) Mitigation Fee

In lieu of earning the required number of WAIRE Points in paragraph (d)(3) or (d)(4) ~~If~~ a warehouse [1]perator ~~does not earn a sufficient number of WAIRE Points to~~ may choose to satisfy all or any remaining part of their WAIRE Points Compliance Obligation ~~in (d)(1), they shall pay~~ through payment of a mitigation fee ~~to make up the difference according to the schedule below.The mitigation fee rate shall be equal to~~ in the amount of [2]1,000~~XX~~ for each WAIRE Point.

~~(A) In any one compliance year, if a warehouse operator does not complete at least 50% of their WAIRE Points Compliance Obligation through the earning of WAIRE points from Table 3, the following year the mitigation fee rate shall be ten percent more than the dollar value per WAIRE Point that the warehouse operator paid in the previous year.~~

~~(5)~~(6) Transferring WAIRE Points

WAIRE Points are not transferable, except as specified below.

(A) Transferring WAIRE Points to a Different Warehouse

[3]~~a~~ a warehouse operator conducts warehousing activities at more than one warehouse, then WAIRE Points earned for one warehouse may be used at the other warehouse(s) under the operational control of ~~t~~that am warehouse operator. Only those points ~~that are~~ earned

Number: 1 Author: nderricksonSubject: Highlight Date: 12/4/2020 6:21:11 PM
and/or owner? 22-10

Number: 2 Author: nderricksonSubject: Highlight Date: 12/4/2020 6:30:29 PM
Where do the mitigation fee funds go? 22-11

Number: 3 Author: nderricksonSubject: Highlight Date: 12/4/2020 6:31:02 PM
This flexibility is good and important to include. 22-12

Number: 1 Author: nderricksonSubject: Highlight Date: 12/4/2020 6:33:25 PM

~~issued.~~

(D) [1] the warehouse has an alternative fueling station(s) or electric harging station(s) located onsite, the Initial Site Information Report shall include

(i) Number of electric chargers/alternative fueling stations installed. The report must include the level for each electric charging station. For alternative-fueling stations, the report must include the fuel type, maximum fuel dispensing rate, the maximum amount of fuel that can be dispensed daily, and the pressure of the fueling system, if applicable;

(ii) Types of vehicles served;

(iii) Total fuel dispensed and/or charging provided in the previous 12-month period.

(E) If the warehouse operator has yard trucks that are ~~based~~ used at that ~~site~~ warehouse facility, the Initial Site Information Report shall include:

(i) Number of yard trucks, and indicate which of these are registered as motor vehicles under Vehicle Code section 4000, et seq. ~~by onroad and offroad classification;~~

(ii) Fuel type and engine size; and

(iii) Total annual hours of operation of all yard trucks.

(F) If the warehouse has onsite alternative energy generation equipment and/or onsite energy storage equipment, the Initial Site Information Report shall include:

(i) The type and rated capacity of the alternative energy generation system in kilowatts and kilowatt-hours per year, and/or rated capacity of the energy storage system in kilowatt-hours, as applicable.

(ii) The total energy generation and/or usage of the energy storage system in kilowatt hours expected during the next applicable 12-month compliance period in subdivision (d).

Table ~~1~~ 2 – Annual Variable

WAIRE Report Year*	Annual Variable
First Year	XX
Subsequent Years	XX
Etc.	XX
	XX
	XX

* This is the year that a warehouse submitted its Annual WAIRE Report.

Number: 1 Author: nderricksonSubject: Highlight Date: 12/4/2020 6:40:17 PM
Is there any more information on what the annual variable might be, how it is calculated, and the strategy around it?

Table 3 WAIRE Menu

Action/Investment	Action/Investment Details	Reporting Metric	Annualized Metric	WAIRE Points per Annualized Metric	Discounted WAIRE Points Subparagraph (d)(6)(A)
Acquire ZE/NZE Trucks in Warehouse Operator Fleet	ZE Class 8	Number of trucks	One truck acquired	126	126
	ZE Class 4-7			68	68
	ZE Class 2b-3			14	14
	NZE Class 8			55	55
	NZE Class 4-7			26	26
ZE/NZE Truck Visits	ZE Class 8	Number of visits	365 truck visits	51	33
	ZE Class 4-7			12	9
	ZE Class 2b-3			9	6
	NZE Class 8			42	24
	NZE Class 4-7			12	9
Acquire ZE Yard Truck		Number of yard trucks	One yard truck acquired	177	177
Use ZE Yard Truck		Hours of use	1,000 hours	291	51
Install Onsite ZE Charging or Fueling Infrastructure	1 vel 5 EVSE Purchase	Number of EVSE purchased	One EVSE purchased	118	118
	Level 4 EVSE Purchase			51	51
	Level 3 EVSE Purchase			26	26
	Level 2 EVSE Purchase			5	5
	2RU Plug EVSE Purchase			3	3
	Begin construction on Level 3, 4, or 5 charger project	First day of construction	One construction project	9	9
	Begin construction on Level 2 charger project			9	9
	Begin construction on TRU Plug project			5	5
	Finalize Level 3, 4, or 5 charger project	The latter of final permit sign off or charger energization	One construction project	59	59
	Finalize Level 2 charger project			9	9
	Finalize TRU Plug project			7	7
	Hydrogen (H_2) Station	3 ily capacity of station in kilograms (kg)	One 700 kg/day station construction project	1,680	1,680
Use Onsite ZE Charging or Fueling Infrastructure	Vehicle Charging	Kilowatt-hours (kWh) of dispensed electricity	165,000 kWh	42	24
	TRU Charging		10,658 kWh	10	3
	H_2 Station Usage	Kg of dispensed H_2	6,152 kg	43	25
Install Onsite Solar Panels	Rooftop	Size of system in kW	100 kW system	23	23
	Carport			27	27
Use Onsite Solar Panels		Energy production in kWh	165,000 kWh	2	2
Install High-Efficiency Filters or Filter Systems in Residences, Schools, Daycares, Hospitals, or Community Centers	Install Stand-Alone System	Number of systems installed	25 systems	55	55
	Install Filters	Number of filters installed	200 filters	51	51

Number: 1 Author: nderricksonSubject: Highlight Date: 12/16/2020 11:04:37 AM
This should be updated to the levels of charging based off of the aforementioned already established charging levels 1- 120V, 2 - 240V, 3 or DCFC - 480+V and perhaps adding a high powered charger as well for Class 7/8 trucks. 22-15

The way points are calculated may be best and fairly determined through a scaled $/kWh charge rate for the different levels of charging and also a scaled cost for the different construction costs for different levels of charging. For example, the point calculation should not disincentivize higher powered, more expensive charging stations.

Number: 2 Author: nderricksonSubject: Highlight Date: 12/16/2020 11:12:50 AM
Can you explain what a "TRU Plug EVSE Purchase" is? 22-16

Number: 3 Author: nderricksonSubject: Highlight Date: 12/16/2020 11:21:57 AM
The hydrogen fueling station is worth much more than points for an EV charging station. Usage points should be scaled so they are equivalent between vehicle miles traveled. 22-17

CENTER FOR COMMUNITY ACTION & ENVIRONMENTAL JUSTICE
EARTHJUSTICE
EAST YARD COMMUNITIES FOR ENVIRONMENTAL JUSTICE
LONG BEACH ALLIANCE FOR CHILDREN WITH ASTHMA
NATURAL RESOURCES DEFENSE COUNCIL
PARTNERSHIP FOR WORKING FAMILIES
SAN PEDRO & PENINSULA HOMEOWNERS COALITION
SIERRA CLUB
THE LOS ANGELES COUNTY ELECTRIC TRUCK & BUS COALITION
WAREHOUSE WORKER RESOURCE CENTER
WEST LONG BEACH ASSOCIATION

February 5, 2021

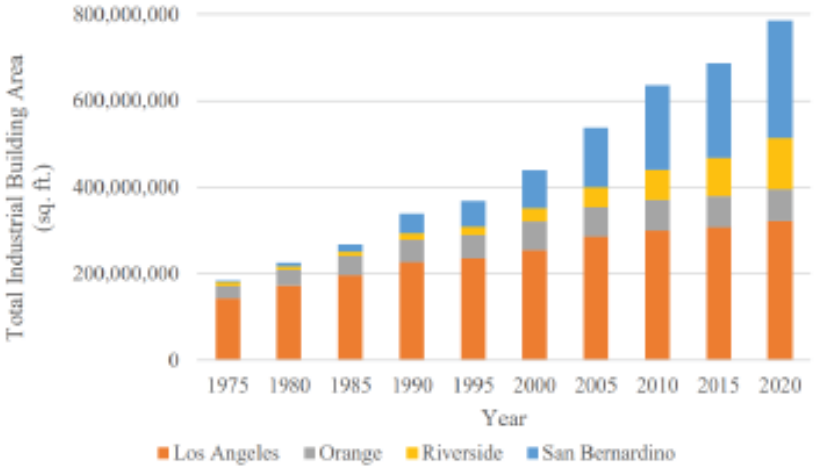
Ian MacMillan
Planning and Rules Manager
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: Comments on the Warehouse Indirect Source Rule (Proposed Rule 2305)

Dear Mr. MacMillan,

On behalf of the undersigned coalition of organizations, we submit these comments on Proposed Rule 2305. We appreciate staff's continued work on the warehouse indirect source rule, but we remain concerned that the current proposal will not meaningfully regulate an industry that has polluted communities for years. As demonstrated in the figure below, the warehouse industry has grown steadily in the South Coast Air Basin in the past two decades,[1] and nearby communities continue to be disproportionately impacted by the polluting trucks visiting these facilities. 23-1

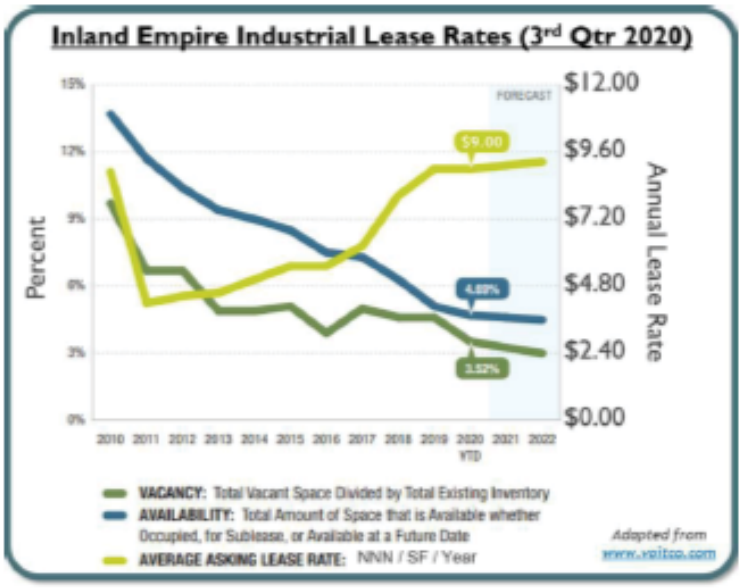
Figure 10: Industrial Building Growth by County



[1] SCAQMD, Preliminary Draft Staff Report, 45.

The ongoing covid-19 pandemic has exacerbated the unacceptable health risks that these frontline communities face every day. Last year, this public health crisis coincided with one of the worst smog seasons in the South Coast Air Basin in decades – with a total of 157 days of ozone pollution levels exceeding state and federal air quality standards.[2]

Meanwhile, the warehouse industry has reported record-breaking profits during the pandemic as consumers increasingly rely on e-commerce. Last year, the San Pedro Bay Ports hit record freight volumes for several months. At the Port of Long Beach, December 2020 was the Port's busiest month in its 110-year history, and 2020 was the Port's "all-time busiest year."[3] This increased port activity has only accelerated the expansion of an already booming warehouse industry, further compounding the health burdens on nearby communities.[4] In the Inland Empire, warehouse vacancy rates have reached their lowest in a decade while lease rates have increased.



A strong warehouse indirect source rule will address these growing disproportionate pollution burdens, provide basic health protections to our communities, and put the South Coast on track to attain federal and state ambient air quality standards. But the Air District must prioritize public health and take into account community needs in the development of this rule.

I. The Air District must increase the proposed stringency in order to meaningfully address public health concerns.

We oppose the current proposed stringency value of 0.0025 WAIRE points/WATT and urge the Air District to evaluate and consider higher stringency values for the final rule. The undersigned 23-2

[2] Tony Barboza, *L.A. began 2020 with a clean-air streak but ended with its worst smog in decades*, Los Angeles Times (Dec. 6, 2020), https://www.latimes.com/california/story/2020-12-06/2020-la-air-quality-southern-california-pollution-analysis.

[3] Port of Long Beach, Port Moves a Record 8.1 Million TEUs in 2020, Jan. 15, 2021, https://www.polb.com/port-info/news-and-press/port-moves-a-record-8-1-million-teus-in-2020-01-15-2021/.

[4] *See* Justin Ho, *As imports boom, warehouses fill up, and businesses face a storage shortage*, Marketplace (Oct. 1, 2020), https://www.marketplace.org/2020/10/01/imports-boom-warehouses-fill-up-businesses-face-storage-shortage-online-shopping-covid19/.

oeganizations have repeatedly asked for a rule that starts with sufficient stringency to proe de eelief e e communities sooner. e

The Air District has edeutefied seeeral factors that e ere taken into considerateon in determining the stringency.[5] We disagree with the agency's approach ef "balancing all factors." Public health concerns e are unequie ocally of greater importance than the financial impaet eo an industry that profits at the expense e of our eommunities' health. As the Air District has acknowledged, the warehouse industry is experiencing e record profies and all-time low vacancies. Despie increasing rents and cargo diverseon, the industry continues to grow in the regeon and e cilities are not choosing to leave the area.[6] The industry can, and e must, se ulder these regulatory costs. A transfoe tion ef the warehouse industry is long ove due, and e publi lth must be the single most important factoe in guiding the stringency of te rule. e

The current range of stringency values, if implemented, is far too low to bring aboe meaningful e change eo warehe e operations.[7] eThe lowest stringency value studied by the eAir District (0.0001) e ould e only reduce,eat a maximum, 1.5 tons per day e f nitrogen oxide emissions and 0.01 eons per day e f diesel e partie ate matter emissions.[8] Due o ehe annual variable and ehase-in schedule, the full stringency would e not even apply to many warehouses for years.[9] These emisseons reductions will not be sufficient e being e relief eo communities living adjaeent to arehouse facelities in the neer future.eWe request that the ageney analyze a stringency value ef 0.0075 WAIRE points per WATT at a minimun. The Air Dietrict's analysis e shows that a stronger rule e ould not result in warehouses leaving the region, and a highee stringency e value is necessary to bring about a teans formation of this industry.e

While we appeeciate that staff has provided the scenario analysis e ol and WAIRE ealculator for e public use, these eools are ina cessible to community members. The caleulatoe, scenario analyses, and e draft staff report do not clarify the specific e tors used to calculate the stringeney value and, ultimately, a e regulated facility's points obligation. It es unclear whether the agency's analysis aecounts for e demograehics in affected eommuni es, data that is critical to edentifying environmental je ce e communities and sensitive receptors located near facilities. We have repeatedly emphasized that facilities e lecated in enviremmental justice communities and neighboring sensetive receptors must eece e a higher e points obligatien or attain zeeo-emissions operations on an accelerated eimeline. The draft propesed rule e does noe account for this, and we request that the Air Distrie include a demographic variable in the points e obligateon calculation.e

23-2

II. e A strong warehouse ISR must prioritize zero-emissions technology. e

As noted in our preve e onment letters, a strong e arehouse indirect source rule must prioritize e zero-emissions tee ology and infrastructure,ethe only solution that will effectively address the air quality e and health inpaets caused by this industry. Yet, the Air Distriet's scenarie analysis continues to e overestimate the emissions reduceions foe near-zero technologies. For example, faeilities earn the same e amount of points foeNZE class 4-7 truck visits and ZE class 4-7 truck visits.[10] This ebscures the real e costs of near-zeeo eece ologiese—efurther investment in naeural gas and oil infrastructure that will e

23-3

[5] Preliminary Draft Staff Report, 6. e
[6] *Id.* at 58. e
[7] SCAQMD, *Warehouse ISR Working Group Presentation* (Dec. e 7, 202e), slides 21-22. e
[8] *Id.* at slide 22.
[9] Preliminary Draft Staff Report, 29.
[10] *Id.* at 97. e

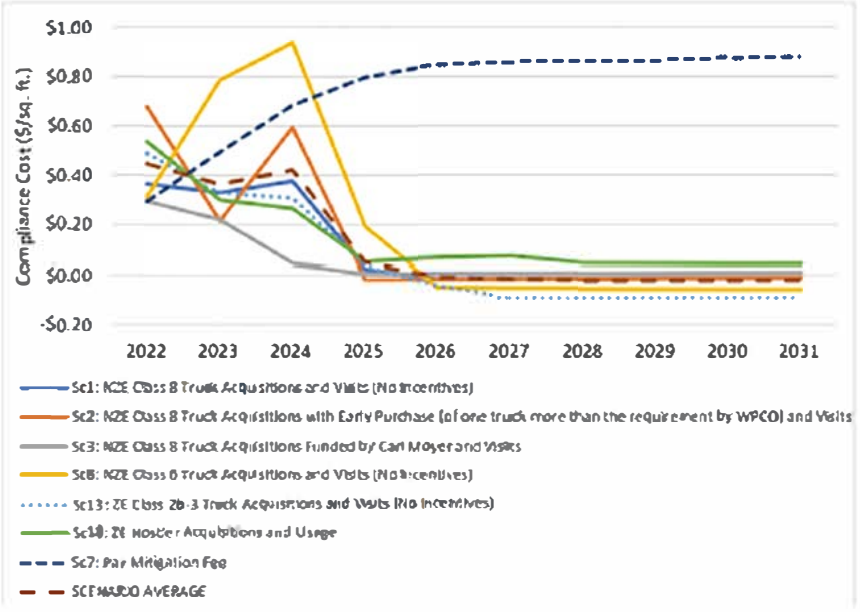
perpetuate harm in frontline communities. We request that the Air District update the WAIRE menu to incentivize investment in zero-emissions technology and infrastructure.

A rule that incentivizes zero-emissions technology will protect the health of our communities and create quality jobs. The transition towards zero-emissions will require the installation of charging infrastructure, on-site solar panels, and the manufacturing of electric vehicles – all of which will lead to meaningful job opportunities in the implementation of cleaner technologies at warehouses. The manufacturing of zero-emission buses and solar panel installation on larger commercial buildings have created and broadened access to unionized jobs with quality wages and benefits for workers. The warehouse indirect source rule can facilitate a similar transformation that will further increase demand for quality jobs in the greening energy, transportation, and manufacturing sectors. The Air District should not waste an opportunity to develop a rule that will lead to significant emissions reductions and create access to good jobs. 23-3 (cont'd)

III. The rule must not allow for a "pay-to-pollute" compliance option.e

We remain concerned about the mitigation fee option as it allows regulated facilities to pay their way into compliance, rather than invest in on-site WAIRE menu items to clean up operations. Although the scenario cost analysis estimates that the mitigation fee will be a more costly option and not frequently used, the agency's projections show that the $1000/point fee remains a cheaper compliance pathway in the initial phases of the rule.[11] 23-4

Figure 14: Potential Bounding Analysis Costs from Truck Acquisition and Subsequent Usage Scenarios



In order to incentivize investment in the WAIRE menu items, we ask that staff consider a higher mitigation fee. In the event that warehouses opt to pay their way into compliance, the Air District should require that these funds are spent in the communities surrounding those facilities.

IV. The Air District should release data on warehouse facilities that is relevant to compliance.

[11] *Id.* at 66.e

In order to ensure proper public engagement, the Air District must make certain information relevant to compliance available to the public. Specifically, we request that the agency release the following data: the number of truck trips to each regulated facility; the number of trucks and tractors serving a warehouse, by truck class and fuel type; the trucking companies servicing the regulated facilities; and the truck routes to and from each facility. 23-5

This information is critical to understanding the impacts of warehouses in nearby communities. There is no legal rationale to withhold this information from the public. Such data does not constitute confidential business information and will be essential for proper enforcement of the rule.

V. We cannot afford further delays of the warehouse indirect source rule.

Finally, the Air District must adopt the warehouse indirect source rule as expeditiously as possible, and no later than April. We appreciate staff's continued work on this critical regulation, but the rule has experienced numerous delays while the freight industry continues to pollute communities living near warehouses. The Air District has the opportunity to adopt a strong and equitable warehouse indirect source rule that will provide significant health benefits to frontline communities. We ask that staff continue to engage with community members so that community needs and concerns can be addressed in the development of this rule. 23-6

We appreciate your consideration of these comments and the staff's work on this important rule. We look forward to continuing to work with the Air District to develop a regulation that prioritizes public health.

Sincerely,

Regina Hsu
Michelle Ghafar
Adrian Martinez
Earthjustice

Ivette Torres
Center for Community Action & Environmental Justice

Taylor Thomas
East Yard Communities for Environmental Justice

Sylvia Betancourt
Long Beach Alliance for Children with Asthma

Heather Kryczka
Natural Resources Defense Council

Kathy Hoang
Partnership for Working Families

Peter M. Warren
San Pedro & Peninsula Homeowners Coalition

Carlo De La Cruz
Sierra Club

Yasmine Agelidis
The Los Angeles County Electric Truck & Bus Coalition

Andrea Vidaurre
Warehouse Worker Resource Center

Theral Golden
West Long Beach Association

cc:

Wayne Nastri
Executive Officer
South Coast Air Quality Management District

Sarah Rees
Assistant Deputy Executive Officer
Planning, Rule Development & Area Sources

Victor Juan
Program Supervisor
South Coast Air Quality Management District

February 16, 2021

South Coast AQMD Board Members, Mobile Source Committee
The Honorable William A. Burke, Ed.D., Chair
The Honorable Sheila Kuehl, Los Angeles County Representative, Vice Chair
The Honorable Lisa Bartlett, Orange County Representative
The Honorable Larry McCallon, Cities of San Bernardino County Representative
The Honorable Manuel Perez, Riverside County Representative
The Honorable Carlos Rodriguez, Cities of Orange County Representative

cc: Matt Miyasato, Ph.D., Deputy Executive Officer
Ian MacMillan, Planning and Rules Manager
(Submitted electronically)

RE: Inclusion of Near-Zero Emission Terminal Tractors Under Proposed Rule 2305 (WAIRE)

Dear Chairman Burke and Members of the South Coast AQMD Board's Mobile Source Committee:

The signatories to this letter represent a broad coalition employing many hundreds of people who live and work throughout Southern California. Our companies and organizations manufacture, sell, service, support, operate and/or provide renewable and traditional fuels for heavy-duty vehicles (HDVs) powered by state-of-the-art, ultra-low-emission engines. These commercially available on- and off-road HDVs – which are certified to CARB's lowest-tier "Optional Low-NOx-Standards" (OLNS) – are fueled by propane or natural gas. As you know, such engines are commonly referred to at the South Coast AQMD as being "Near-Zero Emission" (NZE). All NZE engine types can routinely use renewable low-carbon fuels as "drop-in" replacements for their fossil-fuel versions. The result is that NZE HDVs deliver 90+ percent NOx reductions relative to current heavy-duty engine standards, along with deep greenhouse gas (GHG) reductions when renewably fueled.

We appreciate the opportunity to comment on South Coast AQMD's Proposed Rule (PR) 2305. It appears likely that staff will propose this Indirect Source Rule (ISR) for Board adoption at your April 2021 meeting.

Our coalition of companies and organizations does not oppose the spirit and intent of PR 2305. In fact, we strongly support your efforts to dramatically reduce NOx emissions from HDVs (both on- and off-road) serving large warehouse and distribution centers in the South Coast Air Basin. Our coalition members have made – and will continue to make – major contributions to reducing HDV NOx emissions in the SCAB. 24-1

We are writing to urge you to make a simple, logical, and important modification to the currently defined rule. Specifically, for all the compelling reasons described below, we ask that you direct staff to add NZE terminal tractors (aka yard hostlers, yard tractors, etc.) as a compliance pathway under PR 2305. 24-2

NZE Terminal Tractors Will Provide Highly Cost-Effective NOx Reductions at Warehouse Facilities

We note and appreciate that your staff has embraced NZE on-road trucks as a compliance pathway in drafting PR 2305. Staff has acknowledged that NZE HDVs (regardless of fuel or technology) provide the most cost-effective and expedient means to dramatically reduce (90+ percent) HDV NOx emissions in the SCAB. Most importantly, staff has recognized that the same cost-effective NOx-reduction benefits are achievable from NZE off-road terminal tractors. Unfortunately, PR 2305's draft language does not currently allow NZE terminal tractors as a compliance pathway within the "WAIRE" point system.

In effect, staff appears set on pursuing a specified technology mandate for off-road HDVs under PR 2305. *This diverges from the South Coast AQMD's longstanding practice of, and support for, promulgating emissions-performance requirements to reduce HDV emissions, without unfairly favoring any particular type of HDV fuel/technology*. As has been recognized by Board members and executive management at the District, natural gas and propane fueled HDVs (on- and off-road) are now achieving NOx emission levels as low as the grid-generated emissions that result from charging comparable battery-electric HDV*s*. Yet, the draft rule's current composition disallows compliance with terminal tractors powered by these two types of commercially available NZE engines.

Simply stated, this policy is contrary to the District's urgent mission to restore healthful air quality in the SCAB, and expeditiously achieve ozone attainment. Additionally, it will unnecessarily impose hardship on the entities regulated under the rule. Specifically, if PR 2305 allows only ZE off-road HDVs, it will impose higher infrastructure costs on terminal tractor fleets. This is because the draft rule provides only two compliance options for terminal tractors, as follows: 24-2 (cont'd)

1) Battery-electric terminal tractors are important early-commercial platforms that will work well in many warehouse and distribution center applications. Heavy-duty battery-electric vehicles are very promising for off-road use (including terminal tractors), but adopting facilities will need to overcome significant challenges involving charging infrastructure, site upgrades and permitting.
2) Hydrogen fuel cell tractors are also very promising, although they are several years behind battery electric tractors for commercial maturity. Essentially, they are pre-commercial products in the late stages of R&D. Similar to the case of battery-electric HDVs, facilities seeking to deploy fuel cell HDVs will need to overcome significant challenges associated with fuel and fueling infrastructure. In particular, hydrogen fuel is not yet readily available for use in the transportation sector, especially in HDV applications.

Expanding PR 2305 to allow NZE terminal tractors (regardless of fuel type) will provide additional lower-cost compliance options, for both capital costs and fueling infrastructure. NZE propane and natural gas terminal tractors entail relatively modest incremental capital costs over their baseline terminal tractor counterparts. They are likely to provide lower total cost of ownership (TCO) than either type of ZE platform noted above (Staff's analysis for on-road NZE trucks in Table 9 of the PR 2305 Technical Report acknowledges this). Many warehouses and distribution facilities already have access to propane or natural gas fuel. Propane-fueled NZE terminal tractors can use innovative "pony tank" systems that enable quick tank swaps, with no new infrastructure required.

Board Action is Needed to Support Staff in Modifying PR 2305 for this Simple Change

Unless your Board intervenes to redirect staff, PR 2305 will prevent fleets and facility operators from choosing the most expeditious, lowest total-cost-of-ownership pathway to dramatically reduce NOx (and carcinogenic diesel particulate emissions) from terminal tractors serving large warehouse and distribution centers. PR 2305 will unnecessarily restrict compliance pathways and prescribe a rigid, uneconomic approach that fails to capitalize on 24-3

cost-effective NOx benefits that are readily obtainable from NZE tractors. And as noted, when fueled with drop-in renewable fuels (natural gas or propane), NZE terminal tractors will provide exceptionally low GHG emissions.

Staff clearly needs help from your Board to rectify this situation and improve PR 2305 as a means to rapidly obtain HDV NOx reductions. For many months, our coalition members have engaged with Staff to describe the cost-effective clean-air benefits that can be realized with use of NZE terminal tractors. We have suggested specific (yet modest) changes to PR 2305. To their credit, Staff members have listened to our concerns. We believe Staff genuinely seeks a more diverse, performance-oriented final Rule 2305 that will achieve fast, cost-effective NOx reductions, as strongly needed for timely ozone attainment. Unfortunately, they indicate that any decision to modify PR 2305 language to include NZE terminal tractors must come at the direction of Board members. This is apparently due to intense, sustained pressure on Staff exerted by certain factions demanding the rule contain an exclusionary, "ZE-only" compliance pathway for terminal tractors regardless of the emission and cost-effectiveness advantages provided by NZE terminal tractor platforms. 24-3 (cont d)

Respectfully, we request that you direct Staff to modestly revise PR 2305 to include NZE terminal tractors as compliance pathways. To reiterate, our coalition members support the ***non-exclusive*** use of ZE terminal tractor platforms as ISR compliance pathways. In fact, some of our coalition members are also developing and/or supporting battery-electric and/or hydrogen fuel cell terminal tractor products and technology. Nonetheless, we believe that – for all the important and compelling reasons further discussed herein – the Board should immediately intervene to allow both ZE and NZE terminal tractors. As noted, Staff has already adopted this exact rationale in allowing NZE on-road trucks as compliance pathways under PR 2305.

NZE Off-Road HDVs Are Fully Consistent with Past and Emerging AQMP Control Measures

Below are additional compelling reasons to permit use of NZE terminal tractors for compliance under PR 2305; all are based on the South Coast AQMD's long-standing policies and world-leading technology advancement efforts.

1. For the emerging 2022 Air Quality Management Plan, the District has initiated development of new mobile source strategies that will help achieve SCAB attainment of the 2015 8-hour ozone standard (70 ppb). To support development of these critical 2022 AQMP strategies, the District established "Mobile Source Working Groups" in conjunction with CARB. Notably, draft MOU Elements for the 2022 AQMP emphasize the need to "accelerate Zero Emission (ZE) and Near Zero Emission (NZE) cargo handling equipment (CHE)."[1]
2. South Coast AQMD's Resolution No. 17-2,[2] used for adopting the 2016 AQMP and submitted into the California SIP, includes the following critical statements (emphasis added):

   "WHEREAS, an accelerated deployment of current and emerging near-zero emission natural gas engine technologies will provide significant, cost-effective and near-term benefits to regional and local air quality, energy supply security, and public health;" (Page 4, amended 3/3/17) 24-4

   "BE IT FURTHER RESOLVED, that the mobile source incentive program for heavy-duty vehicles outlined in the 2016 AQMP place priority on the most cost-effective technologies to reach short-term air quality goals such as current and emerging near-zero emission natural gas engine technologies." (Page 10, amended 3/3/17)
3. The 2016 (most-current) AQMP[3] includes nearly 70 individual references to NZE vehicles and equipment. It repeatedly emphasizes the high importance assigned by Staff for rapid, near-term deployment of NZE HDVs to meet ozone attainment goals. Specific examples of such passages in the AQMP include the following (emphasis added):

[1] South Coast Air Quality Management District and California Air Resources Board, "An Overview of CARB's Mobile Source Strategies: 2022 AQMP Mobile Source Working Group, staff presentation, December 16, 2020, http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/presentation-2022-aqmp-mobile-sources-wg-final.pdf?sfvrsn=12.

[2] South Coast AQMD, "Attachment A, Resolution No. 17-2," adopted by the Board, March 3, 2017, aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/resolution.pdf?sfvrsn=6.

[3] South Coast AQMD, "Final 2016 Air Quality Management Plan," March 2017, http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=15

- "More stringent mobile source emission standards are desperately needed to spur further development and production of zero- and near-zero emission technologies." (Preface)
- "Given the fast-approaching deadlines – as early as 2022 and 2023, and given that the majority of the zero and near zero technologies needed for attainment have already or will soon be commercially available, it is now possible to specify the technologies and the implementation pathways to attainment" (Page ES-4)
- "The 2016 AQMP control strategy strongly relies on a transition to zero and near-zero emission technologies in the mobile source sector, including automobiles, transit buses, medium- and heavy-duty trucks, and off-road applications. The plan focuses on existing commercialized technologies and energy sources including their supporting infrastructure, along with newer technologies that are nearing commercialization based on recent demonstration programs and limited test markets. Prioritizing and expanding funding in Environmental Justice (EJ) areas will be sought." (Page ES-5).
- "Additional demonstration and commercialization projects will be crucial to help deploy and reduce costs for zero and near-zero emission technologies. A key element of Plan implementation will be private and public funding to help further the development and deployment of these advanced technologies. Many of the same technologies will address both air quality and climate goals, such as increased energy efficiency and reduced fuel usage." (Page 4-1)
- "The SCAQMD will continue to support technology demonstration projects for both mobile and stationary sources and will work to create new or expanded funding opportunities for earlier deployment of cleaner technologies, thus contributing to a smooth transition to zero and near-zero emission technologies in the mobile and stationary source sectors. The SCAQMD will prioritize distribution of incentive funding in environmental justice (EJ) areas and seek opportunities to expand funding to benefit the most disadvantaged communities." (Page 4-3)
- "Mobile sources such as trucks, locomotives, and cargo handling equipment have technological potential to achieve zero- and near-zero emission levels." (Page 4-8)
- "All technologies and fuels should be able to compete on an equal footing to meet environmental needs. This policy is consistent with the current priority on maximizing emission reductions utilizing zero emission technologies in all applications that are shown to be cost-effective and feasible. In other applications, near-zero technologies remain essential to meet all attainment goals." (Page 4-9)
- "In the longer-term, there is a need to significantly increase the penetration and deployment of near-zero and zero-emission vehicles, greater use of cleaner, renewable fuels (either alternative fuels or new formulations of gasoline and diesel fuels), and additional emission reductions from federal and international sources such as locomotives, ocean-going vessels, and aircraft." (Page 4-23)
- "Lastly, one measure seeks to recognize the criteria pollutant emission reduction benefits of existing incentives programs such as the Carl Moyer Memorial Air Quality Standards Attainment Program and Proposition 1B – Goods Movement Emission Reduction Program. The measures call for greater emission reductions through accelerated turnover of older vehicles to the cleanest vehicles and equipment currently available and increased penetration of commercially-available near-zero and zero-emission technologies through incentives programs in the near-term." (Page 4-24)
- "However, additional research and demonstration are needed to commercialize zero- and near-zero emission technologies for the heavier heavy-duty vehicles (with gross vehicle weight ratings greater than 26,000 pounds)." (Page 4-24)
- "MOB-13 – OFF-ROAD MOBILE SOURCE EMISSION REDUCTION CREDIT GENERATION PROGRAM: This measure seeks to accelerate the early deployment of near-zero and zero-emission off-road equipment through the generation of MSERCs that can be used for purposes of recognizing mobile source emission reductions at facilities affected by proposed AQMP measures MOB-01 through MOB-04 and EGM-01." (Page 4-33)
- "FURTHER DEPLOYMENT OF CLEANER TECHNOLOGIES: OFF-ROAD EQUIPMENT: This measure is designed to achieve further emission reductions for the Basin's attainment needs through a suite of additional actions,

24-4 (cont'd)

including greater penetration of near-zero and zero-emission technologies through incentive programs, and emission benefits associated with the potential for worksite integration and efficiency, as well as connected and autonomous vehicle technologies. These emission reductions will be achieved through a combination of actions to be undertaken by both CARB and the SCAQMD." (Page 4-41)

- "Given the significant NOx emission reductions needed to attain the federal ozone air quality standards by 2023 and 2031, a combination of public funding incentives along with regulatory actions are needed. In the near-term, there is a need to commercialize zero and near-zero on-road trucks and off-road equipment as early as possible." (Page 4-64)
- "Actions to promote ZEVs in these heavy-duty applications are underway and are important to further reduce regional and near-source toxics exposure, especially as it relates to reducing risk from DPM. In the off-road sector, the 2016 AQMP mobile source control strategies stress the need to reflect this same type of transformation to a mix of zero and near-zero technologies operating on renewable fuels." (Page 9-11)
- TABLE 9-3 (2016 AQMP CARB Mobile Source Control Measures and Concurrent Key Toxic Air Contaminants Reduced) includes "Cleaner engine technology transfer from on-road to off-road applications" and "Incentive funding to achieve further deployment of cleanest engine technologies" (Page 9-12)

24-4 (cont'd)

South Coast AQMD is the Leading U.S. Supporter of / Champion for NZE HDVs

For more than three decades, the South Coast AQMD's Technology Advancement / Clean Fuels Program has led the nation (and the world) in providing essential cost-sharing and/or general support to advance progressively lower-emitting HDV technology. In fact, it is largely due to the District's support over the last decade that natural gas and propane engines (manufactured by our coalition members) are certified by CARB today at NZE levels. Similarly, the District's financial and technical support has been instrumental in bringing diesel engine technology to the brink of achieving NZE certification. We thank the South Coast AQMD Board and Staff; without such support, it may not have been possible for our coalition members to achieve these very important milestones.

As documented above, wide-scale deployment of NZE HDV technologies and fuels is critical to the District's overall AQMP control strategy and ability to achieve its air quality goals. If the District now finalizes PR 2305 to exclude NZE terminal tractors, it will be contrary to – and a major blow against – all these successful efforts to develop and deploy NZE HDVs in the SCAB, as strongly needed for ozone attainment. The attached appendix contains specific recent quotes and statements from the District's Clean Fuels program and related technical documents[4] that corroborate strong synergy between developing NZE HDV platforms so they can be subsequently deployed in the SCAB, via regulatory mechanisms and/or incentive programs.

24-5

Conclusions and Requested Actions by the Board

Our coalition of companies and organizations respectfully asks the Board to urgently intervene on PR 2305, by directing staff to allow NZE terminal tractors as compliance pathways. This simple modification – which Staff is ready to implement at your direction – will significantly improve PR 2305's ability to expeditiously achieve its intended NOx reductions. It will provide the regulated community with additional compliance options that are very cost effective for reducing NOx, while also delivering low total cost of ownership. Our recommended action is in full accord with your Board's longstanding fuel-neutral policies to rapidly deploy emerging clean HDV platforms. It will perpetuate and strengthen the decades-long synergy between the District's world-class HDV technology advancement program and your efforts to rapidly deploy the cleanest-available HDV fuel-technology platforms, as they emerge into the marketplace.

24-6

[4] South Coast Air Quality Management District, Board Agenda No. 28, "Approve and Adopt Technology Advancement Office Clean Fuels Program 2019 Annual Report & 2020 Plan Update," March 2020.

If you have any questions about the content of our letter, or if you would like to discuss this important issue with our coalition, please contact Ben Granholm at ben@westernpga.org or Jon Leonard at jon.leonard@gladstein.org.

Sincerely,

Joy Alafia, President and CEO, Western Propane Gas Association
Tom Swenson, P.E., Business Development Manager, Cummins Inc. – Natural Gas Group
Ashley Remillard, Vice President, Legal, Agility Fuel Solutions
Thomas Lawson, President, California Natural Gas Vehicle Coalition
Todd Campbell, Vice President of Public Policy, Clean Energy
Julie Johnson, President, Ted Johnson Propane
Scott Graham, General Manager, Expo Propane
Mike Caldarera, P.E., Sr. Vice President, Regulatory and Technical Affairs, National Propane Gas Association

APPENDIX

- "The South Coast AQMD Clean Fuels Program cost-shares projects to develop and demonstrate zero, near-zero and low emissions clean fuels and advanced technologies to push the state-of-the-technology and promote commercialization and deployment of promising or proven technologies not only for the Basin but Southern California and the nation as well. As noted, these projects are conducted through public-private partnerships with industry, technology developers, academic and research institutes and local, state and federal agencies."
- "The South Coast AQMD continually seeks to support the deployment of lower-emitting technologies. The Clean Fuels Program is shaped by two basic factors: 1) Zero, near-zero and low emission technologies needed to achieve clean air standards in the Basin; and 2) Available funding to support technology development within the constraints imposed by that funding."
- "One function of the Clean Fuels Program is to help expedite the deployment and commercialization of zero, near-zero and low emission technologies and fuels needed to meet the requirements of the AQMP control measures. In many cases, new technologies, although considered "commercially available," require assistance to fully demonstrate the technical viability to end-users and decision-makers."
- "More than ever before, the Clean Fuels Program must both foster and accelerate advancement of transformative transportation, and off-road technologies where possible, with an emphasis on zero and near-zero emissions vehicle and fuel technologies. This is especially true given the region's economic dependence on thriving goods movement, along with the corresponding impact of that industry on environmental justice communities."
- "It is important to note here that South Coast AQMD's Technology Advancement Office (TAO) administers not only the Clean Fuels Program but also the Carl Moyer Program (and other significant incentive programs, such as Proposition 1B-Goods Movement and the Community Air Protection Program). These two programs produce a unique synergy, with the Carl Moyer Program providing the necessary incentives to push market penetration and commercialization of zero and near-zero emission technologies developed and demonstrated by the Clean Fuels Program. This synergy enables the South Coast AQMD to act as a leader in both technology development and commercialization efforts targeting reduction of criteria pollutants and GHG reduction co-benefits."
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- "Nonetheless, while the state and federal governments have continued to turn a great deal of their attention to climate change, South Coast AQMD has remained committed to developing, demonstrating and commercializing zero and near-zero emission technologies. Fortunately, many, if not the majority, of technology sectors that address our need for NOx reductions also garner greenhouse gas (GHG) reductions. Due to these "co-benefits," the South Coast AQMD has been successful in partnering with the state and federal government. Even with the leveraged funds, the challenge for the South Coast AQMD remains the need to identify project or technology opportunities in which its available funding can make a difference in achieving progressively cleaner air in the Basin."
- "Although both announcements (separate initiatives on clean HDVs by EPA and CARB) are welcome news, the timing is too late to help the South Coast AQMD meet its 2023 federal attainment deadline. So, despite progress, commercialization and deployment of near-zero engines are still needed.
- "Because of Assembly Bill (AB) 6171, which requires reduced exposure to communities most impacted by air pollution, TAO conducted additional outreach to AB 617 communities regarding available zero and near-zero emission technologies, as well as the incentives to accelerate those cleaner technologies into their communities.
- SCAQMD's Clean Fuels Plan 2020 Update includes projects to develop, demonstrate and commercialize a variety of technologies to meet emission control needs identified in the 2016 AQMP. Emphasis is on getting significant near-term reductions "using near-zero and zero emission technologies," including "for high horsepower applications."
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February 8, 2021

South Coast AQMD Board Members, Mobile Source Committee
The Honorable William A. Burke, Ed.D., Chair
The Honorable Lisa Bartlett, Orange County Representative
The Honorable Larry McCallon, Cities of San Bernardino County Representative
The Honorable Manuel Perez, Riverside County Representative
The Honorable Carlos Rodriguez, Cities of Orange County Representative
(Submitted electronically)

RE: Inclusion of Near-Zero Emission Terminal Tractors Under Proposed Rule 2305 (WAIRE)

Dear Chairman Burke and Members of the South Coast AQMD Board's Mobile Source Committee:

The signatories to this letter represent a broad coalition employing many hundreds of people who live and work throughout Southern California. Our companies and organizations manufacture, sell, service, support, operate and/or provide renewable and traditional fuels for heavy-duty vehicles (HDVs) powered by state-of-the-art, ultra-low-emission engines. These commercially available on- and off-road HDVs – which are certified to CARB's lowest-tier "Optional Low-NOx-Standards" (OLNS) – are fueled by propane or natural gas. As you know, such engines are commonly referred to at the South Coast AQMD as being "Near-Zero Emission" (NZE). It appears that NZE diesel engines may also be on the cusp of commercialization. All three NZE engine types can routinely use renewable low-carbon fuels as "drop-in" replacements for their fossil-fuel versions. The result is that NZE HDVs deliver 90+ percent NOx reductions relative to current heavy-duty engine standards, along with deep greenhouse gas (GHG) reductions when renewably fueled.

We appreciate the opportunity to comment on South Coast AQMD's Proposed Rule (PR) 2305. It appears likely that staff will propose this Indirect Source Rule (ISR) for Board adoption at your April 2021 meeting. Subsequent to that, staff will initially introduce PR 2305 to the Board at its Mobile Source Committee meeting (expected to be no later than March 2021).

Our coalition of companies and organizations does not oppose the spirit and intent of PR 2305. In fact, we strongly support your efforts to dramatically reduce NOx emissions from HDVs (both on- and off-road) serving large warehouse and distribution centers in the South Coast Air Basin. Our coalition members have made – and will continue to make – major contributions to reducing HDV NOx emissions in the SCAB. 25-1

We are writing to urge you to make a simple, logical and important modification to the currently defined rule. Specifically, for all the compelling reasons described below, we ask that you direct staff to add NZE terminal tractors (aka yard hostlers, yard tractors, etc.) as a compliance pathway under PR 2305. 25-2

NZE Terminal Tractors Will Provide Highly Cost-Effective NOx Reductions at Warehouse Facilities

We note and appreciate that your staff has embraced NZE on-road trucks as a compliance pathway in drafting PR 2305. Staff has acknowledged that NZE HDVs (regardless of fuel or technology) provide the most cost-effective and expedient means to dramatically reduce (90+ percent) HDV NOx emissions in the SCAB. Most importantly, staff has recognized that the same cost-effective NOx-reduction benefits are achievable from NZE off-road terminal tractors. Unfortunately, PR 2305's draft language does not currently allow NZE terminal tractors as a compliance pathway within the "WAIRE" point system.

In effect, staff appears set on pursuing a specified technology mandate for off-road HDVs under PR 2305. *This diverges from the South Coast AQMD's longstanding practice of, and support for, promulgating emissions-performance requirements to reduce HDV emissions, without unfairly favoring any particular type of HDV fuel/technology*. As has been recognized by Board members and executive management at the District, natural gas and propane fueled HDVs (on- and off-road) are now achieving NOx emission levels as low as the grid-generated emissions that result from charging comparable battery-electric HDV*s*. Yet, the draft rule's current composition disallows compliance with terminal tractors powered by these two types of commercially available NZE engines. Additionally, PR 2305 as currently drafted will disallow potential use of NZE diesel terminal tractors, when and if they are commercialized. 25-2 (cont'd)

Simply stated, this policy is contrary to the District's urgent mission to restore healthful air quality in the SCAB, and expeditiously achieve ozone attainment. Additionally, it will unnecessarily impose hardship on the entities regulated under the rule. Specifically, if PR 2305 allows only ZE off-road HDVs, it will impose higher infrastructure costs on terminal tractor fleets. This is because the draft rule provides only two compliance options for terminal tractors, as follows:

1) Battery-electric terminal tractors are important early-commercial platforms that will work well in many warehouse and distribution center applications. Heavy-duty battery-electric vehicles are very promising for off-road use (including terminal tractors), but adopting facilities will need to overcome significant challenges involving charging infrastructure, site upgrades and permitting.

2) Hydrogen fuel cell tractors are also very promising, although they are several years behind battery electric tractors for commercial maturity. Essentially, they are pre-commercial products in the late stages of R&D. Similar to the case of battery-electric HDVs, facilities seeking to deploy fuel cell HDVs will need to overcome significant challenges associated with fuel and fueling infrastructure. In particular, hydrogen fuel is not yet readily available for use in the transportation sector, especially in HDV applications.

Expanding PR 2305 to allow NZE terminal tractors (regardless of fuel type) will provide additional lower-cost compliance options, for both capital costs and fueling infrastructure. NZE propane and natural gas terminal tractors entail relatively modest incremental capital costs over their baseline terminal tractor counterparts. They are likely to provide lower total cost of ownership (TCO) than either type of ZE platform noted above (Staff's analysis of on-road NZE trucks for PR 2305 acknowledges this). Many warehouses and distribution facilities already have access to propane or natural gas fuel. Propane-fueled NZE terminal tractors can use innovative "pony tank" systems that enable quick tank swaps, with no new infrastructure required.

Board Action is Needed to Support Staff in Modifying PR 2305 for this Simple Change

Unless your Board intervenes to redirect staff, PR 2305 will prevent fleets and facility operators from choosing the most expeditious, lowest total-cost-of-ownership pathway to dramatically reduce NOx (and carcinogenic diesel particulate emissions) from terminal tractors serving large warehouse and distribution centers. PR 2305 will unnecessarily restrict compliance pathways and prescribe a rigid, 25-3

uneconomic approach that fails to capitalize on cost-effective NOx benefits that are readily obtainable from NZE tractors. And as noted, when fueled with drop-in renewable fuels (natural gas, propane or diesel), NZE terminal tractors will provide exceptionally low GHG emissions.

Staff clearly needs help from your Board to rectify this situation, and improve PR 2305 as a means to rapidly obtain HDV NOx reductions. For many months, our coalition members have engaged with Staff to describe the cost-effective clean-air benefits that can be realized with use of NZE terminal tractors. We have suggested specific (yet modest) changes to PR 2305. To their credit, Staff members have listened to our concerns. We believe Staff genuinely seeks a more diverse, performance-oriented final Rule 2305 that will achieve fast, cost-effective NOx reductions, as strongly needed for timely ozone attainment. Unfortunately, they indicate that any decision to modify PR 2305 language to include NZE terminal tractors must come at the direction of Board members. This is apparently due to intense, sustained pressure on Staff exerted by certain factions demanding the rule contain an exclusionary, "ZE-only" compliance pathway for terminal tractors regardless of the emission and cost-effectiveness advantages provided by NZE terminal tractor platforms. 25-3 (cont'd)

Respectfully, we request that you direct Staff to modestly revise PR 2305 to include NZE terminal tractors as compliance pathways. To reiterate, our coalition members support the ***non-exclusive*** use of ZE terminal tractor platforms as ISR compliance pathways. In fact, some of our coalition members are also developing and/or supporting battery-electric and/or hydrogen fuel cell terminal tractor products and technology. Nonetheless, we believe that – for all the important and compelling reasons further discussed herein – the Board should immediately intervene to allow both ZE and NZE terminal tractors. As noted, Staff has already adopted this exact rationale in allowing NZE on-road trucks as compliance pathways under PR 2305.

NZE Off-Road HDVs Are Fully Consistent with Past and Emerging AQMP Control Measures

Below are additional compelling reasons to permit use of NZE terminal tractors for compliance under PR 2305; all are based on the South Coast AQMD's long-standing policies and world-leading technology advancement efforts.

1. For the emerging 2022 Air Quality Management Plan, the District has initiated development of new mobile source strategies that will help achieve SCAB attainment of the 2015 8-hour ozone standard (70 ppb). To support development of these critical 2022 AQMP strategies, the District established "Mobile Source Working Groups" in conjunction with CARB. Notably, draft MOU Elements for the 2022 AQMP emphasize the need to "accelerate Zero Emission (ZE) and Near Zero Emission (NZE) cargo handling equipment (CHE)."[1] 25-4

2. South Coast AQMD's Resolution No. 17-2,[2] used for adopting the 2016 AQMP and submitted into the California SIP, includes the following critical statements (emphasis added):

   "WHEREAS, an accelerated deployment of current and emerging near-zero emission natural gas engine technologies will provide significant, cost-effective and near-term benefits to regional and local air quality, energy supply security, and public health;" (Page 4, amended 3/3/17)
   "BE IT FURTHER RESOLVED, that the mobile source incentive program for heavy-duty vehicles outlined in the 2016 AQMP place priority on the most cost-effective technologies to reach short-term air quality goals such as current and emerging near-zero emission natural gas engine technologies." (Page 10, amended 3/3/17)

[1] South Coast Air Quality Management District and California Air Resources Board, "An Overview of CARB's Mobile Source Strategies: 2022 AQMP Mobile Source Working Group, staff presentation, December 16, 2020, http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/presentation-2022-aqmp-mobile-sources-wg-final.pdf?sfvrsn=12.
[2] South Coast AQMD, "Attachment A, Resolution No. 17-2," adopted by the Board, March 3, 2017, aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/resolution.pdf?sfvrsn=6.

3. The 2016 (most-current) AQMP[3] includes nearly 70 individual references to NZE vehicles and equipment. It repeatedly emphasizes the high importance assigned by Staff for rapid, near-term deployment of NZE HDVs to meet ozone attainment goals. Specific examples of such passages in the AQMP include the following (emphasis added):

   - "More stringent mobile source emission standards are desperately needed to spur further development and production of zero- and near-zero emission technologies." (Preface)

   - "Given the fast-approaching deadlines – as early as 2022 and 2023, and given that the majority of the zero and near zero technologies needed for attainment have already or will soon be commercially available, it is now possible to specify the technologies and the implementation pathways to attainment" (Page ES-4)

   - "The 2016 AQMP control strategy strongly relies on a transition to zero and near-zero emission technologies in the mobile source sector, including automobiles, transit buses, medium- and heavy-duty trucks, and off-road applications. The plan focuses on existing commercialized technologies and energy sources including their supporting infrastructure, along with newer technologies that are nearing commercialization based on recent demonstration programs and limited test markets. Prioritizing and expanding funding in Environmental Justice (EJ) areas will be sought." (Page ES-5).

   - "Additional demonstration and commercialization projects will be crucial to help deploy and reduce costs for zero and near-zero emission technologies. A key element of Plan implementation will be private and public funding to help further the development and deployment of these advanced technologies. Many of the same technologies will address both air quality and climate goals, such as increased energy efficiency and reduced fuel usage." (Page 4-1)

   - "The SCAQMD will continue to support technology demonstration projects for both mobile and stationary sources and will work to create new or expanded funding opportunities for earlier deployment of cleaner technologies, thus contributing to a smooth transition to zero and near-zero emission technologies in the mobile and stationary source sectors. The SCAQMD will prioritize distribution of incentive funding in environmental justice (EJ) areas and seek opportunities to expand funding to benefit the most disadvantaged communities." (Page 4-3)

   - "Mobile sources such as trucks, locomotives, and cargo handling equipment have technological potential to achieve zero- and near-zero emission levels." (Page 4-8)

   - "All technologies and fuels should be able to compete on an equal footing to meet environmental needs. This policy is consistent with the current priority on maximizing emission reductions utilizing zero emission technologies in all applications that are shown to be cost-effective and feasible. In other applications, near-zero technologies remain essential to meet all attainment goals." (Page 4-9)

   - "In the longer-term, there is a need to significantly increase the penetration and deployment of near-zero and zero-emission vehicles, greater use of cleaner, renewable fuels (either alternative fuels or new formulations of gasoline and diesel fuels), and additional emission reductions from federal and international sources such as locomotives, ocean-going vessels, and aircraft." (Page 4-23)

25-4 (cont'd)

[3] South Coast AQMD, "Final 2016 Air Quality Management Plan," March 2017, http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=15

- "Lastly, one measure seeks to recognize the criteria pollutant emission reduction benefits of existing incentives programs such as the Carl Moyer Memorial Air Quality Standards Attainment Program and Proposition 1B – Goods Movement Emission Reduction Program. The measures call for greater emission reductions through accelerated turnover of older vehicles to the cleanest vehicles and equipment currently available and increased penetration of commercially-available near-zero and zero-emission technologies through incentives programs in the near-term." (Page 4-24)
- "However, additional research and demonstration are needed to commercialize zero- and near-zero emission technologies for the heavier heavy-duty vehicles (with gross vehicle weight ratings greater than 26,000 pounds)." (Page 4-24)
- "MOB-13 – OFF-ROAD MOBILE SOURCE EMISSION REDUCTION CREDIT GENERATION PROGRAM: This measure seeks to accelerate the early deployment of near-zero and zero-emission off-road equipment through the generation of MSERCs that can be used for purposes of recognizing mobile source emission reductions at facilities affected by proposed AQMP measures MOB-01 through MOB-04 and EGM-01." (Page 4-33)
- "FURTHER DEPLOYMENT OF CLEANER TECHNOLOGIES: OFF-ROAD EQUIPMENT: This measure is designed to achieve further emission reductions for the Basin's attainment needs through a suite of additional actions, including greater penetration of near-zero and zero-emission technologies through incentive programs, and emission benefits associated with the potential for worksite integration and efficiency, as well as connected and autonomous vehicle technologies. These emission reductions will be achieved through a combination of actions to be undertaken by both CARB and the SCAQMD." (Page 4-41)
- "Given the significant NOx emission reductions needed to attain the federal ozone air quality standards by 2023 and 2031, a combination of public funding incentives along with regulatory actions are needed. In the near-term, there is a need to commercialize zero and near-zero on-road trucks and off-road equipment as early as possible." (Page 4-64)
- "Actions to promote ZEVs in these heavy-duty applications are underway and are important to further reduce regional and near-source toxics exposure, especially as it relates to reducing risk from DPM. In the off-road sector, the 2016 AQMP mobile source control strategies stress the need to reflect this same type of transformation to a mix of zero and near-zero technologies operating on renewable fuels." (Page 9-11)
- TABLE 9-3 (2016 AQMP CARB Mobile Source Control Measures and Concurrent Key Toxic Air Contaminants Reduced) includes "Cleaner engine technology transfer from on-road to off-road applications" and "Incentive funding to achieve further deployment of cleanest engine technologies" (Page 9-12)

25-4 (cont'd)

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Our coalition of companies and organizations respectfully asks the Board to urgently intervene on PR 2305, by directing staff to allow NZE terminal tractors as compliance pathways. This simple modification – which Staff is ready to implement at your direction – will significantly improve PR 2305's ability to expeditiously achieve its intended NOx reductions. It will provide the regulated community with additional compliance options that are very cost effective for reducing NOx, while also delivering low total cost of ownership. Our recommended action is in full accord with your Board's longstanding fuel-neutral policies to rapidly deploy emerging clean HDV platforms. It will perpetuate and strengthen the decades-long synergy between the District's world-class HDV technology advancement program and your efforts to rapidly deploy the cleanest-available HDV fuel-technology platforms, as they emerge into the market place.

25-6

If you have any questions about the content of our letter, or if you would like to discuss this important issue with representatives from our coalition, please contact Ben Granholm at ben@westernpga.org or Jon Leonard at jon.leonard@gladstein.org.

Sincerely,



Thomas E. Knauff
CEO

Rail Cents Enterprises, Inc.

P.O. Box 235
Wallingford, PA
19086

phone: 610/565-8458
fax: 610/565-3617
E-mail: tom.erickson@railcents.com

January 20, 2021

Philip M. Fine, Ph.D.
Deputy Executive Officer
South Coast Air Quality Management District
Office of Planning, Rule Development & Area Sources
21865 Copley Drive
Diamond Bar, CA 91765

Dear Dr. Fine:

California leads the nation in environmental statutes, and the South Coast AQMD leads California. Your Proposed Rule 2305, the Warehouse Indirect Source Rule, is a good example. However, it has a glaring omission. It fails to foresee the greatest potential weapon in combating damage from urban trucks—railroads. The pick-up and drop-off of large-lot shipments in urban areas by rail sidings could greatly reduce air pollution, road congestion, and road accidents, as well as cut transportation costs. The fact that the large railroads do not yet themselves realize the vast sea of revenue potential from urban sidings only adds to the imperative for regulations that monetize the environmental, economic, and aesthetic advantages of railroad rights-of-way. 27-1

In other ways the South Coast AQMD has already been a leader in reducing pollution from locomotives with its support of the Pacific Harbor Line. You are administering a grant from the Carl Moyer Program to convert the last sixteen PHL locomotives from Tier 2 to Tier 3 emissions standards. PHL has also been working with Progress Rail to lease its Tier 4 switching locomotive and its zero-emission battery locomotive. Your neighbor, the San Joaquin Valley Air Pollution Control District, is administering a $22.6 million grant from the Near Zero-Emission Board so that BNSF can test Wabtec's zero-emission battery-powered linehaul locomotives. 27-2

The Warehouse Indirect Source Rule should encourage the use of rail sidings to service the warehouse of the future. The reliability of railroad linehaul service has been recently revolutionized by Precision Scheduled Railroading, and it would be a short step to extend a high degree of reliability to switching service at the customer's private siding. Specifically, we would propose that Table 3 to Proposed Rule 2305 be amended so that WAIRE Points are awarded for each carload shipped or received (a boxcar generally carries 120,000-to-180,000 lbs. of lading) in accordance with the locomotive emissions standard met by the serving engine—a rising scale from Tier 1 to Tier 4 to a zero-emission battery-powered switching locomotive. 27-3

Railroads can help cities not just with moving people, but also with urban freight and the integration of environmentally-friendly urban industrial and warehouse jobs and corporate taxes.

Sincerely,

Tom Erickson

Thomas F. Erickson, Jr.
Proprietor

cc: William A. Burke, Ed.D., Chair, South Coast AQMD Governing Board, c/o Marie Patrick
Mr. Ben Benoit, Vice Chair, South Coast AQMD Governing Board, Wildomar, CA
Mr. Wayne Nastri, Executive Officer, South Coast AQMD, Diamond Bar, CA
Mr. Craig Pedersen, Chair Supervisor, San Joaquin Valley APCD, Hanford, CA
Mr. Samir Sheikh, Executive Director, San Joaquin Valley APCD, Fresno, CA
Mr. Otis Cliatt II, President, Pacific Harbor Line, Wilmington, CA

From: Tom Erickson [mailto:railcents@comcast.net]
Sent: Friday, February 19, 2021 12:03 PM
To: 'VJuan@aqmd.gov'; 'CDawson@aqmd.gov'; 'FShirmohammadi@aqmd.gov'; 'PYuen@aqmd.gov'
Cc: Michael Sussman
Subject: Warehouse Indirect Source Rule actions

Victor, Caitlin, Farimah, and Priscilla –

Thank you for your time yesterday during our Zoom call about WAIRE points that the South Coast Air Quality Management District proposes to award to warehouses that take specific actions to comply with new requirements for pollution abatement in your 4-county area. I hope to have tickled your interest in the huge potential for railroads to help reduce pollution while simultaneously relieving urban road congestion, accidents, and wear. 27-4

It is not often that our work can lead to groundbreaking improvements. The rest of the country, if not world, will be watching and learning from your efforts to monetize pollution abatement at the level of the individual warehouse. You can plant a seed with enormous positive repercussions by including the use of rail delivery and rail electrification initiatives into your incentive program.

Why do this?

- Because steel-wheel-on-steel-rail requires ¼ of the energy to do the same work as rubber-tire-on-pavement.
- Because it is only fair to reward rail electrification on the same basis as truck electrification.
- Because railroads need incentives to pursue emission reduction in locomotives.
- Because railroads need talking points to solicit warehouse business.

27-5

More specifically, we propose that lines be added to Table 3 in Proposed Rule 2305 as follows:

- Column 1—WAIRE Menu Item: "Use rail sidetrack"
- Column 2—WAIRE Menu Sub-item: "Switched by Tier 1 or 2 Locomotive" or "Switched by Tier 3 or 4 Locomotive" or "Switched by All-electric Locomotive"
- Column 3—Reporting Metric: Number of Cars (with higher points awarded for successive levels in Column 2)

27-6

I have copied Michael Sussman, Chairman & CEO of Strategic Rail Finance, since he brought your warehouse initiative to my attention and since he masterminded the 2020 update to Nevada's State Rail Plan referenced under separate cover. 27-7

Regards, Tom Erickson, Proprietor, Rail Cents Enterprises, PA office: 610-565-8458

P.S. Would appreciate being advised of your individual titles and whether progress has been made in proposing point amounts for Columns 4, 5, and 6 of Table 3—WAIRE menu.

EARTHJUSTICE

February 19, 2021

Chair Burke and Members of the Mobile Source Committee
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: Item No. 1 – Update on Proposed Rule 2305 Warehouse Indirect Source Rule

Dear Chair Burke and Members of the Mobile Source Committee:

On behalf of Earthjustice, we submit these comments on the warehouse indirect source rule. Earthjustice is working with a broad coalition that includes the communities living and working adjacent to warehouses, who continue to be disproportionately harmed by the freight industry every single day. We appreciate the Air District staff's continued work on the warehouse indirect source rule and request that the agency move expeditiously in the development and adoption of a strengthened regulation that focuses on zero-emissions. 28-1

The covid-19 pandemic has exacerbated health impacts to communities in the region just as we had one of the worst smog season in decades. Warehouses and ports have been profiting – and polluting – more due to consumers' increased reliance on e-commerce,[1] further compounding existing health risks in nearby communities. While those with ownership stakes in the freight system have profited handsomely, communities, particularly low-income communities and communities of color, have suffered the brunt of the air pollution harms. 28-2

Proposed Rule 2305 will mean significant benefits to our region in reduced smog-forming emissions and the need to put people to work to clean up warehouse pollution through retrofitting warehouses with clean transportation and clean energy resources. But, the rule remains too weak, and it should be at least tripled in strength to provide more emissions reductions. Moreover, we recommend the Air District make sure maximum credit is provided for zero-emission technologies and reject efforts by the natural gas and propane industries to use this rule to further expand their infrastructure. 28-3

[1] *See* Justin Ho, *As imports boom, warehouses fill up, and businesses face a storage shortage,* Marketplace (Oct. 1, 2020), https://www.marketplace.org/2020/10/01/imports-boom-warehouses-fill-up-businesses-face-storage-shortage-online-shopping-covid19/.

CALIFORNIA OFFICE 707 WILSHIRE BLVD., SUITE 4300 LOS ANGELES, CA 90017

T: 213.766.1059 F: 213.403.4822 CAOFFICE@EARTHJUSTICE.ORG WWW.EARTHJUSTICE.ORG

We appreciate your consideration of these comments, and the staff's hard work on this important rule. We look forward to working with the Governing Board to finally adopt this rule that has been such a vitally important one. 28-4

Sincerely,



Adrian Martinez
Regina Hsu
Michelle Ghafar
Earthjustice

cc:

Wayne Nastri
Executive Officer

Sarah Rees
Deputy Executive Officer

Ian MacMillan
Planning and Rules Manager
Mobile Sources/ISR

Robert Redford
CONSERVANCY
for Southern California Sustainability
PITZER COLLEGE

Susan A. Phillips
Interim Director
Robert Redford Conservancy for Southern California Sustainability
susan_phillips@pitzer.edu | 323-899-7862
1050 North Mills Avenue | Claremont, CA 91711-6101

February 17, 2021

AT N:
Clerk of the Board, clerkofboard@aqmd.gov
Wayne Nastri, wnastri@aqmd.gov
Sarah Reese, SRees@aqmd.gov
Ian Macmillan, imacmillan@aqmd.gov
CC: Yassi Kevezade, yassi.kavezade@sierraclub.org

To the Governing Board of the South Coast Air Quality Management District and Senior Staff:

The Robert Redford Conservancy for Southern California Sustainability aims to increase socio-ecological justice and sustainability in our surrounding communities and beyond. We support projects that bolster multiple and interconnected systems (ecological, human, political, economic and cultural), and we foster collaboration and leadership for socio-ecological justice and sustainability. 29-1

We applaud the SCAQMD for its role in inviting community input regarding the impact of warehouses on life and health in Southern California. We believe that action must be taken now to combat climate change and solve the air quality issues of southern California. These environmental crises harm residents in our region every day. As we continue to contend with the ongoing COVID-19 pandemic, essential workers and their families - particularly in the logistics industry - are put at even greater risk due to unsafe work conditions and worsening air quality. Our workers deserve higher workplace standards so that they are able to breathe safely and power their business without creating harmful air pollution. 29-2

To date, the warehouse industry continues to operate without being subject to proper regulations, putting workers and communities at risk every day. We at the Robert Redford Conservancy believe that the **Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program Fees for Rule 2305** is an important rule that will stop this abuse in the goods movement sector. 29-3

The logistics industry is here to stay because of our coastal and inland port communities, and we must work together to clean up warehouses. The Warehouse Indirect Source Rule will be critical to holding these facilities accountable. We implore the South Coast AQMD to pass a rule that is strong enough to protect our communities' health and achieve broader climate benefits at the same time. 29-4

Warehouses have spewed toxic air pollution in nearby communities for years. A strong mandatory program, like the warehouse indirect source rule, is necessary to transform this industry. But to effectively clean up the warehouse industry, the rule must be stringent enough so that warehouses actually take the actions listed in the WAIRE menu to clean up their operations. This would require a stringency value of at least 0.0075. In addition, this rule should not simply be a "pay-to-pollute" scheme. The purpose of this rule is to reduce air pollution from 29-5

this industry and a low mitigation fee of $1000 per point may lead to warehouses simply paying to comply. 29-5 (cont'd)

We also believe that warehouses must move towards zero emission technology and the warehouse indirect source rule should incentivize this shift. This will provide air quality benefits and a just transition that will create access to quality jobs by increasing demand for labor as the industry begins to implement zero emission technologies. These job opportunities have been proven to provide quality wages and benefits for workers, unlike many temporary low-wage warehouse jobs. 29-6

Part of our mission at the Conservancy is to promote environmental justice in the Inland Empire. Our support of a stringent Warehouse Indirect Source Rule is an integral step toward that goal. We hope the Board will pass a strong warehouse indirect source rule that serves public health, supports a new green economy, and provides regional air quality benefits. 29-7

Sincerely,



Susan A. Phillips
Professor of Environmental Analysis

Origin Engines™
2915 Cherry Ave • Kearney, NE 68847 • Phone 877-667-6360
Info@OriginEngines.com

February 18, 2021

South Coast AQMD Board Members, Mobile Source Committee

RE: Inclusion of Near-Zero Emission Terminal Tractors Under Proposed Rule 2305 (WAIRE)

Dear Chairman Burke and Members of the South Coast AQMD Board's Mobile Source Committee:

Origin Engines, by means of this letter, wish to endorse and support including that both on-road and off-road vehicles be included in the warehouse indirect source rule. 30-1

It is Origin Engines understanding that "The SCAQMD warehouse indirect source rule includes on road Near Zero Emissions vehicles - Nat Gas / Propane but excludes Near Zero for off-road. The only option for off-road is electric. The SCAQMD staff understand that Near Zero Emissions (Nat Gas / Propane) are the most cost-effective alternative for getting the NOx emissions reductions they need today. Yet the staff has not included NZE in the source rule for off-road applications. 30-2

Origin Engines has a history of developing natural gas and propane engines for use in off-road applications and look forward to the future where "Near Zero Emission Vehicles- Natural Gas / Propane" can be included for use. 30-3

Best Regards,

Shawn Sterling

Shawn Sterling
Chief Customer Officer
Origin Engines

The Chamber
Long Beach Area Chamber of Commerce

February 22, 2021

Ian MacMillan
Victor Juan
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178
Sent Via Email: imacmillan@aqmd.gov / vjuan@aqmd.gov

Subject: Comments on Proposed Rule 2305 (Warehouse Indirect Source Rule

Dear Mr. MacMillan:

The Long Beach Area Chamber of Commerce officially opposes the adoption of Rule 2305 (Indirect Source Rule . A significant portion of our membership is involved in the support and development of distribution warehouses that are integral to the Southern California logistics industry. The logistics industry plays a crucial role in the response to the COVID-19 pandemic—not only in the distribution of medical supplies, vaccines, and equipment but also in delivering goods to a public that has become increasingly dependent on e-commerce. 31-1

We believe the District's proposed ISR is a misguided policy during the COVID-19 pandemic. The District is pursuing a regulation targeting a sector that serves as a lifeline to our region and the nation and is deemed essential by federal and state governments. Under the current draft rule, reporting obligations begin only 60 days from rule adoption. The substantive WAIRE Points obligations will commence as soon as July 2021. 31-2

The Long Beach Area Chamber of Commerce has the following comments in response to the District's Proposed Rule 2305 (Warehouse Indirect Source Rule :

1. This rule would impose additional/permanent costs on warehouses of approximately $.90 per square foot. This extra cost would amount to targeting a specific essential industry with $1 billion in annual fees during the worst possible time and while responding to the pandemic's challenges on behalf of our nation. 31-3

2. It is not feasible to comply with the ISR due to the following:

    a) The proposed rule requires warehouses to control truck fleets and decrease truck emissions. Yet, warehouse operators are not able to accomplish this task.
    b) Warehouses have no control over how truck engines are manufactured.
    c) Warehouses do not own truck fleets, nor do they control what type of trucks shipping companies purchase.
    d) Warehouse operators do not control which trucks come to warehouses, when they arrive, where they come from, or any other variables related to truck trips. 31-4

3. The technology is not available to accomplish items on the WAIRE menu. For example, there are no heavy-duty electric trucks available that are 100% viable from a technology and/or economically reasonable standard. 31-5

4. Warehouses have been deemed to be essential businesses by the State for important reasons including: 31-6

    a) The approximately 18 million people who live in Southern California rely on warehouses as an integral part of the goods movement system to get them the items they need to survive, like food, medical supplies, clothes etc.

5. This rule creates tremendous uncertainty in the economy as the full negative impact of this ISR is not known.

    a) Uncertainty should not be created in this critical, essential business sector, especially considering the current economic downturn/unemployment crisis associated with the COVID-19 pandemic. 31-7

6. Warehouses provide a broad range of jobs for people of every level of education and skillset. Warehouses and the logistics industry offer jobs that lead to upward mobility. This job creation is a socioeconomic benefit that the proposed ISR's onerous costs would threaten. 31-8

7. The proposed ISR seeks to "indirectly" regulate the trucking industry through the Warehouse industry. The District should publicly explain how it has the jurisdiction/authority to regulate a mobile source that is such an integral part of interstate commerce as the trucking industry. 31-9

Thank you for your attention to these comments. Please include these comments as part of the official record for Proposed Rule 2305 (Warehouse Indirect Source Rule so that all SCAQMD Board Members may have the opportunity to review the above. 31-10

Respectfully,



Jeremy Harris
President/CEO
Long Beach Area Chamber of Commerce

cc: Long Beach Vice Mayor/SCAQMD Board Member Rex Richardson
Los Angeles City Councilmember/SCAQMD Board Member Joe Buscaino

4675 MacArthur Court, Suite 800
Newport Beach, California 92660 USA
949.437.1000 fax: 949.612.1894

www.CleanEnergyFuels.com

Todd R. Campbell
Vice President Public Policy & Regulatory Affairs

February 26, 2021

Mr. Victor Juan
Planning, Rule Development and Area Sources
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

RE: Proposed Rule 2305 – Warehouse Indirect Source Rule (ISR)

Chairman Burke and Members of the Board,

Clean Energy greatly appreciates this opportunity to comment on proposed rule 2305 (PR 2305) which establishes a warehouse ISR. With rapidly approaching attainment deadlines, Clean Energy applauds the South Coast AQMD for taking bold action. While this measure alone will not achieve attainment, if done in an effective manner, it could be a significant step towards that goal. Clean Energy is concerned that the current proposal deviates from the stated purpose of the rule, "…to reduce local and regional NOx and PM emissions…", and as a consequence, its effectiveness will be greatly diminished unless amended. 32-1

PR 2305 requires warehouse owners and operators to earn a certain number of WAIRE points in order to comply. Unfortunately, a significant portion of points are awarded based on costs and not actual emissions reductions. This approach is detrimental to the success of the rule for three main reasons: (1) It allows warehouse operators to earn fewer points based on actual emission reductions (2) it disincentivizes the market to reduce costs in the future and (3) it disincentivizes cost-effective emission reduction solutions. 32-2

Points should be awarded based on emission reductions and emission reductions should be treated equally and consistently regardless of how they are achieved. The current WAIRE menu provides more than twice as many points for the acquisition of a Class 8 ZE truck than it does a Class 8 NZE truck, 126 and 55 points, respectively. Both vehicle types provide similar emissions reductions as demonstrated by Table 6 on page 92 of the Preliminary Draft Staff Report:

Table 6. NOx and DPM emission reductions for the Annualized Unitary Metric

WAIRE Menu Item		Annualized Unitary Metric (AUM)	Annualized Regional Emission Reductions (lb NOx/AUM)	Annualized Local Emission Reductions (lb DPM/AUM)
Class 8 Truck	NZE	365 truck visits	0.9 × 180.3 = 162.3	1.3
Class 4-7 Truck	NZE	365 truck visits	0.9 × 29.2 = 26.3	0.1
Class 8 Truck	ZE	365 truck visits	0.247 × 2 × 365 = 180.3	0.002 × 2 × 365 = 1.3
Class 4-7 Truck	ZE	365 truck visits	0.040 × 2 × 365 = 29.2	0.0002 × 2 × 365 = 0.1
Class 2b-3	ZE		0.027 × 2 × 365 = 19.7	0.0003 × 2 × 365 = 0.2

32-3

If only emission reductions were used for awarding points, a Class 8 ZE truck acquisition would receive roughly 10% more points. Shockingly, the current proposal provides ZE trucks with 129% more points than a NZE truck under this category.

In addition to air quality benefits, NZE trucks fueled by renewable natural gas, provide superior greenhouse gas emission reductions while also providing performance that is comparable to diesel in terms of range, power, and refueling time. This cost-effective, viable and equally clean alternative should not be penalized if the District's goal is emissions reductions. 32-3 (cont'd)

Amendment Request: Points for the acquisition and usage of NZE and ZE vehicles should be based solely on the emissions reduction potential of each technology such that an NZE measure achieves 90% of the WAIRE points as a ZE measure. On a NOx reduction basis, near zero emission trucks should deliver the same NOx emissions reductions per AQMD staff and are certified to be 90% cleaner than diesel. 32-3 (cont'd)

Example: Under the current proposal, a class 8 ZE truck acquisition receives 126 WAIRE points, therefore, based on CARB's 90 percent reduction certification of a low NOx engine, a class 8 NZE truck should receive 113 WAIRE points, not 55 points as currently proposed.

Discrimination against cost-effective solutions in the proposed rule is further illustrated by the exclusion of NZE yard trucks from earning WAIRE points. NZE yard trucks should be included as an approved activity for purposes of not only equity but also flexibility for warehouse operators. These vehicles have been proven in the field to both operate and reduce emissions thereby providing an option that warehouse operators can depend upon and reach the desired goal. Every opportunity for operators to move away from diesel should be encouraged. More pointedly, if NZE yard tractors are not incentivized and no one has confidence in zero emission yard tractors, the default is a diesel yard tractor which is counter to goal. 32-4

A third example of discrimination against cost-effective solutions is the exclusion of NZE infrastructure from earning WAIRE points while ZE recharging infrastructure can receive a significant number of WAIRE points. An investment in infrastructure can represent 50 percent or more of the total investment for adoption of a clean vehicle fleet. Excluding NZE infrastructure from earning points puts a key emissions reduction technology at a major disadvantage. 32-5

Amendment Request:

(1) Include NZE trucks on the WAIRE menu and provide them 90% of the WAIRE points ZE yard trucks receive for acquisition (159 WAIRE points) and annual hours of use (261 WAIRE points). 32-4 (cont'd)

(2) Provide compliance points for renewable natural gas station installations on the WAIRE menu. 32-5 (cont'd)

The Governor's Executive Order N-79-20 does not require PR 2305 to discriminate against NZE technology and the South Coast AQMD's 2016 Air Quality Management Plan (AQMP) prioritizes near zero natural gas engine technologies. The executive order proclaims that *"It shall be a further goal of the State that 100 percent of medium- and heavy-duty vehicles in the* 32-6

State be zero-emission by 2045 for all operations where feasible..." The warehouse ISR accelerates the adoption of zero-emission vehicles by including them as an activity eligible for WAIRE points. Additionally, the executive order establishes a non-binding goal that is over 20 years away. Therefore, discrimination against cost-effective NZE technology is not necessary for compliance with the executive order. 32-6 (cont'd)

Furthermore, penalizing NZE technology for being cost-effective is contrary to the AQMD's 2016 Air Quality Management Plan's Resolution No. 17-2 which states:

Whereas, an accelerated deployment of current and emerging near-zero emission natural gas engine technologies will provide significant, cost-effective and near-term benefits to regional and local air quality, energy supply security, and public health; 32-7

Be it FURTHER RESOLVED, that the mobile source incentive program for heavy-duty vehicles outlined in the 2016 AQMP place priority on the most cost-effective technologies to reach short-term air quality goals such as current and emerging near-zero emission natural gas engine technologies.

Conclusion

The 2016 AQMP states on page 4-9, "All technologies and fuels should be able to compete on an equal footing to meet environmental needs." This guiding principle should be better reflected in PR 2305 by basing point allocations on emissions reductions rather than cost. In summary, we request the following changes:

- Points for the acquisition and usage of NZE and ZE vehicles should be based solely on the emissions reduction potential of each technology such that an NZE measure achieves 90% of the WAIRE points as a ZE measure. On a NOx reduction basis, near zero emission trucks should deliver the same NOx emissions reductions per AQMD staff and are certified to be 90% cleaner than diesel. 32-3 (cont'd)

- Include NZE yard trucks on the WAIRE menu and provide them 90 percent of the WAIRE points ZE yard trucks receive for acquisition (159 WAIRE points) and annual hours of use (261 WAIRE points). 32-4 (cont'd)

- Provide compliance points for renewable natural gas station installations on the WAIRE menu. 32-5 (cont'd)

With quickly approaching attainment deadlines and local residents suffering from poor air quality, PR 2305 must treat cost-effective solutions fairly. Thank you for considering our requests.

Sincerely,

Todd R. Campbell
Vice President, Public Policy & Regulatory Affairs

"Promoting Jobs in a Competitive Business Climate"

MARCH 1, 2021

VIA E-MAIL

Ian MacMillan
Victor Juan
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178
imacmillan@aqmd.gov
vjuan@aqmd.gov

Re: Comments on Proposed Rule 2305 (Warehouse Indirect Source Rule)

Dear Mr. MacMillan and Mr. Juan:

The Carson Dominguez Employers Alliance (CDEA) officially opposes the adoption of Rule 2305 (Warehouse Indirect Source Rule). A significant portion of our membership engages with the warehouse industry on a daily basis as an integral component of the Southern California logistics sector. The warehouse and trucking industries are playing a key role in our regional and national response to the COVID-19 pandemic. 33-1

We believe the District's proposed ISR is a misguided policy in the midst of the COVID-19 pandemic. The District is pursuing a regulation targeted at a sector that serves as a lifeline to our region and nation. The warehouse industry and the trucking industry work in tandem in delivering the goods that we all count on during this pandemic.

At this time, the CDEA has the following comments in response to the Proposed Rule 2305 (Warehouse Indirect Source Rule):

1. The proposed ISR clearly seeks to "indirectly" regulate the trucking industry through the Warehouse industry. The District should publicly explain how it has the jurisdiction/authority to regulate a mobile source that is such an integral part of interstate commerce as the trucking industry. 33-2

2. The proposed ISR would impose additional/permanent costs on warehouses of about $.90 per square foot. This would amount to targeting a specific essential industry with $1 billion in annual fees during the worst possible time, as it responds to the challenges of the pandemic. 33-3

3. It is not feasible to comply with the ISR due to the following:
   a.) The proposed rule requires warehouses to control truck fleets and decrease truck emissions but warehouse operators are not able to accomplish this task.
   b.) Warehouses have no control over how truck engines are manufactured.
   c.) Warehouses do not own trucks fleets nor control what type of trucks shipping companies purchase.
   d.) Warehouse operators do not control which trucks come to warehouses, when they arrive, where they come from or any other variables related to truck trips. 33-4

4. The technology is not available to accomplish items on the WAIRE menu. For example, there are no heavy-duty electric trucks available that are 100% viable from a technology and/or economic reasonable standard. 33-5

5. Warehouses have been deemed to be essential businesses by the State for important reasons including. The approximately 18 million people who live in Southern California rely on warehouses as an integral part of the goods movement system, to gets them the items they need to survive, like clothing, food, medical supplies, etc. 33-6

6. This rule creates tremendous uncertainty in the economy as the full negative impact of this ISR is not known. Uncertainty should not be created in this critical, essential business sector, especially in light of the current economic downturn/unemployment crisis associated with the COVID-19 pandemic. 33-7

7. Warehouses provide a broad range of jobs for people of every level of education and skill sets. Warehouses and the logistics industry as a whole, provide jobs that lead to upward mobility. This job creation is a socioeconomic benefit that would be threatened by the onerous costs imposed by the proposed ISR. Targeting one industry by imposing a fee of $1 billion annually would have devastating impacts to jobs in this sector. 33-8

Thank you for your attention to these comments. Please include these comments as part of the official record for Proposed Rule 2305. 33-9

Respectfully,

Christina Earle
On behalf of the board of the Carson Dominguez Employers Alliance

cc: Long Beach Vice Mayor/SCAQMD Board Member Rex Richardson
Los Angeles City Councilmember/SCAQMD Board Member Joe Buscaino

March 1, 2021

Mr. Ian MacMillan
Mr. Victor Juan
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178
Via US Mail and Email
imacmillan@aqmd.gov
vjuan@aqmd.gov

RE: Proposed Warehouse Indirect Source Rule (ISR)

Dear SCAQMD Leadership,

On behalf of Weber Logistics, and in concert with many of my colleagues providing Third Party Logistics (3PL) service, one of the most dynamic industries in California, I wish to express our strong opposition to the South Coast Air Quality Management District's (SCAQMD) proposed Warehouse Indirect Source Rule (ISR).

Weber Logistics employs over 500 logistics workers and professionals in California, and is poised to grow, providing good, high-paying jobs. 34-1

However, our clients have long been concerned that further cost and regulatory actions in California may make it uncompetitive for them to continue to store and ship their product from here, and have suggested that we open facilities to serve them in Arizona and Nevada.

This potential loss of business to California directly impacts all our employees, their families, and the many industries with which purchase supplies and services. Please help us to keep our jobs in California!

I wish to reiterate many of the points that you know and are hearing now.

- California has the cleanest supply chain in the United States. Thanks to two decades of investment in the cleanest available equipment, including early adoption by our collective members, localized emissions associated with warehouses have never been lower, falling by over 95% in the last decade.

- The goods movement system serves as the lifeblood of California's economy, delivering essential goods, services, and medicines. Never has this industry been more important than during the COVID-19 pandemic. Grocery store shelves have been stocked, vaccines delivered, and small retailers kept alive by e-commerce thanks to power of the modern supply chain, allowing Californians to shelter in place and abate the spread of COVID-19. 34-2

- Goods movement also powers high-paying blue-collar jobs vital to our economy. An estimated 1 in 22 jobs in Southern California are tied to the logistics industry.

All this progress and vital infrastructure is jeopardized.

- The draft ISR creates a complicated system of Warehouse Actions and Investments to Reduce Emissions "WAIRE Points" that must be earned by owners and operators of warehouses, mostly through a fee on warehouse operators. This rule is a costly and duplicative effort that is not poised to achieve demonstrable improvements in air quality in the South Coast basin. 34-3

- As you know, California is the only state in the nation with the power to regulate mobile sources pursuant to its waiver under federal Clean Air Act. The California Air Resources Board (CARB) has used this power to adopt the country's strictest emission laws, including adopting in July the world's first mandate to manufacture and sell zero-emission commercial vehicles. CARB has also stated its intent to adopt regulations that will require nearly every equipment type at warehouses to operate in a zero-emission mode within the next year. 34-4

- SCAQMD's proposed Warehouse ISR is duplicative of these regulations and **will create burdensome, expensive requirements for the supply chain for questionable environmental benefit.**

- During presentations, SCAQMD justified the draft rule by stating that additional action is necessary to address ozone and NOx concentrations in the basin. With respect to NOx, a recent technical analysis of the draft staff report found that the report does not adequately demonstrate that the proposed Warehouse ISR will provide NO_X reductions beyond those generated by CARB regulations, despite the enormous costs that will be involved in complying with this rule.

- Further, as stated during AQMD's Scientific, Technical & Modeling Peer Review Advisory Group Meeting on January 27, 2021, the small quantities of NO_X reductions generated by this rule will not be sufficient to decrease the ozone concentrations in the basin. One is left with the impression that the rule, instead of addressing environmental concerns, is being used as a funding mechanism. 34-5

- Duplicative rulemaking by CARB and the SCAQMD that does not move the needle on environmental benefit in the basin not only wastes the state's resources, but unnecessarily increases the cost of compliance for an industry that is gearing up for the all-electric future envisioned by CARB and Governor Newsom.

Weber Logistics hopes SCAQMD will reconsider this untimely, duplicative, and costly regulation and work with industry to develop a rule that takes into account the emissions reductions that already will occur due to CARB rulemaking and appropriately addresses emissions that are within the bounds of SCAQMD authority. 34-6

Yours very truly,



Robert E. Lilja
Chief Executive Officer

CC: All Weber Logistics Employees and their Families

Cody Phelps
Manager – California Air Compliance
SFOEN

March 2, 2021

Via Email
Ian MacMillan, Planning & Rules Manager: imacmillan@aqmd.gov
Victor Juan, Program Supervisor: vjuan@aqmd.gov

Re: United Airlines Comments on *SCAQMD's Proposed Rule 2305 Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program*

Messrs. MacMillan and Juan:

United Airlines, Inc. (United) submits the following comments on behalf of its cargo operations (United Cargo) at Los Angeles International Airport LAX). United leases a warehouse building at LAX with greater than 100,000 square feet of indoor floor space dedicated to / that may be used for warehousing and other aviation activities by United Cargo and other United operational groups, and therefore would be subject to the Proposed Rule as it is currently drafted. United appreciates this opportunity to engage with the South Coast Air Quality Management District SCAQMD) regarding the development of an indirect source rule (ISR) for warehouses and distribution centers. The following comments refer to the draft proposal dated January 15, 2021 (Proposed Rule).[1] United reserves the right to supplement or amend the following comments as appropriate. 35-1

1. The Clean Air Act's indirect source provisions do not authorize the SCAQMD's regulation of cargo activities at commercial airports.

As an initial matter, United is concerned that the SCAQMD does not have the legal authority to promulgate an indirect source rule to address emissions from mobile sources by regulating existing air cargo warehouses located at airports. While indirect source regulations are provided for under the Clean Air Act (CAA), they cannot be used to regulate sources that CARB and the SCAQMD are preempted from regulating. 35-2

In particular, the Federal Aviation Act and the Airline Deregulation Act ("ADA") preempt the Proposed Rule's regulation of air cargo warehouse operations. The Federal Aviation Act preempts states from adopting regulations relating to the movement and operation of aircraft. 49 U.S.C. § 40103(a). The ADA preempts any state requirement "related to a price, route, or service of an air carrier." 49 U.S.C. § 41713(b)(1). The Proposed Rule seeks to regulate airport activities and aircraft cargo operations and their associated emissions and this regulation is preempted by both the Federal Aviation Act and the ADA. *See City of Burbank v. Lockheed Air Terminal, Inc.*, 411 U.S. 624, 63 1973) (finding state regulation of airport transportation activities is generally preempted by federal law); *Federal Express Corp. v. California Public Utilities Comm'n*, 936 F.2d 1075, 1078 (9th Cir. 1991) (holding that the ADA preempts state regulation of airport cargo

[1]https://www.aqmd.gov/docs/default-source/planning/fbmsm-docs/proposed-rule-2305.pdf?sfvrsn=8.

vehicles, because "the use of the trucks depends on the conditions of air delivery. The timing of the trucks is meshed with the schedules of the planes."). 35-2 (cont'd)

2. The Proposed Rule is inconsistent with the SCAQMD's voluntary memorandum of understanding approach for addressing mobile source emissions at commercial airports.

Consistent with the 2016 Air Quality Management Plan AQMP), adopted in 2017, the SCAQMD Board approved staff's recommendation to pursue a voluntary Memorandum of Understanding (MOU) approach instead of an ISR approach) for commercial airports. The recommendation was based on the airports' willingness to develop airport-specific Air Quality Improvement Plans/Measures (AQIP or AQIM), to avoid issues of federal preemption as described above, and the fact that commercial airports contribute only about 8 tons per day of NOx excluding aircraft emissions).[2] Following the Board's direction, the SCAQMD worked closely with the commercial airports and tenants to develop AQIPs, which included the airports' comprehensive plans to reduce emissions from non-aircraft mobile sources related to airport operations *e.g.*, ground support equipment, shuttle buses, and cargo delivery trucks). Based on the draft AQIPs or AQIMs, draft MOUs were developed for each of the five commercial airports. On December 6, 2019, the South Coast AQMD Governing Board approved the MOUs with the five commercial airports. The MOUs represent voluntary agreements between SCAQMD and each commercial airport with each party having specific responsibilities and commitments.[3] 35-3

The SCAQMD's prior statements recommending <u>against</u> an ISR for commercial airports are equally applicable to the Proposed Rule. According to the SCAQMD:

> While aircraft make up a substantial portion of airport-related emissions it has become evident through the working group process that this source of emissions presents a particularly unique challenge given the existing regulatory landscape for aircraft and the nature of aircraft activity *e.g.*, interstate and international origins and destinations). The remaining *i.e.*, minus aircrafts) emissions from this facility sector are about 8 tons per day, with about 5 of those tons coming from trucks serving the cargo operations at LAX and ONT.
>
> Staff is recommending to pursue a voluntary MOU approach at this time because of the limited emissions reductions that may be available from the non-aircraft sources in this sector, the complications with regulating airports due to overlapping federal jurisdiction, the existence of many existing emission reduction programs, and the potential willingness of airports to enter into cooperative agreements. SCAQMD staff is proposing that commercial airport operators in the Basin each develop their own [AQIPs]. Given the unique challenges with reducing emissions from airports

[2] http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/facility-based-mobile-source-measures/airports-final-staff-report.pdf?sfvrsn=6.
[3] http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/facility-based-mobile-source-measures/commercial-airports-mous.

> an [AQIP] would provide airport operators with a level of flexibility that is desirable to develop suitable emissions reduction strategies that avoid interference with the regulatory landscape of aircraft related activity and the day-to-day operations of commercial airports affected by national and global commerce. Key elements of the [AQIPs] would include a detailed emissions inventory of all sources both under direct and indirect airport control, emission reduction measures *e.g.*, incentives, fleet policies, etc.) and measurable goals.[4]

The commercial airports have already pursued and implemented many policies that reduce emissions. For example, LAX has implemented alternative fuel policy for vehicles >8,500 pounds GVWR, a ground support equipment emission standard, an electric vehicle purchasing policy, a clean construction policy, gate electrification projects, and a new Landside Access Modernization Program to reduce emissions from passenger vehicles. 35-3 (cont'd)

By approving the airport MOUs, the SCAQMD expressly rejected the development of an indirect source rule to achieve emission reductions from mobile sources attributed to cargo warehouse activities at commercial airports. The application of the Proposed Rule to warehouse cargo activities at the same commercial airports subject to MOUs undermines the commitments made by the airports and the SCAQMD. In this context, it is important to note that in its CEQA analysis the SCAQMD does not appear to have investigated and analyzed the potential environmental, economic and operational impacts the Proposed Rule may have on the existing airport AQIPs and MOUs.[5]

Furthermore, the Preliminary Draft Staff Report for the Proposed Rule makes clear that SCAQMD is seeking to achieve reductions of NOx and PM emissions primarily from trucks operating within the South Coast Air Basin region, in order to help meet federal air quality standards for ozone and particulate matter. It is not clear how the Proposed Rule will actually result in the desired emissions reductions when the compliance obligations are solely imposed on warehouse operators, particularly where such operators do not operate their own truck fleets. For warehouse operators that are not also truck operators, the WAIRE points menu provides extremely limited options for compliance, and none of the available options, such as installation of solar panels or installation of MERV 16 filters, would actually reduce mobile source NOx or PM emissions. 35-4

3. The proposed definition of "Warehouse" – Proposed Rule Section c)(31) – is too broad and requires further clarification. 35-5

It is unclear what is intended by the terms "distribution" and "retail customers." Given SCAMQD's primary focus of reducing emissions associated with the operation of heavy-duty diesel trucks, United proposes that the term "warehouse" be limited to buildings that store goods for later distribution via truck. Buildings that are connected to, or part of, other transportation centers (such as a port, commercial airport or rail yard) should not be considered "warehouses"

[4] http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2018/2018-may4-032.pdf at 3-9 (emphasis added).

[5] http://www.aqmd.gov/docs/default-source/ceqa/documents/aqmd-projects/2021/draftea_pr2305and316.pdf?sfvrsn=12

under the Proposed Rule. Although such buildings temporarily store goods that may ultimately be distributed to a business or retail customer, the immediate distribution is often to a boat, plane or train – a transfer that does not create a significant amount of additional, localized truck-related emissions. 35-5 (cont'd)

In addition, the term "retail customer" should be deleted or further defined. Consider, for instance, that United sells its cargo products to individual customers, including by offering small package airport-to-airport service. It is unclear whether an individual who elects to ship a small package from LAX to an individual at another airport via United Cargo is a "retail customer" under the Proposed Rule, or whether SCAQMD intends to limit the applicability to warehouses that transport goods directly to business that operate retail stores. 35-6

United offers the following revisions to the definition of "warehouse" for SCAQMD's consideration:

> WAREHOUSE means a building that stores cargo, goods, or products on a short-or long long-term basis for later distribution, via truck or trailer, directly to a retail store ~~businesses and/or retail customers~~.

4. The proposed definition of "Warehouse Facility" – Proposed Rule Section (c)(29) – is unclear.

The Proposed Rule defines the term "warehouse facility" to mean "a property that includes a warehouse as well as accessory uses …" Under this proposed definition, and given the broad definition of "warehouse" discussed above, LAX could be considered a "warehouse facility." LAX is one property with multiple "warehouses," each of which may be used by a different "warehouse operator."

The obligations in the Proposed Rule are unclear with regard to "warehouse facilities," such as LAX, that have multiple "warehouses" and "warehouse operators." For example, per Section (d)(7) of the Proposed Rule, warehouse operators are responsible for submitting initial site information reports for their "warehouse facility." The Proposed Rule should be revised to clarify that the warehouse facility for which an initial site information report must be submitted is only that portion of the warehouse facility leased by the warehouse operator. If SCAQMD requires information about an entire "warehouse facility," such obligations should be imposed on the warehouse facility owners, rather than the warehouse operators, as the latter may not have access to information about all of the other warehouses and warehouse operators at the warehouse facility. 35-7

United requests that this provision and similar requirements throughout the Proposed Rule be revised to clearly allocate reasonability to warehouse owners and warehouse operators, as appropriate, in particular considering situations in which there may be multiple warehouses, each of which is leased by a different warehouse operator, at one warehouse facility. In addition to clearly allocating operator vs. owner requirements, the Proposed Rule should seek to incentivize owners in multi-tenant situations to take on the compliance obligation rather than placing the sole

burden on the operator and merely allowing the owner to earn WAIRE points voluntarily. Furthermore, where a warehouse operator is dependent upon the owner to earn the necessary WAIRE points, the Proposed Rule should provide for a process to seek a limited exemption or waiver of the requirements should the owner choose not to cooperate due to no fault of the operator. 35-7 (cont'd)

5. Calculating Weighted Annual Truck Trips (WATTs)

a. Proposed Rule Section (d)(1)(B)

As an initial matter, United notes that vehicle miles traveled (VMT) is not considered in the formula for calculating WATTs. Failing to consider the impact of VMT in determining the compliance obligation will lead to inequitable application of the rule. For example, warehouses with multiple operators, or warehouses located close together, could have similar compliance obligations to warehouses operated by single operators that attract trucks with much longer VMTs and therefore higher truck-related emissions. United does appreciate that the Proposed Rule specifies that "if a warehouse is occupied by more than one warehouse operator, the WATTs are calculated only for truck trips to or from that operator." However, because the formula does not include consideration of the distance of each trip, the Proposed Rule should address how to calculate WATTs when a warehouse facility (i.e., LAX) is occupied by more than one warehouse and/or warehouse operator. If a truck visits a warehouse at LAX, but not United's warehouse, United should not be held responsible for that truck trip. At the same time, if a truck visits both United's warehouse and another warehouse / warehouse operator also located at LAX, the Proposed Rule should not consider each of those visits to be a separate truck trip. Such a formula would penalize co-located operations, which are inherently more efficient and result in fewer truck-related emissions. 35-8

United also understands that heavy-duty trucks may visit LAX for reasons that are wholly unrelated to warehouse activities e.g., trucks associated with construction or trucks delivering provisions to airport vendors). Information about a truck's purpose and overall movement at LAX, however, is not readily available to individual warehouse operators, and it would be inefficient and overly burdensome to ask each operator to separately seek to collect such information. The provisions in the Proposed Rule should be revised to specifically address WATTs calculations at warehouse facilities where there are multiple warehouses and warehouse operators, in addition to other non-warehouse operations. In such situations any warehouse points compliance obligation should be determined at the facility level by the warehouse facility owner. 35-9

b. Proposed Rule Section (d)(1)(C)

United appreciates that the Proposed Rule offers an option in the event that a warehouse operator does not have information about the number of truck trips at a warehouse due to a force majeure event such as a destruction of records from a fire. The Proposed Rule should also allow for a reasonably determined default calculation of truck trip rates in the event of other circumstances that are outside of the warehouse operator's control. For instance, many of the technological solutions for counting and classifying truck trips are not feasible for United Cargo at LAX. United 35-10

Cargo's leasehold is almost entirely limited to its building footprint. United Cargo does not have exclusive control over all of the roads and other spaces existing prior to its dock doors. Space constraints therefore would make it difficult to install technology for counting / classifying trucks without approval from, and significant cooperation with, the warehouse facility owner LAWA). United should not be penalized if such approval cannot be obtained, and should not be required to manually count trucks – a solution that would not be cost effective or practical. 35-10 (cont'd)

6. Transferring WAIRE Points – Proposed Rule Section (d)(6)(C

United appreciates that the Proposed Rule allows the warehouse facility owner to transfer WAIRE points to the warehouse operators located within its facility, but asks that the rule be revised so that such points can be transferred without any discounting. This is particularly necessary where the warehouse facility owner has primary control over whether, and which type of, WAIRE points can be earned. As a lessee that does not own or operate a truck fleet, most of the WAIRE Menu projects that would be available to United such as installing charging, fueling or solar infrastructure would require United to obtain permission from, and otherwise cooperate with, LAWA and its other tenants. Some of the projects may not be feasible at United's warehouse building, but may be achievable at other LAX locations that are not controlled by United. If LAWA pursues such projects, a matter which is outside United's control, LAWA should be permitted to allocate any associated WAIRE points to the various warehouse operators on its property. 35-11

7. Mitigation Fee – Proposed Rule Section (d)(5)

United agrees that in lieu of earning WAIRE points a warehouse operator should be allowed to satisfy its compliance obligation through payment of a mitigation fee.

United suggests that the fee rate should change based on whether an operator chooses to pay a fee rather than earn WAIRE points (higher) or whether an operator was not able to earn WAIRE points due to circumstances outside of its control and the infeasibility of options available from the WAIRE menu lower). For instance, if a landlord does not approve a WAIRE points project, or none of the WAIRE points projects are feasible in a given compliance year, the mitigation fee rate should be adjusted accordingly. 35-12

* *

Thank you for your consideration of these comments. Please contact me at cody.phelps@united.com or 650-874-4572 with any questions. 35-13

Regards,

Cody Phelps

Cody Phelps

PRICE TRANSFER, INC.

March 2, 2021

Mr. Ian MacMillan, Planning and Rules Manager
Mr. Victor Juan, Program Supervisor
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765-4178

Mr. MacMillan and Mr. Juan,

Price Transfer, Inc. expresses its strong opposition to the South Coast Air Quality Management District's (SCAQMD) proposed Warehouse Indirect Source Rule (ISR).

The draft ISR creates a complicated system of Warehouse Actions and Investments to Reduce Emissions "WAIRE Points" that must be earned by owners and operators of warehouses, mostly through a fee on warehouse operators. This rule is a costly and duplicative effort that is not poised to achieve demonstrable improvements in air quality in the South Coast basin. 36-1

The Ports of Long Beach and Los Angeles are the 10th largest ports in the world on a combined basis and largest in the nation. They are the key to the goods movement system that serves as the lifeblood of California's and the nation's economy by delivering essential goods, services, and medicines. Never has this industry been more important than during the COVID-19 pandemic. Grocery store shelves have been stocked, vaccines delivered, and small retailers kept alive by e-commerce thanks to power of the modern supply chain, allowing Californians and the rest of the nation to shelter in place and abate the spread of COVID-19. 36-2

Goods movement also powers blue-collar jobs vital to our economy. An estimated 1 in 22 jobs in Southern California are tied to the logistics industry. The logistics industry in Southern California is already under pressure from higher operating costs, taxes, and regulation than the rest of the nation. An additional layer of cost and regulation from the ISR could lead to the Ports of Long Beach and Los Angeles becoming less competitive and giving companies incentive to use other US ports. This would result in significant job loss, abandoned warehouses, and lost tax revenue for the region. 36-3

California has the cleanest supply chain in the United States. Thanks to two decades of investment in the cleanest available equipment, including early adoption by our collective members, localized emissions associated with warehouses have never been lower, falling by over 95% in the last decade. 36-4

As you know, California is the only state in the nation with the power to regulate mobile sources pursuant to its waiver under federal Clean Air Act. The California Air Resources Board (CARB) has used 36-5

this power to adopt the country's strictest emission laws, including adopting in July the world's first mandate to manufacture and sell zero-emission commercial vehicles. CARB has also stated its intent to adopt regulations that will require nearly every equipment type at warehouses to operate in a zero-emission mode within the next year.

36-5 (cont'd)

SCAQMD's proposed Warehouse ISR is duplicative of these regulations, exceeds the District's authority to regulate mobile sources, and will create burdensome, expensive requirements for the supply chain for questionable environmental benefit.

During presentations, SCAQMD justified the draft rule by stating that additional action is necessary to address ozone and NOx concentrations in the basin. With respect to NOx, a recent technical analysis of the draft staff report found that the report does not adequately demonstrate that the proposed Warehouse ISR will provide NO_X reductions beyond those generated by CARB regulations, despite the enormous costs that will be involved in complying with this rule.

36-6

Further, as stated during AQMD's Scientific, Technical & Modeling Peer Review Advisory Group Meeting on January 27, 2021, the small quantities of NO_X reductions generated by this rule will not be sufficient to decrease the ozone concentrations in the basin. One is left with the impression that the rule, instead of addressing environmental concerns, is being used as a funding mechanism.

Duplicative rulemaking by CARB and the SCAQMD that does not move the needle on environmental benefit in the basin not only wastes the state's resources, but unnecessarily increases the cost of compliance for an industry that is gearing up for the all-electric future envisioned by CARB and Governor Newsom.

We hope SCAQMD will reconsider this untimely, duplicative, and costly regulation and work with industry to develop a rule that takes into account the emissions reductions that already will occur due to CARB rulemaking and appropriately addresses emissions that are within the bounds of SCAQMD authority.

36-7

Thank you for taking the time to consider my public comment.

Patrick G. Farenga
Chief Financial Officer
Price Transfer, Inc.

March 2, 2021

Mr. Ian MacMillan, Planning and Rules Manager
Mr. Victor Juan, Program Supervisor
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765-4178

Mr. MacMillan and Mr. Juan,

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37-1

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Further, as stated during AQMD's Scientific, Technical & Modeling Peer Review Advisory Group Meeting on January 27, 2021, the small quantities of NO_X reductions generated by this rule will not be sufficient to decrease the ozone concentrations in the basin. One is left with the impression that the rule, instead of addressing environmental concerns, is being used as a funding mechanism.

Duplicative rulemaking by CARB and the SCAQMD that does not move the needle on environmental benefit in the basin not only wastes the state's resources, but unnecessarily increases the cost of compliance for an industry that is gearing up for the all-electric future envisioned by CARB and Governor Newsom.

We hope SCAQMD will reconsider this untimely, duplicative, and costly regulation and work with industry to develop a rule that takes into account the emissions reductions that already will occur due to CARB rulemaking and appropriately addresses emissions that are within the bounds of SCAQMD authority. 37-7

Thank you for taking the time to consider my public comment.

Patrick G. Farenga
Chief Financial Officer
FCL Logistics, LTD.

American Lung Association

February 26, 2021

Dr. William A. Burke, Chair
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

via email: clerkofboard@aqmd.gov

Support for Warehouse Indirect Source Rule

Dear Dr. Burke and members of the Governing Board:

On behalf of the American Lung Association, we are writing to provide comments in support of the adoption of a strong Indirect Source Rule by the South Coast Air Quality Management District. We appreciate the work you, District staff and stakeholders have put into ensuring community health protections through clear targets for reducing ozone-forming emissions from indirect sources. As the rulemaking continues, we respectfully urge the District to act quickly to adopt the strongest possible rule. 38-1

In large part due to the transportation sector, including trucks serving warehouses throughout the region, the American Lung Association's annual *State of the Air* 2020 report found that the Los Angeles metropolitan area is the most ozone-polluted region in the United States, and among the most impacted by particle pollution. Too many communities face a significant number of days with unhealthy ozone or particle pollution levels that contribute to a wide range of health impacts, including asthma attacks, heart attacks and strokes, lung cancer and premature deaths. We are deeply concerned with the disparities that exist in exposures to transportation pollution which often fall most heavily on lower-income communities and communities of color nearest major trucking routes, warehouses and other diesel hotspots, as well as with workers impacted at these sites. Fortunately, decades of policy innovation has spurred significant progress in reducing harmful emissions and we look to the district to continue to build on this foundation. 38-2

Now, a strong Indirect Source Rule for warehouses is urgently needed to protect public health from the growing pollution impacts of major warehouse operations throughout the region. We believe the district should strengthen the final rule to ensure that the greatest possible emission reductions and health protections are required. We encourage the district to move forward as rapidly as possible, and to elevate the role and requirements for zero-emission 38-3

trucks serving warehouses to help provide critical air quality relief for the impacted communities and warehouse industry workers. The American Lung Association's 2020 *Road to Clean Air* report found that the greater Los Angeles Area could experience the greatest public health benefits in the nation through a widespread transition to zero-emission transportation, including over $14 billion in annual public health benefits, more than 1,200 fewer deaths and 16,000 asthma attacks due to cleaner air. The Indirect Source Rule represents an important opportunity to reduce local pollution impacts, advance zero-emission transportation, and provide meaningful health protections for heavily impacted communities and workers within the region.

38-3 (cont'd)

We look forward to working with the district to continue the important progress made and taking on the challenging work ahead to ensure clean, healthy air for all residents, especially for those most burdened by heavy trucking pollution today. Please don't hesitate to reach to out Steven Jimenez at steven.jimenez@lung.org with any questions.

38-4

Sincerely,

Karen Jakpor, MD
Health Professional Volunteer

Afif El-Hasan, MD
Health Professional Volunteer

Frances Mojica
Executive Director, Los Angeles

Ian MacMillan, Planning and Rules Manager
Victor Juan, Program Supervisor
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Sent via Email and USPS

March 2, 2021

Dear Mr. MacMillan and Mr. Juan:

The California Taxpayers Association ("CalTax") is a nonprofit, nonpartisan research and advocacy association founded in 1926 to promote sound tax policy and government efficiency. In 2010, CalTax sponsored Proposition 26 to stop hidden taxes, after years of rising costs from government regulations and fees. Proposition 26 does not stop local agencies from raising revenue – but it does create a legal pathway for government to follow when imposing new taxes and fees. 39-1

The South Coast Air Quality Management District (SCAQMD) has proposed two new air quality rules: "Rule 2305: Warehouse Indirect Source Rule" and "Rule 316: Fees for Rule 2305." These proposed rules would require warehouses with more than 100,000 square feet of indoor space in a single building to reduce emissions or pay a tax-like "mitigation fee." Notwithstanding the "fee" labels, the proposed rules seek to impose a special tax that requires approval by a two-thirds vote of the electorate to take effect.

About CalTax

CalTax is the oldest and largest organization representing taxpayers in California, including individuals, small businesses and Fortune 500 companies. CalTax sponsored Proposition 26 in 2010, and co-chaired the Stop Hidden Taxes campaign.

CalTax has a great interest in this issue, which will have a direct impact on CalTax, its members, and taxpayers both regionally and across the state. Because of CalTax's broad-based membership and its expertise and experience -- in addition to that of its members -- concerning the legal and policy issues raised by this proposed rule, CalTax believes its perspective on the relevant issue will be of assistance to the District and its governing board in deliberating proposed rules 2305 and 316.

Brief History on Voter Approval for Local Taxes

Prior to the passage of Proposition 26, which was approved by the voters in November 2010, the California Constitution required special taxes to be approved by a two-thirds vote of the electorate. This vote requirement was added to the Constitution in 1978 after voters approved Proposition 13. 39-2

After passage of Proposition 13, state and local governments frequently turned to tax-like "fees" to raise revenue.

In 1991, the state Legislature approved a tax-like "fee" on paint manufactures and manufacturers that produced lead-based products. This led to litigation, and the case eventually was decided by the California Supreme Court in *Sinclair Paint v. State Board of Equalization*, 15 Cal.4th 866 (1997). The Supreme Court opined: "In general, taxes are imposed for revenue purposes, rather than in return for a specific benefit conferred or privilege granted. Most taxes are compulsory rather than imposed in response to a voluntary decision to develop or to seek other government benefits or privileges."[1] To the dismay of taxpayers, the Court ultimately held that the "fees" in the *Sinclair* case were valid regulatory fees, not taxes. The decision resulted in a 20-year effort to clarify the distinction between legitimate regulatory fees and taxes.

Addressing the legal history in the years that followed the *Sinclair* decision, Proposition 26 sought to codify certain decisions that address the characteristics and differences between taxes and fees:

- **Generating Revenue From Regulatory Programs Is Prohibited.** Regulatory programs cannot include a charge imposed primarily for the purpose of raising revenue. A regulatory-related charge can be considered a tax depending on how the charge is spent. State law requires a true regulatory charge to be spent in a manner that proportionately benefits those who pay. In *Northwest Energetic Services, LLC v. California Franchise Tax Board*, the court determined: "If revenue is the primary purpose and regulation is merely incidental the imposition is a tax."[2]

- **Fees Must Provide a Specific Benefit to the Payor.** In 2008, the Fourth District Court of Appeal ruled in *Bay Area Cellular Telephone Co. v. City of Union City* that the 9-1-1 "fee" was a tax because "those who paid the Fee received no benefit not received by those who did not pay (and thus by the general public), thereby negating the distinguishing feature of a user fee."[3]

- **Fees Must Be Fairly Apportioned Among Payors.** The California Supreme Court determined in *California Farm Bureau v. State Water Resources Control Board* that fees should be reasonably apportioned to the payors involved -- otherwise, the "fee" is a tax.[4] While the Supreme Court asked a lower court to determine proportionality, the court's findings may impact other situations where payors are treated differently by the law, but benefit from the same service or privilege. The court wrote that the question in the case "revolves around the scope and the cost of the ... regulatory activity and the relationship between those costs and the fees imposed. It is further complicated by the fact that not all those who hold water rights are required to pay the fee."[5] The court concluded: "Focusing on the activity and its associated costs will allow the trial court to determine whether the assessed fees were reasonably proportional and thus not a tax. The court must determine whether the statutory scheme and its implementing regulations provide a fair, reasonable, and substantially proportionate assessment of all costs related to the regulation of affected payors."[6]

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[1] *Sinclair Paint v. State Board of Equalization*, 15 Cal.4th 866, 874 (1997).
[2] *Northwest Energetic Services, LLC v. California Franchise Tax Board*, 159 Cal.App.4th 841, 855 (2008).
[3] *Bay Area Cellular Telephone Co. v. City of Union City*, 162 Cal.App.4th 686, 695 (2008).
[4] *California Farm Bureau Federation v. State Water Resources Control Board*, 146 Cal.App.4th 1126 (2011).
[5] *California Farm Bureau Federation v. State Water Resources Control Board*, 51 Cal.4th 421, 441 (2011).
[6] *Id* at 442.

- **Government Bears the Burden of Proving That a Fee Is Not a Tax.** Under Proposition 26, just as under *Sinclair*, government bears the burden of proving that a "fee" is not a tax. In *San Diego Gas & Electric,* the court found that "government should prove (1) the estimated costs of the service or regulatory activity, and (2) the basis for determining the manner in which the costs are apportioned, so that charges allocated to a payor bear a fair or reasonable relationship to the payor's burdens on or benefits from the regulatory activity."[7] Further, in *California Association of Professional Scientists v. Department of Fish and Game,* the court found: "The government bears the burden of proof ... It must establish ... the estimated costs of the service or regulatory charges allocated to a payor bear a fair or reasonable relationship to the payor's burdens on or benefits from the regulatory activity."[8]

- **Fees Must Be Reasonable.** Revenue derived from regulatory fees cannot be used for unnecessary regulatory activities, nor should revenues be used for unnecessary administrative costs. In *San Diego Gas & Electric Company v. San Diego County Air Pollution Control District*, the court stated that government must show "estimated costs of the service or regulatory activity, and the basis for determining the manner in which the costs are apportioned, so that charges allocated to a payor bear a fair and reasonable relationship to the payor's burdens on or benefits from the regulatory activity."[9]

The Definition of a Legitimate Fee

The expansion of *Sinclair*-style tax-like "fees" eventually led to voters approving Proposition 26, which refined the definition of tax to ensure that state and local government could not circumvent the vote requirements for tax increases by labeling taxes as "fees."

Effective January 1, 2010, all taxes and fees must comply with the requirements of Proposition 26. Fees adopted prior to 2010 may continue to be imposed under prior tax and fee definitions, such as the fees considered in *California Building Industry Association v. San Joaquin Valley Air Pollution Control District*, 178 Cal.App.4th 120 (2009).

Proposition 26 added Article XIII C, section 1 to the California Constitution, and defines a tax as "any levy, charge, or exaction of any kind imposed by a local government"[10] except for specific enumerated exceptions. The enumerated exceptions:

(1) A charge imposed for a specific benefit conferred or privilege granted directly to the payor that is not provided to those not charged, and which does not exceed the reasonable costs to the local government of conferring the benefit or granting the privilege.
(2) A charge imposed for a specific government service or product provided directly to the payor that is not provided to those not charged, and which does not exceed the reasonable costs to the local government of providing the service or product.

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[7] *San Diego Gas & Electric Company v. San Diego County Air Pollution Control District*, 203 Cal. App. 3d 1132, 1146 (1988).
California Association of Professional Scientists v. Department of Fish and Game, 79 Cal. App. 4th 935, 945 (2000).
[9] *San Diego Gas & Electric Company*, 203 Cal.App.3d at 1146.
[10] Cal. Const. article XIII C, § 1

(3) A charge imposed for the reasonable regulatory costs to a local government for issuing licenses and permits, performing investigations, inspections, and audits, enforcing agricultural marketing orders, and the administrative enforcement and adjudication thereof.
(4) A charge imposed for entrance to or use of local government property, or the purchase, rental, or lease of local government property.
(5) A fine, penalty, or other monetary charge imposed by the judicial branch of government or a local government, as a result of a violation of law.
(6) A charge imposed as a condition of property development.
(7) Assessments and property-related fees imposed in accordance with the provisions of Article XIII D. [11]

39-2

Proposition 26 Placed the Burden of Proof on the Government

Proposition 26 placed the burden of proof on a local agency to prove "by a preponderance of the evidence that a levy, charge, or other exaction is not a tax, that the amount is no more than necessary to cover the reasonable costs of the governmental activity, and that the manner in which those costs are allocated to a payor bear a fair or reasonable relationship to the payor's burdens on, or benefits received from, the governmental activity."[12]

In this case, SCAQMD bears the burden of proof, by a preponderance of the evidence, to demonstrate that the proposal contained in Rules 2305 and 316 is not a tax, and that it complies with the provisions added by Proposition 26 in Article XIII C, section 1.

The South Coast Air Quality Management District's Proposals Constitute a Tax

SCAQMD's proposed rules would result in the imposition of a tax.

In *Morning Star Co. v. Board of Equalization*, the court deliberated whether a hazardous-materials "fee" imposed by the California Board of Equalization was a tax or a fee. The court opined: "[T]he section 25205.6 charge to the Company is not regulatory because it does not seek to regulate the Company's use, generation or storage of hazardous material but to raise money for the control of hazardous material generally. The charge is therefore a tax. At its most basic level, the section 25205.6 charge is not a regulatory fee because it is not regulatory. It is monetary."[13]

39-3

The facts and circumstances litigated in the *Morning Star* case are similar to the fees proposed by SCAQMD. Proposed rules 2305 and 316 do not seek to regulate the specific fee-payors' indirect source emissions, but instead aim to raise money for the control of emissions in the South Coast region generally. The District's stated purpose is to "reduce local and regional emissions of NOx and PM associated with warehouses in order to assist in meeting state and federal air quality standards."[14] The District also stated that proceeds from this new tax will be used "to provide financial incentives for truck owners to purchase NZE or ZE trucks, or for the

[11] *Id.*
[12] *Id.*
[13] *Morning Star Co. v. Board of Equalization*, 201 Cal.App.4th 737, 755 (2011).
[14] PRELIMINARY DRAFT STAFF REPORT PROPOSED RULE 2305 – WAREHOUSE INDIRECT SOURCE RULE - WAREHOUSE ACTIONS AND INVESTMENTS TO REDUCE EMISSIONS (WAIRE) PROGRAM AND PROPOSED RULE 316 – FEES FOR RULE 2305 (2021), http://www.aqmd.gov/docs/default-source/planning/fbmsm-docs/preliminary-draft-staff-report.pdf?sfvrsn=14.

installation of fueling and charging infrastructure, with priority given for projects in the communities near warehouses that paid the fee." The purpose and spending plan from SCAQMD do not appear to have any nexus to the specific fee-payors' use or generation of indirect emissions, and the exaction therefore constitutes a tax. 39-3

The contemplated charge is monetary and not regulatory because, among other things, the proposed rules do not provide a sunset date for the charge. If the true purpose was regulatory and not monetary, the proposed rules would provide a mechanism for the charge to end. If the true goal of the District is to control local and regional emissions, the charge should end when that goal has been accomplished. By leaving an indefinite charge in place regardless of the emissions in the region, the purpose of the proposed rule appears more in line with a revenue-raising or monetary purpose. 39-4

Furthermore, in *California Chamber of Commerce v. State Air Resources Board*, the court ruled on whether the "Cap-and-Trade" auction was a tax that required two-thirds approval from the Legislature. In its analysis of the distinction between a tax and a fee, the court stated: "Although the term 'tax' has different meanings in different contexts, we find that, generally speaking, a tax has two hallmarks: (1) it is compulsory, and (2) it does not grant any special benefit to the payor."[15] (In this case, the court found that the cap-and-trade auction was valid law, given that it was imposed prior to the enactment of Proposition 26. In 2017, when lawmakers extended the auction to 2030 [AB 398, Chapter 135, Statutes of 2017], they approved the legislation with a two-thirds vote.) 39-5

To be properly classified as a "fee" under California law, the government activity funded by a specific charge must benefit only the individuals and entities that pay the charge. Governmental activity benefiting entire communities or populations, and charges that exclude or exempt certain segments of the population, are not evenly distributed and therefore constitute a tax that must be presented to the voters. 39-6

The SCAQMD's proposed indirect source rules would apply only to a limited subset of taxpayers — those that operate warehouses above a specific size. Since the proposed rules apply to a limited segment of the population, the charge is not evenly distributed and therefore is a tax subject to voter approval requirements, according to California law.

In addition, warehouses that would pay the "fees" under the District's proposed rules will not receive any specific benefits for doing so. Again, the District's preliminary staff report states that the proceeds from the proposals will be used "to provide financial incentives for truck owners to purchase NZE or ZE trucks, or for the installation of fueling and charging infrastructure, with priority given for projects in the communities near warehouses that paid the fee." This proposed spending of the funds generated through these new proposed rules provides no special benefit to the warehouse operators who would be paying these new taxes. As most warehouse operators do not own or have reason to own trucks, the incentives to purchase NZE or ZE trucks will be of little to no use to them. Furthermore, warehouse operators have little or no control over which vehicles come and go from their facilities. Therefore, the installation of fueling and charging infrastructure, even if they were in communities near the warehouses paying the fee, provides no specific benefits to the payors. 39-7

[15] *California Chamber of Commerce v. State Air Resources Bd.,* 10 Cal.App.5th 604, 640 (2017).

California courts have repeatedly maintained that the two primary indicators of distinguishing whether a levy, exaction or charge is a tax or a fee is that taxes are mandatory and provide no special benefits to the payor. The SCAQMD's proposed Rules 2305 and 316 bear these "two hallmarks" of a tax because the proposed charge is mandatory and provides no special benefit to the payor. The charge therefore is a tax that would require voter approval (with a two-thirds threshold, as it constitutes a special tax).

39-7

Thank you for considering these comments. If you have any questions, please feel free to contact CalTax using the information provided below.

Sincerely,



Ben Lee
Tax Counsel
California Taxpayers Association
ben@caltax.org

cc: South Coast Air Quality Management District Governing Board Members
South Coast Air Quality Management District Governing Board Assistants and Consultants

The California Taxpayers Association was founded in 1926 as a nonpartisan, nonprofit research and advocacy association with a dual mission to promote sound tax policy and government efficiency. CalTax's members include individuals and many businesses operating in every sector of the California economy, ranging from small firms to Fortune 500 companies. CalTax is also dedicated to the uniform and equitable administration of taxes and minimizing the cost of tax administration and compliance.
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NAIOP
COMMERCIAL REAL ESTATE DEVELOPMENT ASSOCIATION
SoCAL CHAPTER

NAIOP
COMMERCIAL REAL ESTATE DEVELOPMENT ASSOCIATION
INLAND EMPIRE CHAPTER

March 2, 2021

Ian MacMillan, Planning and Rules Manager
Victor Juan, Program Supervisor
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765 Sent via Email

Re: Comments on Draft Rule 2305 and Draft Staff Report

Dear Mr. MacMillan and Mr. Juan:

NAIOP, the Commercial Real Estate Development Association, is the leading national organization of developers, owners, and related professionals in office, industrial and mixed-use real estate. NAIOP advances responsible commercial real estate development, researches trends and innovations, provides educational programs, and advocates for effective public policy. The NAIOP SoCal and Inland Empire Chapters serve Los Angeles, Orange, Riverside and San Bernardino Counties, with a membership of over 1,300 members. We appreciate this opportunity to comment on Proposed Rule 2305 and the Draft Staff Report and submit this as part of the official rulemaking record.

40-1

We wish to emphasize at the outset that NAIOP supports the District's vision and objectives of cleaner air and reducing greenhouse gas emissions. We look forward to the day when technological advances will make these goals a reality while supporting a sustainable, thriving and prosperous economy that will provide opportunity and a high quality of life for all. **While we support the District's laudable clean air goals, there are several major concerns requiring that the rule should not be adopted at this time.**

40-2

The SCAQMD does not have the legal authority to adopt PR 2305 on existing facilities. Furthermore, the mitigation fee constitutes an illegal tax.

40-3

The rule has numerous infeasible, as well as arbitrary and capricious provisions.

40-4

The potential for emissions and ozone reductions, as well as any SIP credit, is unknown at best and most likely the rule cannot achieve any such results.

40-5

Additionally, warehouses have no control over the marketplace for heavy duty trucks and most have no control over which trucks may come to a warehouse, which makes it infeasible to get WAIRE points for ZE or NZE trucks.

40-6

No one knows when low emissions trucks will be commercially available in sufficient supply to even be able to achieve any WAIRE points, among other issues.

40-7

Finally, the targeted mobile sources are already regulated by other agencies.

We want to make it clear that although staff has requested comments to be submitted by today, the full public comment period remains open up until and including the final vote on PR 2305. This correspondence is a preliminary reply and we reserve the right to submit additional comments. Our initial concerns with Proposed Rule 2305 are set forth in detail below.

40-8

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Warehouses are a Beneficial Essential Service

It is important to view this entire issue of PR 2305 with a balanced and thoughtful perspective. Warehouses play a key role in the complex system of systems that delivers to the public all the items needed to live their lives on a daily basis for the approximate 18 million people in this four-county region. Everything, including our food supply, clothing, medical supplies, vaccines and essentially everything required for residents to survive on a daily basis goes through a warehouse. The ability to rapidly deliver to residents their daily needs has become far more critical as the public is even more dependent today on e-commerce. The vital importance of warehouses has never been made clearer than during the COVID-19 pandemic in distributing medical supplies and equipment, as well as vaccines. Warehouses are vital to the health and quality of life of the people who live in Southern California, which is why the State and Federal governments declared the warehousing industry to be an essential business. 40-9

In addition to providing the vital goods everyone needs, as the Governor's Office of Business and Economic Development Go Biz stated, "California's freight network is a vital economic force…." The goods movement system accounts for about 1/3rd of the state and regional economy and is responsible for providing millions of direct and indirect jobs for people with a large range of skill sets.

The critical role the warehousing sector has in supplying jobs to people has been proven over the years and become even more obvious during the COVID-19 pandemic. Warehousing has been one of the very few job creators, which has been critical for so many people due to the dramatic decline in traditional blue-collar jobs that has occurred in this region over the last several years. Moreover, the economic distress of COVID-19 has resulted in additional job losses and shuttering businesses across many sectors. Particularly hard-hit are retail and hospitality businesses – many of these jobs and businesses are lost forever. This is especially important to the many people, over 50% in the Inland Empire, whose highest level of education is a high school degree or less. The warehousing sector provides entry level jobs at compensation levels that exceed other jobs that do not require a college degree and many of the lost service sector jobs, along with providing the ability for upward mobility. 40-10

Taxing the very sector that provides a significant number of career pathways to minorities and people of color is bad public policy. The proposed increases would substantially increase the cost of all goods and services, including groceries, for our region's residents and families. Higher prices would hurt Angelinos and small businesses at a time they are already struggling to put food on the table. 40-11

Warehouses and warehouse development have over the years, and will continue to do so in the future, provided numerous community benefits at no cost to the taxpayer. Just some examples are;

1. Providing new and upgraded streets, sidewalks, and other community infrastructure;
2. Funding for local schools and parks;
3. Funding for regional infrastructure and benefits; and
4. Increased sales and property tax revenue to local jurisdictions.

40-12

Lack of Legal Authority to Enact PR 2305

The SCAQMD does not have the legal authority to adopt PR 2305. The District is governed under the Lewis-Presley Air Quality Management Act, Cal. Health Saf. Code, § 40400, et seq. The Lewis-Presley Act created the District. It provides the enabling legislation from which the District derives its powers, and it prescribes the limitations on those powers. The statute authorizing the District to adopt indirect source rules specifically provides that the District's indirect source controls must be limited to those areas of the South Coast district in which there are high-level, localized concentrations of pollutants *or* with respect to any new source that will have a significant effect on air quality in the South Coast Air Basin. Cal. Health Saf. Code, § 40440 b) 3). In its current form, however, the SCAQMD is proposing that the rule apply to all distribution warehouses greater than or equal to 100,000 square feet irrespective of where they are located within the South Coast Basin, and irrespective of whether they are new or existing. Thus, Proposed Rule 2305 clearly exceeds the District's authority. Notably, in the Staff Report discussion of the District's legal authority for Rule 2305 40-13

staff omit any citation or discussion of section 40440, and instead rely entirely on authorities of other air pollution control districts. 40-13 (cont'd)

Additionally, Proposed Rule 2305 exceeds the scope of an "indirect source review program," as defined in the federal Clean Air Act. The federal Clean Air Act defines an "indirect source review program" as "the *facility-by-facility review* of indirect sources of air pollution, including such measures as are necessary to assure, or assist in assuring, that a *new or modified indirect source* will not attract mobile sources of air pollution . . ." 42 U.S.C. § 7410(a)(5 D (emphasis added). Rule 2305 does not involve any "facility-by-facility review" and is not limited in scope to "new or modified" indirect sources. Thus, the rule is a regulation of mobile sources, rather than a true "indirect source" rule. 40-14

In several respects Rule 2305 is arbitrary, capricious, entirely lacking in evidentiary support, or unlawfully or procedurally unfair." *California Building Industry Ass'n v. San Joaquin Valley Air Pollution Control Dist.* (2009) 178 Cal. App. 4th 120, 129. Under this standard "the agency must act within the scope of its delegated authority, employ fair procedures, and be reasonable. 'A court must ensure that an agency has adequately considered all relevant factors, and has demonstrated a rational connection between those factors, the choice made, and the purposes of the enabling statute.'" *Ibid*. 40-15

The District's stated purpose for the rule is to assist in meeting state and federal air quality standards—principally the US EPA's 8-hour ozone standard. Yet many aspects of Rule 2305 are disconnected from this purpose. To the extent that the zero-emission and near-zero-emission trucks are not available on a scale to satisfy the industry's collective WAIRE Points obligation, operators will be required to either: 1 adopt other technologies such as installing on-site electrical truck charging or hydrogen fueling infrastructure, solar panels, or air filtration systems in local residences, schools, daycares, hospitals, or community centers; or (2) paying the District the mitigation fee. Of course, if the zero-emission and near-zero-emission trucks are not widely available, installing charging and fueling infrastructure for them won't reduce any emissions. Nor will installing solar energy panels or indoor air filters do anything to reduce truck emissions or ambient ozone concentrations. 40-16

We reserve our right to challenge the District's legal authority to adopt and enforce Rule 2305 on these and any other legal or constitutional grounds. 40-17

Mitigation Fee/Tax

Rule 2305 also constitutes an illegal tax. The rule requires warehouse operators to satisfy their obligations by either adopting certain technologies primarily by the purchase and use of zero-emission or near-zero-emission trucks or infrastructure for the same) or paying the District a "mitigation fee." Currently, zero-emission and near-zero-emission technologies are not commercially available on a scale to enable warehouse operators to satisfy their collective compliance obligation. Therefore, warehouse operators will have no option but to pay the fee. The District concedes in its AQMP that "additional research and demonstration are needed to commercialize zero- and near-zero emission technologies for the heavier heavy-duty vehicles with gross vehicle weight ratings greater than 26,000 pounds . [AQMP at 4-24.] Moreover, the District concedes in its staff report that some of the WAIRE menu technologies including zero-emission class 8 trucks) are not currently technically feasible. 40-18 40-19 40-20

The District states that it will use the mitigation fees to subsidize the purchase of zero-emission and near-zero emission trucks and electric charging infrastructure. But if there are not enough zero-emission and near-zero-emission trucks to satisfy the warehouses' collective WAIRE Points obligation, there won't be clean trucks available to subsidize. 40-21

The District estimates that there are about 750,000,000 square feet of warehouse space that will be covered by this rule. Thus, warehouse operators could collectively pay the SCAQMD hundreds of millions of dollars per year in mitigation fees under Rule 2305 alone, up to $630 million by the estimate of staff. For comparison, the SCAQMD's entire budget last year was $173 million, and the budget for its Carl Moyer program was $30 million. Thus, Rule 2305 is likely to bring in far more revenue for the District than it can spend reducing NOx and DPM from truck emissions. 40-22

Moreover, the District has not yet proposed any written subsidy plan or program to control expenditure of the mitigation fee, and it is not clear when, if ever, it will have such a plan. Furthermore, throughout the discussions of PR 2305 no copy of any plan has been provided for discussion by the Board or any of the stakeholders, even though there certainly have been various questions and comments of concern about this "program" by a broad spectrum of stakeholders.

The actual rule itself has just a short paragraph on page 10 that only sets out the amount of the "mitigation fee" at $1,000 and says it is to be paid at the time of the Annual WAIRE Report. Nothing else. It does not even mention there will be any "WAIRE Mitigation Plan". 40-23

There is a less than a one-page reference of a "WAIRE Mitigation Program" on page 39 of the Draft Staff Report. This is where it is stated that it will use the mitigation fee proceeds to subsidize the acquisition of zero-emission and near-zero-emission trucks, or charging/fueling infrastructure. But, again, if those trucks are not widely available there is no assurance as to how much, if any, benefit the mitigation fee will have on air quality.

Moreover, this brief description on page 39 specifically states that "Because this funding program is wholly within the control of South Coast AQMD, funds may be combined with other incentive programs as allowable on a case-by-case basis." So, this sounds more like funds generated from a tax that can be used for a wide variety of purposes. 40-24

There are many other issues. like lack of any nexus, surrounding the tax issue, but, in conclusion, the District lacks legal authority to issue taxes. It may impose regulatory fees. But regulatory fees must be limited to the costs required to administer a regulatory program and may not be levied for unrelated revenue purposes. See Health Saf. Code, § 40522.5(a). The District is proposing a separate regulatory fee in a companion rule Rule 316) to cover its costs of administering Rule 2305. Thus, the mitigation fee imposed by Rule 2305 is a special tax requiring approval by a two-thirds majority of the voters within the south coast district. Cal. Const., art. 13A, § 4; art.13C §1; Govt. Code, § 53722; see also *Santa Clara County Local Transp. Authority v. Guardino* 1995) 11 Cal.4th 220, 231-233.

Truck Emissions Have and Will Continue to Decrease Dramatically

While PR 2305 claims to be about warehouses, there is no question the rule is solely about trucks and truck emissions, and really aimed at heavy duty truck HDT) fleets. The organization in California that has the authority regarding truck emissions, the California Air Resources Board (CARB), has enacted numerous rules regulating truck emissions and many more are coming. Truck emissions have actually DECLINED and will continue to DECLINE. 40-25 40-26 40-27

The decline has been dramatic. All of the various rules from CARB and US EPA have reduced particulate matter PM) emissions by 99% and NOx emissions by 90%. CARB has indicated that their own tests of the impact of requiring diesel particulate filters on trucks since 2014 demonstrate that "…*PM filters virtually eliminate PM from truck exhaust* and that the….*air quality impacts* following the adoption of PM filters into the on-road fleet *have been substantial*."

The reality is CARB has already adopted an entire suite of regulations requiring the trucking industry to meet the cleanest standards. They are the strictest rules in the country and cost the trucking industry about $1 billion a year. CARB has stated the enhanced compliance provisions means 300,000 older diesel trucks will be cleaned up, which would be "…the equivalent of removing every single passenger car off California's roads in 2023."

Additional rules include the Drayage Truck Rule, the Tractor-Trailer Greenhouse Gas Reduction Measure, the 5-Minute Idling Rule, Refrigerated Trailer Rule, and the Periodic Smoke Inspection Program. Just this past summer CARB adopted the Low NOx Omnibus rule that will reduce NOx an additional 75% by 2024 and 90% by 2027 over and above the 90% plus reductions that have already been achieved, along with the Advanced Clean Trucks Rule.

In 2021, CARB is scheduled to adopt an Advanced Clean Fleets rule and a Truck Refrigerated Unit (TRU) rule, which will bring even further emissions reductions. 40-27 (cont'd)

These rules cover a wide variety of issues and approaches to decreasing truck emissions. Thus, there is no question that the entire field of decreasing truck emissions is being addressed and will continue to be aggressively pushed by the agency with the real authority to make a true impact, CARB. The reality of what is truly going on regarding decreasing truck emissions certainly calls into question the need for and role of PR 2305.

Most Warehouse Operators do not Control What Trucks are Bought or Used

It is also well known, and staff admits, that the vast majority of warehouses do not own trucks and have no need to buy them. This means an operator would have no reason to buy NZE or ZE trucks. So, this is not a realistic option.

Not only do the vast majority of warehouse operators not own any trucks, they also have no control over what trucks come and go to the facility. It is the shipping company that makes all the decisions about what trucks are used. The operator does not have any relationship to the shipping company. The operator cannot direct the shipper to only send a ZE or NZE truck to their warehouse. The operator does not even know what type of truck might arrive at the warehouse. It would be by complete chance that NZE or ZE trucks were used, even if there were any commercially available heavy-duty trucks. So, again, this is not a "feasible" option. 40-28

PR 2305 Negatively Impacts Incentive Funding of New Trucks

There is no question the primary focus of PR 2305 is to force the turnover of the truck fleet from diesel to ZE and NZE trucks. It has been repeated many times by the SCAQMD staff and the Governing Board that incentive money is the key to achieving that objective due to the much higher cost of lower emissions trucks. Yet, staff has admitted that any truck purchased with incentive funds could not get WAIRE points credit. Staff has stated that the only way to get WAIRE points for the purchase of a truck is to NOT use incentive funding. So, this ISR will actually serve as a disincentive to purchase lower emissions vehicles, the opposite of what is trying to be achieved. 40-29

Ability to Have Sufficient EV Truck Purchases and Visits is Speculative

While there is a lot of effort being undertaken to develop newer technology, it is widely known that there are no the commercially available Class 8 trucks, which are the ones that are the focus in relationship to warehouses. It is also unknown when they might become sufficiently commercially available for any type of widespread use. Even once they might begin to be available, in what quantity? Any electric trucks will be spread across the entire nation, not just the warehouses subject to this rule. You can't buy or use something that does not exist or is not realistically available. 40-30

Furthermore, most truck fleets are owned by small business operators with 1-5 trucks, and they don't have the capital to spend on newer trucks that will be significantly more expensive. So, again, the idea that there are going to be a lot of NZE or ZE trucks purchased in the near future is not reasonable. 40-31

The SCAQMD actually commissioned a study to look into transitioning truck fleets to electric trucks. This report, "Developing Markets for Zero Emissions Vehicles in Short Haul Goods Movement" (Report) was completed in February of 2020, but apparently never released and we do not know if the Governing Board has seen it. It is also not cited or referenced in any of the documents that have been released or any presentations given dealing with PR 2305. Yet, it raises many issues that impact this rule. Just a few points are noted below;

- Due to the different performance characteristics of electric trucks versus diesel trucks, namely range, load capacity, and refueling time, it is not a one for one trade-off between diesel and electric trucks. This can be as great as a near doubling of the fleet. Even as the technology improves, there will still be a need for additional trucks. 40-32
- The economic estimates of purchase cost of heavy-duty electric trucks are highly speculative due to lower production volumes.
- Many firms do not want to quick charge during a shift due to impacts in productivity; the long charging times mean a truck charging is one not working for quite a period of time.
- California's diesel fleet is now relatively young due to all the upgrades that have recently occurred, which means that most diesel trucks will stay on the road for many years into the future.

<u>Charging Station Installation and Usage is Speculative</u>-

Once again, there is no real analysis about trying to force warehouses to build charging stations. Even the foundational question of where the best location for any charging facility is has not been answered. Would putting a charging facility at a warehouse actually lead to a quicker turnover of the fleet? Or would building facilities at publicly accessible areas similar to truck stops that are more easily accessible to all trucks be the way to push turnover of the fleet? 40-33

Additionally, there seems to be a lot of belief that because charging stations are installed they will be used. It must be remembered the warehouse operator cannot force any truck driver to use the charging station or the hydrogen station. That is entirely up to the decision of the truck driver, just as you decide when and where to refuel your car. So, the warehouse operator has to just hope the charging station or hydrogen station will be used. Thus, getting points for the use of the stations is completely arbitrary. 40-34

Simply mandating the installation of EV charging stations does not reduce emissions and ignores the nature of the warehousing business. First, the vast majority of warehouses are leased. Leases are short term, ranging from 3-5 years, and so the tenant is not inclined to go through the complicated process and cost of installing a charging station on a property they do not own. By the time the charging station is built, which staff admits can take years, the lease may end. Plus, once the lease ends, the tenant cannot take it with them, so they end up merely installing infrastructure on property they do not own. There is no incentive for the warehouse operator to install EV charging stations. 40-35

Also, as staff admits on page 13 of the WAIRE Menu Technical Report, currently "…the higher power chargers used for heavy duty vehicle charging have yet not followed a common standard, and proprietary charging systems are commonly tailored to each vehicle." So, the operator does not know what charging infrastructure to install, and even if they did it may not work on the truck that shows up at the warehouse. This all increases the likelihood of stranded assets and added costs to replace a station. Thus, it is imperative that a common truck charging system be adopted before there are any rules focused on the installation or use of charging stations. 40-36

Currently, there are no commercially available heavy-duty electric trucks. So, one would not install a charger that will not be used. Even once there may be commercially available heavy-duty trucks, it is unclear how many over what period of time they will be manufactured. The proposed rule does not address this issue. It will take many years for sufficient for the manufacturers to produce a sufficient number of EV trucks that can use any charging stations on a daily basis or very frequently at all. So, again, the idea if getting WAIRE points to really count is not actually feasible and may not be for decades. 40-37

Since this rule only applies to existing buildings, SCAQMD is mandating the retrofit of facilities which were built to meet certain requirements of the city or county. All safety and building code requirements would still have to be met, such as parking spaces, which would be the most likely area to be used. There is the issue of whether there is even room to build EV infrastructure. Staff acknowledges that there would have to be a "…dedication of space for electrical equipment and vehicle parking…" Most existing warehouse sites were not developed with excess space that is not being used. Staff makes reference to the Floor Area Ratio FAR) as an indicator, but that is not accurate. The FAR is set by the city or county at the time a warehouse is built to cover the requirements they have for landscaping, setbacks, auto parking, the needed area for trucks to safely maneuver on the property, trailer storage areas and more. It is not just vacant, available land. 40-38

Also, truck drivers do not have idle time to wait at a warehouse once the truck has been unloaded, and especially if they have taken on a load. They must quickly leave to get another load or deliver their cargo. Truck drivers do not get paid for waiting at a warehouse while hours of charging their vehicles are taking place. 40-39

There are additional challenges relating to the entire electrical infrastructure (i.e., trenches, transformers, switchboards, conduit, etc. required to accept the additional power for the charging station. There is a great deal of accompanying infrastructure. Staff admits many facilities "may not have sufficient access to electrical utility infrastructure connections onsite or nearby." (Draft Staff report, page 117). This means the utilities will have to bring all that is needed to the property itself before any onsite work is even feasible, a huge expense. The tenant has no control over whether the utility might be willing to take on that expense and effort. 40-40

There are also growing concerns about the pressure put on electrical infrastructure that is in some cases already under stress, especially in congested areas such as Southern California. It is unknown what is the impact on the electrical power grid, and what improvements may be required to the grid.

Then there is the requirement to count each actual truck trip to the warehouse, and this has to be "collected using methods that contemporaneously record the truck trips and that are verifiable." Page 5 of PR 2305 This is something that has never been done. Although staff tries to make this all sound easy, it is not, especially since you have to know if the truck is a ZE or NZE truck to get any WAIRE points. Plus, you cannot use the so-called "proxy" for determining the class of truck as the WAIRE menu has different points attributable to different classes of trucks. So, this would require setting up a check-in stand with employees stopping each truck to get all the needed information about each truck somehow. and contemporaneously record it. What would have to be done to make any such recording "verifiable"? Technical infrastructure would not be effective in getting the detailed information needed on if it is a diesel, ZE or NZE truck, and determine its class. 40-41

Furthermore, if a warehouse is used by more than one operator, which is about 40% of them, then this must be done by each individual operator. There certainly is not an ingress or egress assigned to any given operator. Now you have two or more check-in facilities set up to do the counting and additionally make sure which truck is going to which operator. This would take further time, decrease throughput and be inefficient. It could lead to trucks backing up into the streets, which is not wanted by anyone.

The Stringency Factor is Arbitrary

The Draft Staff Report says there were four points considered in coming to a stringency factor; a. need for emissions reductions, b.) the significance of the emissions reductions associated with warehouses, c. potential emissions reductions, and d. impact to industry. Then, supposedly "After balancing all of these factors" they somehow came to a number, .0025.

What was done to take the general description of the items and turn them into a number? Is there some model, data, mathematical equations, or anything that somehow transformed what is written in the report into a number? If so, we have not seen anything that sets out how the number was created. It just seems to have appeared on paper. 40-42

This even becomes more concerning when, as described below, staff has admitted any emissions reductions have not been modelled and are "speculative". The impact to industry, the costs, are based upon made up scenarios the staff has admitted will never happen. Based upon what has been presented, picking the number .0025 can only be seen as some arbitrary choice.

Emissions Reductions, if any, from PR 2305 are Unknown

While it is claimed there will be emissions reductions from PR 2305, the facts are no real reductions can be identified. The impact of the rule on any NOx, PM and ozone has not even been modelled, and is "speculative". 40-43

In the comments provided by NAIOP to the Notice of Preparation (NOP) of the environmental document, the SCAQMD staff was specifically asked to quantify the NOx and DPM reductions that were expected to result from PR 2305. In response, staff stated: 40-44

> "Potential changes in NOx and DPM concentrations would be speculative and have not been calculated as the underlying assumptions needed to conduct this analysis are too uncertain…" (emphasis added, Environmental Assessment (EA), C-41

Staff was also asked to quantify the amount of any ozone reductions. Staff again stated:

> "…ozone concentrations were not modeled. **Ozone concentrations cannot be reasonably calculated for individual rules** given the many variables needed to conduct this regional modeling analysis. Emphasis added, C-41)

The draft staff report also admits that "it is not possible" to determine the emissions impacts of the rule. So, instead of trying to determine any potential emissions reductions, staff came up with 18 "scenarios" and "…all 2,902 warehouses were assumed to only comply with a single scenario approach from 2021 through 2031. **No single scenario in this bounding analysis is expected to occur**." emphasis added, pg. 60) This clearly means that any supposed emission reduction "estimates" are based upon imaginary scenarios that will never happen. 40-45

NAIOP also believes there are numerous questions about the baseline inventory analysis as is set out in the separate report from Ramboll that we incorporate by reference herein as though fully set forth. This could certainly lead to any claimed emissions reductions being overstated. 40-46

Cost of Compliance is Also Unknown

In the Draft Staff Report, the only "estimated" costs of compliance to date also solely come from the same 18 scenario exercise as the claimed emissions reductions. So, as with emissions projections, any refence to costs is based upon imaginary scenarios that will never happen and provide no information as to what the actual costs of PR 2305 will be. 40-47

SIP Credit is Also Unknown.

The Board made it very clear the ability to get SIP credit for any actions taken, voluntary or not, was a necessary key issue. As the discussion of any potential approach to warehouses began, many meetings were held where the topic of SIP creditability and how to achieve it was discussed. Staff made it very clear that any approach would have to show it resulted in achieving SIP credits. That seems to have been dropped.

40-48

As staff has repeatedly said throughout the discussion of an ISR, " SIP creditable emission reductions must satisfy five key "Integrity Elements". Namely, the emission reductions must be quantifiable, enforceable, verifiable, surplus, and real." original emphasis, Draft Staff report, page 146) Staff has not even attempted to show that any of the requirements in PR 2305 meet those standards. So, how much SIP credit will the SCAQMD get for this rule, if any?

A careful analysis of Appendix D in the Draft Staff Report reveals that PR 2305 will not produce any Prospective SIP credit, meaning that the reductions in the regulation do not meet EPA's "Integrity Elements". Staff elaborates that the primarily reason there are no creditable emission reductions is "because some emission reductions from PR 2305 will at least partially overlap with other SIP-creditable measures." Staff does not indicate how much overlap there could be, and it is certainly possible that there will be 100% overlap. In addition, while the draft Staff Report speculates that retrospective SIP credits could be generated in the future, no estimate of the amount of credits is provided.

Installation and Use of Solar Panels and Filters in Existing Buildings

According to PR 2305, "The purpose of this rule is to reduce local and regional emissions of nitrogen oxides and particulate matter, and to facilitate local and regional emission reductions associated with warehouses and the mobile sources attracted to warehouses in order to assist in meeting state and federal air quality standards for ozone and fine particulate matter." How do these items in the WAIRE menu reduce or facilitate local and regional emissions reductions or assist in meeting state and federal air quality standards? They don't, and are clearly far beyond the scope and purpose of this rule and any ISR.

40-49

Solar panels and filters will also not create any SIP credits. The Draft Staff Report makes it clear that these two WAIRE meu items are not sources that may lead to any SIP credit.

40-50

The true complexity of trying to use solar panels or install filters is not even discussed in the staff report and needs to be considered. First, as to solar panels, since this rule is solely aimed at existing warehouses there is the fact that most existing warehouse roofs do not have the load bearing capacity to handle solar panels. Thus, to place solar panels would require an entire rebuilding of the roof. You again have the situation where the operator is not the owner of the building with a short lease and does not want to improve someone else's building with an asset with a useful life of around 20 years for others to use. Additionally, it is complicated and takes a long time to get all parties to agree to the necessary approvals, especially from the utilities and may require system upgrades and an interconnection study, and the list goes on.

40-51

Installing high efficiency filter systems in schools, daycare centers, hospitals and community centers is obviously very expensive in such large buildings. Yet, you would only get two points for each system, so there is no cost-effective reason to think of this option. Warehouses are not in the business of installing filters and here the number of WAIRE points, about four per filter, does not make this a real option or in any way cost-effective.

40-52

Missing/Incomplete Documents

First, not all the relevant documents have been released, so it is impossible to provide a thorough analysis of the rule. It has been indicated the Socioeconomic Assessment and the Comparative Analysis of Rules will not be released until 30 days before the hearing, which would be today, and it appears there could be other documents released as well.

40-53

More importantly, throughout PR 2305 there are numerous references to the operator or owner having to comply with the "WAIRE Program Implementation Guidelines". While these "Guidelines" are an integral part of PR 2305, they have never even been described, presented or discussed in any way. The only thing we know is the name, and staff just recently indicated they may be released by March 3. So, obviously, we cannot comment on the "Guidelines" at this time, and even if they are released there is no time to analyze them, comment, and have any actual discussion of the Guidelines. 40-53 (cont'd)

As we analyzed the publicly available information, it became clear that an extensive amount of information was missing to fully understand and analyze PR 2305. Thus, Public Records Act requests were made, and we appreciate the large volume of information that has been provided to date, yet we have been told there is more information to be produced and some of it may not be provided until after the hearing on PR 2305. 40-54

There is also the Environmental Assessment EA), a 654-page document to which comments are due March 12, 2021. We appreciate that staff does take comments seriously and they "…want to ensure responses are appropriate." Staff made it clear to the Warehouse ISR Working Group in discussing the responses to the Notice of Preparation (NOP of the EA, a 133-page document, that "This takes time." And we agree. Since staff must review the comments, which will be far more extensive than responses to the NOP, it is difficult to understand how in three weeks they could properly analyze comments, make any needed revisions to the EA and still transmit it to the Board in time for them to properly analyze PR 2305. 40-55

Conclusion

In light of the voluminous information that has been and is still being developed regarding this very complex, unusual rule, we are concerned about the Board truly having the proper amount of time to analyze everything surrounding PR 2305. The May 4, 2018 motion that was approved by the Board to proceed with a warehouse ISR included direction the Board was to receive progress reports every 4-6 months that should include information about key issues such as potential emissions reductions, cost of compliance, commercial availability, SIP credit and other matters. Unfortunately, the Board has not been kept apprised as promised. A sweeping rule with major consequences to jobs, the economy and with science needing careful analysis, it makes no sense the April 2, 2021 will mark the first time the full Governing Board will be thoroughly brought up to date on PR 2305. 40-56

We thank you for allowing us to comment on PR 2305. As you can see, there are many issues and concerns surrounding the rule as proposed. Based upon what is currently before us, we must respectfully submit that PR 2305 should not be approved. 40-57

Sincerely,





Timothy Jemal
CEO, NAIOP SoCal

Robert Evans
Executive Director, NAIOP Inland Empire

Cc: Governing Board Members

SOUTHERN CALIFORNIA EDISON

March 2, 2021

Sarah Rees, Ph.D.
Deputy Executive Officer
Planning, Rule Development & Area Sources
South Coast Air Quality Management District
21865 Copley Dr., Diamond Bar, CA 91765

Re: SCE Comments on Proposed Warehouse Indirect Source Rule

Dear Dr. Rees:

Southern California Edison (SCE) appreciates the opportunity to comment on the South Coast Air Quality Management District's (SCAQMD) proposed Warehouse Indirect Source Rule (ISR). 41-1

SCE supports the SCAQMD Warehouse ISR and improving air quality in the region.

SCE supports the Warehouse ISR and improving air quality in the region and especially appreciates the emphasis SCAQMD has placed on zero-emissions (ZE) technologies as a critical component of achieving significant emissions reductions in the warehouse sector, while still maintaining a flexible menu of other technology options for warehouse owners and operators to achieve compliance. SCE believes SCAQMD's continued encouragement to transition fleets to zero-emission vehicles (ZEVs) is especially important because procurement decisions made today will impact California for generations to come. SCAQMD's focus on ZEVs sends an important market signal. Encouraging transition to ZEVs could be an economic engine for California and our region in the coming decades and create thousands of good paying, skilled jobs. 41-2

With 42% of NOx emissions in Southern California coming from goods movement,[1] transitioning to a ZE medium- and heavy-duty (MDHD) truck fleet has the potential to dramatically reduce local and regional air pollution impacts from this sector, particularly in communities disproportionately impacted by truck emissions. The Warehouse ISR would achieve emissions reductions from both the direct warehouse operations and indirect truck emissions. As a business member of the San Bernardino, Muscoy AB 617 Community Steering Committee (CSC), SCE recognizes and has heard directly from the community that reducing local emissions is critical. Specifically, the San Bernardino, Muscoy CSC, in its Community Emission Reduction Plan, prioritized the pursuit of indirect source rules that would require emission reductions from warehouse operations.[2] The CSC and residents of San Bernardino, Muscoy are counting 41-3

[1] "*Zero-Emission Drayage Trucks Challenges and Opportunities for the San Pedro Bay Ports*," p. 6, UCLA Luskin Center for Innovation, October 2019. https://innovation.luskin.ucla.edu/wp-content/uploads/2019/10/Zero_Emission_Drayage_Trucks.pdf

[2] *Assembly Bill (AB 617) Community Air Initiatives, Community Emissions Reduction Plan, San Bernardino, Muscoy,* Chapter 5c: Warehouses: https://www.aqmd.gov/docs/default-source/ab-617-ab-134/steering-committees/san-bernardino/cerp/carb-submittal/final-cerp.pdf?sfvrsn=9

on the development of the Warehouse ISR to achieve emission reductions needed in their community. Addressing emissions from warehouses is vital for improving air quality to get closer to achieving attainment designations in the South Coast Air Basin, addressing the climate crisis, and addressing environmental justice issues in communities near warehouses. 41-3 (Cont'd)

SCE supports customers in transitioning truck fleets to zero-emissions electric alternatives.

SCE is committed to helping customers identify electric infrastructure solutions to meet regulatory compliance commitments while also minimizing costs. SCE's Charge Ready Transport program will help accelerate infrastructure deployment and reduce costs for fleet owners over a five-year period (2019 to 2024) by working with customers to install electric infrastructure at eligible sites to support MDHD electric vehicles. SCE appreciates that the Warehouse ISR allows Warehouse Actions and Investments to Reduce Emissions (WAIRE) points to be earned from electric infrastructure installed with Charge Ready Transport funding. With an approved total program budget of $356.4M, the program will achieve a minimum of 870 sites supporting approximately 8,500 MDHD electric vehicles within SCE's service territory in Southern California, a majority of which are also within SCAQMD jurisdiction. A minimum of 40% of SCE's budget for this program must be spent in disadvantaged communities, and also a minimum of 25% of the budget must serve vehicles operating at ports and warehouses. SCE also provides a rebate toward the cost of the qualified charging stations for eligible customers.[3] 41-4

Additionally, SCE's commercial EV rates help to reduce costs for commercial fleet customers interested in fueling with electricity. Launched in 2019, the rates waive demand charges over a five-year period and then gradually re-introduce them in a graduated manner over the subsequent five years. The rate also provides price signals to create opportunities for maximizing savings while charging during low-price periods. Additional incentives, such as revenues from Low Carbon Fuel Standard credits, can serve as an offset to the costs of fueling with electricity, further increasing the favorable economics of electrifying fleets.

SCE also provides resources and assistance for customers to navigate questions and challenges associated with electrifying vehicle fleets. SCE offers fleet assessments that provide customers with reports of vehicle options for fleets, associated benefits for going electric, customized rate analyses to help customers understand potential fuel costs, an online publicly available fuel cost calculator,[4] along with additional information on utility and non-utility programs and incentives. SCE also works onsite with customers to offer an assessment of the feasibility of installing infrastructure to serve potential EV fleet deployments. By providing consultation on infrastructure needs and siting, rates, charging needs and optimal siting of required charging infrastructure, SCE stands ready to help support customers utilize electrification as a means to comply with the Warehouse ISR.

Successful implementation of ZEV deployment requires continued forward-planning for infrastructure and electric system needs.

Utilities, the SCAQMD, and fleets and facilities increasingly need to work together to anticipate and assess impacts of growing EV-driven demand and proactively plan accordingly. A strong, resilient grid ready for mass EV adoption that can achieve significant emission reductions is attainable through advanced forward planning, increased industry coordination, and new collaborative approaches in data- 41-5

[3] SCE Charge Ready Transport Program details: https://crt.sce.com/overview
[4] SCE Electric Fleet Fuel Savings Calculator: https://fleetfuelcalculator.sce.com/

sharing and cooperation between public and private stakeholders. It is important to plan ahead in the early years to ensure that sufficient EV charging infrastructure needs are identified and addressed to meet longer-term policy and regulatory timelines, achieving important air quality improvement benefits. Electrification projects require site-specific planning and sometimes can take more than one year to implement. As such, SCE appreciates that the Warehouse ISR allows warehouses to earn WAIRE points from critical milestone steps such as purchase of Electric Vehicle Supply Equipment, construction mobilization and charger energization. Time for advanced planning is especially important for ensuring the grid is ready to support the increased EVs in sites and corridors affected by the Warehouse ISR which may require proactive grid expansion and upgrades that are potentially initiated to be ready to meet customer needs and regulatory timelines. 41-5 (cont'd)

SCE is assessing system and EV infrastructure planning needs in the region. SCE is currently evaluating when and where EVs are likely to appear as a charging load, the potential magnitude of that load, and what potential infrastructure and system solutions would be necessary to accommodate that load. These infrastructure assessment and planning activities will be greatly aided by more and better data and information related to where, when, and how EVs will charge. The data reported through the Warehouse ISR would be incredibly insightful for infrastructure assessment and planning within the South Coast Air Basin. SCE requests that the data gathered be shared in order to help shape a clearer, more reliable picture of future system needs for large-scale fleet transitions to EVs and ultimately help utilities and other charging support providers confidently plan and make decisions to provide the necessary infrastructure to support fleet and facility plans in the region. 41-6

Thank you for considering our comments regarding this important regulation. While there will be challenges as zero-emission electric vehicles increase in commercial fleets, SCE views these challenges and work ahead as a critical call to action. SCE is committed to doing its part and partnering with the Air District, communities, and our customers to ensure successful implementation of the Warehouse ISR as well as the related necessary deployment of zero-emission vehicle technology in the region. 41-7

Sincerely,

/s/ Laura Renger

Laura Renger
Director, Electrification & Customer Service Policy
Regulatory Affairs
Southern California Edison

CC: Ian McMillan, SCAQMD Planning & Rules Manager
Victor Juan, SCAQMD Program Supervisor

March 1, 2021

Mr. Ian MacMillan
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178

Re: Comments on Proposed Rule 2305

Dear Mr. MacMillan:

On behalf of over 56,000 members of the Southwest Regional Council of Carpenters, I write to respectfully request the board postpone any adoption of Rule 2305 (Indirect Source Rule or ISR) in light of the current economic and public health crisis. We are concerned that the current language and timeline of Rule 2305 would add uncertainty to the market and respectfully request that more analysis is given to its economic impact, particularly on construction. 42-1

While we strongly support a just transition to a clean energy economy, a policy change this broad and at this time would be destabilizing for the industry. The COVID-19 pandemic is a once-in-a-century event that has upended Southern California's economy and construction sector. The impacts of the pandemic have particular relevance to the warehouse industry as the growth in e-commerce has led to a surge in warehouse demand. 42-2

To best implement this policy, we ask that the SCAQMD continue this item at least 90 days so that the industry and its labor partners can more accurately assess its long-term impact. A greater understanding of the role the pandemic and the sudden shift to e-commerce is needed before a change of this magnitude is implemented. Thank you again for your consideration of this important issue. 42-3

Sincerely,

Daniel R. Langford

Daniel Langford
Executive Secretary-Treasurer
Southwest Regional Council of Carpenters

RAMBOLL

ENVIRONMENT
& HEALTH

Mr. Victor Juan
Warehouse ISR Program Supervisor
South Coast Air Quality Management District
21865 Copley Dr
Diamond Bar, CA 91765

REVIEW OF THE SOUTH COAST AQMD'S PRELIMINARY DRAFT STAFF REPORT FOR PROPOSED RULE 2305 AND PROPOSED RULE 316

March 2, 2021

Ramboll
5 Park Plaza
Suite 500
Irvine, CA 92614
USA

T +1 949 261 5151
F +1 949 261 6202
https://ramboll.com

Dear Mr. Juan:

On behalf of NAIOP, Ramboll US Consulting, Inc. (Ramboll) has reviewed South Coast Air Quality Management District (AQMD)'s Preliminary Draft Staff Report for the Proposed Rule (PR) 2305 and PR 316[1] dated January 2021. Our review included the supporting calculation spreadsheets (pr-2305-draft-baseline-emission-inventory.xlsx, pr-2305-draft-scenario-calculations.xlsm, and pr-2305-draft-truck-emission-rate-calculations.xlsx)[2] that were released in December 2020. 43-1

SUMMARY OF FINDINGS/PURPOSE OF RULE

As stated in Chapter 1 of the Preliminary Draft Staff Report, the primary goal of PR 2305 and PR 316 is to achieve NOx emissions to meet the near-term attainment deadlines in 2023 and 2031 for federal air quality standards for ozone, however the emission analysis presented in this report does not substantiate these NOx reductions. 43-2

- Table 17 of the Preliminary Draft Staff Report presents the range of NO_X reductions associated with the bounding scenarios for rule implementation as "zero" tons per day to 5.4 tons per day in 2023 and "zero" tons per day to 21.8 tons per day in 2031. Such a range of outcomes indicates that it is uncertain, and may be zero.
- The upper end of the range in 2023 is based on Scenario 5 (ZE Class 8 truck visits from non-owned fleet) which is not substantiated since ZE trucks are not currently commercially available. In 2031, the higher end of the range is based on Scenario 7 (Pay Mitigation Fee). As stated in the below in the section entitled WAIRE Mitigation Program, these reductions are likely overestimated. 43-3
- Further as noted subsequently in the section entitled Scenario Analysis, the discounting method used for the implementation of ACT, Omnibus, and HD I&M regulations is not accurate. 43-4

[1] Available at: http://www.aqmd.gov/docs/default-source/planning/fbmsm-docs/preliminary-draft-staff-report.pdf?sfvrsn=14. Accessed: February 2021.

[2] Available at: http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/facility-based-mobile-source-measures/fbmsm-mtngs. Accessed: February 2021.

Hence, the analysis presented in this report does not demonstrate with substantial evidence that PR 2305 will provide NOx reductions beyond those generated by CARB regulations, despite the enormous costs that will be involved in complying with this rule. 43-5

Further, as stated during AQMD's Scientific, Technical & Modeling Peer Review Advisory Group Meeting[3] on January 27, 2021, the small quantities of NO_X reductions generated by this rule will not be sufficient to decrease the ozone concentrations in the basin. A recent study by Parish et al,[4] indicates that it could take ~35 years of additional emission control efforts in the Los Angeles region to reach the federal ozone standard of 70ppb, because the background ozone concentration in the region is ~89% of the standard. Thus, it is unclear how this rule will help the basin attain the ozone standard by 2023, and unclear what the cost effectiveness of this rule is. 43-6

Our specific comments are summarized below and based on the information reviewed to date. To the extent new information becomes available, our comments may change.

BASELINE EMISSIONS INVENTORY

The following comments pertain to the baseline emissions inventory prepared for 2019, 2023, and 2031. We understand that emissions of oxides of nitrogen (NO_X) and diesel particulate matter (DPM) were developed for these three calendar years for heavy-duty trucks, passenger vehicles, transport refrigeration units (TRUs), and yard trucks. 43-7

Truck Emissions

Mobile Emissions Inventory Model

The AQMD mobile emissions were developed using EMFAC2017, while a newer version of the model with updated model assumptions, EMFAC2021, was released in Mid-January 2021.[5]

- This updated version includes the incorporation of the California Air Resources Board's (CARB's) Advanced Clean Trucks (ACT)[6] and Low NOx Omnibus[7] regulations. While AQMD's analysis in the Preliminary Draft Staff Report performs outside-model adjustments for these regulations, it is not clear how their outside-model adjustments compare to the EMFAC2021 analysis. To ensure the AQMD has accounted for these so that there is not double counting of reductions, the ACT and Low NOx Omnibus regulations should be accurately accounted for in the inventory. 43-8
- EMFAC2021 also includes several updates[8] to the heavy-duty truck emission factors as noted below: 43-9
  - Running exhaust NO_X emission rates decrease,
  - Starting exhaust NOx emission rates increase,

[3] Available at: http://www.aqmd.gov/home/news-events/meeting-agendas-minutes/agenda?title=stmpr-meeting-agenda-january-21-2021. Accessed February 2021.

[4] 2017. Parrish, D. D., Young, L. M., Newman, M. H., Aikin, K. C., and Ryerson, T. B. Ozone design values in Southern California's air basins: Temporal evolution and U.S. background contribution. Journal of Geophysical Research: Atmospheres, 122, 11,166–11,182. https://doi.org/10.1002/2016JD026329.

[5] Available at: https://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/road-documentation/msei-modeling-tools-emfac. Accessed: February 2021.

[6] Available at: https://ww2.arb.ca.gov/our-work/programs/advanced-clean-trucks. Accessed: February 2021.

[7] Available at: https://ww2.arb.ca.gov/rulemaking/2020/hdomnibuslownox. Accessed: February 2021.

[8] 2020. EMFAC202x Updates December Workshop. December 15. Available at: https://ww2.arb.ca.gov/sites/default/files/2020-12/EMFAC202x_Dec_Workshop_20201215_rev.pdf. Accessed: February 2021.

- NO_X for older fleets decrease due to new heavy-duty deterioration model, and
- NOx decreases due to heavy-duty activity profile updates such as vehicle miles traveled (VMT) distribution by speed and number of starts by soak time, and extended idling hours.

43-9 Cont'd

AQMD should either use EMFAC2021, or confirm that these changes do not materially change the findings regarding the anticipated emission reductions.

<u>META Tool for South Coast</u>

The Preliminary Draft Staff Report states that the District's analysis incorporates the emissions reductions associated with the ACT and Low NO_X Omnibus Regulation using CARB's META tool. However, the version of CARB's META tool[9] available to the public presents zero-emission/near-zero emission (ZE/NZE) population and VMT data only for the statewide fleet. While AQMD's scenario calculation spreadsheet pr-2305-draft-scenario-calculations.xlsm provides ZE/NZE population and VMT data for South Coast heavy-duty truck fleet, it fails to state how these were derived. Without this detail it is not clear if the method AQMD used to account for ACT and the Low NOx Omnibus regulation is correct. AQMD should provide these details of the methodology for public review.

43-10

The Preliminary Draft Staff Report also stated that AQMD's analysis accounts for the reductions from the California Air Resources Board (CARB)'s proposed heavy-duty inspection and maintenance (HD I/M) program[10] using the META tool, but details of how these reductions were derived are not clear. Without this detail it is not clear if the method AQMD used to account for the HD I/M program is correct. AQMD should provide additional documentation that shows how these reductions were estimated for public review.

43-11

<u>ZE Drayage Truck Fleet</u>

The conversion of the drayage truck fleet to 100% ZE by 2035 is not incorporated into the analysis. Several regulatory actions and activities such as Governor Newsom's Executive Order (EO) N-79-20,[11] CARB's proposed Advanced Clean Fleets (ACF) regulation,[12] and the Port's Clean Air Action Plan (CAAP)[13] clearly indicate that the drayage truck fleet will be converted to a 100% ZE fleet by 2035. In order to achieve this conversion, beginning 2023 all new drayage trucks will have to be a zero-emission trucks.[14] AQMD should update their analysis to incorporate the proposed regulations as this would reduce the estimates for the 2031 baseline inventory.

43-12

<u>Trip Lengths</u>

AQMD's analysis used a basin average trip length to estimate the emissions associated with trucks travelling to and from warehouses. While a basin average value provides a general estimate across truck trip types within the basin, it may not represent the actual trip lengths of trucks visiting a

43-13

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[9] Available at: https://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/msei-modeling-tools. Accessed: February 2021.

[10] Available at: https://ww2.arb.ca.gov/our-work/programs/heavy-duty-inspection-and-maintenance-program. Accessed: February 2021.

[11] Available at: https://www.gov.ca.gov/wp-content/uploads/2020/09/9.23.20-EO-N-79-20-text.pdf. Accessed: February 2021.

[12] Available at: https://ww2.arb.ca.gov/our-work/programs/advanced-clean-fleets/advanced-clean-fleets-meetings-events. Accessed: February 2021.

[13] Available at: https://cleanairactionplan.org/strategies/trucks/. Accessed: February 2021.

[14] Available at: https://ww2.arb.ca.gov/sites/default/files/2020-12/201209drayagepres_ADA.pdf. Accessed: February 2021.

particular warehouse that would be regulated by PR 2305. As noted in Appendix B of the Preliminary Draft Staff Report, truck trip lengths can vary significantly from one warehouse to another. Therefore, using a basin average trip length does not appear to represent the actual activity for a regulated warehouse. 43-13 Cont'd

The basin average truck trip lengths and passenger car trip lengths used in AQMD's analysis to develop the baseline emission inventory are based on the 2016 Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The 2020 RTP/SCS was adopted in September 2020,[15] and SCAG made major model enhancements from a trip-based model to an activity-based model for passenger vehicle trips. It does not appear that AQMD has assessed how this updated data would impact the analysis. We recommend that AQMD assess how the data in the 2020 RTP/SCS may affect the analysis, as it may greatly change the anticipated reductions. 43-14

Internalization

As stated on Page 48 of the Preliminary Draft Staff Report, AQMD's analysis assumes a 22.2% internalization for all Class 8 truck VMT to account for the trips made between warehouses by trucks. This value is based on a study that is specific to drayage (T7 Port of Los Angeles (POLA): Heavy-Heavy Duty Diesel Drayage Truck near South Coast) trucks.[16] However, drayage truck VMT accounts for ≤25% of the overall Class 8 truck VMT and the internalization rate may be very different at other warehouses. AQMD should provide more analysis to substantiate this assumption. Without further substantiation, the assumption is arbitrary. 43-15

Yard Truck Emissions

AQMD does not provide sufficient documentation for the development of the baseline NOx and DPM emissions for yard trucks (hostlers). 43-16

- AQMD refers to the Powersys webpage (Reference 75 in the Preliminary Draft Staff Report) as a source for the activity data that is used to develop yard truck emission factors but does not provide a copy of the specific report or study from which the values were derived. Thus, we are unable to confirm their findings.
- AQMD fails to provide a source for the 1.2 hostlers per million square feet assumption for warehouses between 100,000 and 200,000 square feet. The cited source (i.e., AQMD business survey[17]) provides data only for warehouses greater than 200,000 square feet. 43-17

We recommend that AQMD provide the documentation for these assumptions used to develop the baseline inventory for yard trucks, otherwise the assumptions are arbitrary.

TRU Emissions

Page 51 of the Preliminary Draft Staff Report states that the TRU emission estimates were based on CARB's current rulemaking efforts affecting TRUs but fails to provide details of how these estimates were made. A review of the calculation spreadsheet pr-2305-draft-baseline-emission-inventory.xlsx did not reveal any additional detail. AQMD should provide additional documentation for the NOx and DPM 43-18

[15] Available at: https://scag.ca.gov/read-plan-adopted-final-plan. Accessed: February 2021.

[16] Available at: https://scag.ca.gov/sites/main/files/file-attachments/task4_understandingfacilityoperations.pdf. Accessed: February 2021.

[17] Available at: http://www.aqmd.gov/docs/default-source/ceqa/handbook/high-cube-warehouse-trip-rate-study-for-air-quality-analysis/business-survey-summary.pdf. Accessed: February 2021.

RAMBOLL

emissions factors for yard trucks that were used for the development of the baseline inventory for calendar years 2019, 2023, and 2031, otherwise the assumption is arbitrary. 43-18 Cont'd

Calculational Errors

The baseline inventory for 2019 has calculation errors in the NO_x and DPM emission factors for Class 4-7 and Class 8 heavy-duty trucks and for passenger vehicles.

- The 2019 Class 8 truck emission factors for NOx and DPM use T6 utility, T7 Ag, T7 CAIRP, T7 CAIRP construction, and T7 single construction vehicle categories instead of T7 CAIRP, T7 NNOOS, T7 NOOS, T7 POLA, and T7 Tractor. 43-19
- The 2019 Class 4-7 truck emission factors for NOx and DPM used SBUS, T6 CAIRP small, T6 instate construction (heavy & small), and T6 instate heavy vehicle categories instead of T6 CAIRP (Heavy & Small), T6 Instate (Heavy & Small), and T6 OOS (Heavy and small).
- The 2019 passenger vehicle emission factor for NOx and DPM was missing the LDT2 category.

Fixing these errors will result in higher baseline NOx emissions and slightly lower baseline DPM emissions in 2019 compared to those presented in Table 13 in Chapter 3 of the Preliminary Draft Staff Report for trucks and for passenger vehicles.

The calculations for baseline emission inventory for TRUs are erroneous. The factor applied to South Coast Air Basin TRU emissions to estimate emissions associated with cold storage warehouses in pr-2305-draft-baseline-emission-inventory.xlsx uses misaligned years (2019 square footage over the 2014 cold storage square footage). The impact of using data from aligned years (2014 data only) would be a lower fraction of cold storage square footage in SCAB in each calendar year. 43-20

SCENARIO ANALYSIS

Methodology Issues

The methodology used to estimate the emission reductions in the scenario analysis is separate and distinct from that used to prepare the baseline emission inventory.

- The differences in the approach used for the truck emission factors are particularly distinct. 43-21
  - While the baseline emission inventory applies reductions associated with ACT regulation, Low NOx Omnibus regulation, and HD I/M program to the emission factors for trucks, the scenario analysis does not apply reductions associated with all three regulations to each of the 18 scenarios.
  - That said the issues related to the truck emissions noted under the baseline inventory section (mobile emissions inventory model, META tool for South Coast, ZE drayage truck fleet, trip lengths, and internalization) apply to the scenario analysis as well. 43-22
- Although the baseline inventory does not include emissions associated with electricity use at the warehouse facilities, Scenario 11 (Rooftop solar panel installations and usage) estimates emission reductions associated with replacement of the electricity from the grid with electricity generated by the solar panel. The electricity emissions should be included in the baseline, or the reductions from solar should be removed. 43-23

The eighteen scenarios analyzed in the Preliminary Draft Staff Report that are meant to represent the range of emissions reductions that can be achieved by PR 2305 are unrealistic. These scenarios do not consider how WAIRE points might be generated due to the implementation of the CARB regulations 43-24

(ACT regulation, Low NO_X Omnibus regulation, proposed ACF regulation) and Ports CAAP, i.e., WAIRE points presented in scenario analysis are not additional to what warehouses would earn from these regulations. More realistic scenarios should be developed to substantiate what reductions are realistic to expect from this rule. 43-24 (cont'd)

Discounting Method for CARB Regulations

The discounting method used to avoid double counting of the ACT regulation, Low NOx Omnibus regulation, and HD I/M program are suspect and still potentially result in double counting. A summary of the issues noted in the calculation spreadsheet pr-2305-draft-scenario-calculations.xlsm are listed below: 43-25

- For scenarios that use NZE trucks (Scenario 1, 2, 3, 4, 8, and 9) to obtain WAIRE points, reductions associated with Low NO_X Omnibus regulation are discounted. However, reductions from the ACT regulation are not considered.
- For scenarios (Scenario 5, 6, 10, 12, 13, and 14) that use ZE trucks and ZE fueling infrastructure to obtain WAIRE points, reductions associated with ACT regulation are discounted. However, reductions from Low NO_X Omnibus regulation are not considered. 43-26
- Reductions associated with HD I/M are applied only to the discounted emissions associated with ACT/Low NOx Omnibus regulation rather than the reductions associated with the use of ZE/NZE trucks for obtaining WAIRE points. 43-27
- For scenarios that do not use ZE/NZE trucks or ZE fueling infrastructure to obtain WAIRE points (Scenario 7, 11, 15, 16, 17, and 18), reductions associated with ACT/Omnibus/HD I&M are not discounted. 43-28

Calculation Errors

NO_X and DPM reductions calculations for Scenario 1 (NZE Class 8 truck acquisitions and subsequent visits from those trucks) shown in pr-2305-draft-scenario-calculations.xlsm have errors. These calculations are using truck emissions factors for calendar year 2023 and are therefore overestimating the reductions in the calendar years 2024 to 2027. 43-29

WAIRE MENU TECHNICAL REPORT

WAIRE Points Calculation Methodology

As noted in Figure 1 of Appendix B of the Preliminary Draft Staff Report, WAIRE points assigned to each item in the WAIRE menu (seen in Table 3 of PR 2305) are estimated as a function of the cost of the item, and the regional (NO_X) and local (DPM) emission benefit that the item would provide. The methodology used to estimate NO_X and DPM emission benefits for WAIRE menu items such as NZE truck purchase, NZE truck visits, ZE truck purchase, ZE truck visits, Charging Station Usage, and Hydrogen Fueling Station Usage, are based on the truck emission factors in calendar year 2023. As seen in the outputs from the EMFAC2017 model, emission factors for trucks are expected to reduce in the future years (beyond 2023) due to implementation of CARB Regulations and the general fleet turnover to cleaner vehicles. However, the WAIRE Menu in Table 3 of PR 2305 uses a static value for the WAIRE points assigned to these menu items. This approach does not represent how the changing fleet will impact the potential emission benefits and thus the cost effectiveness. AQMD should also include an evaluation that calculates WAIRE points for these menu items in future years (2023 and beyond) to more accurately demonstrate how WAIRE points may change in the future. 43-30

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Total Cost of Ownership for Battery Electric Truck

The total cost of ownership analysis for the battery electric (BE) trucks presented in Appendix B of the Preliminary Draft Staff Report assumes that one battery electric truck can replace one diesel truck, thereby ignoring the operational implications of BE vehicle usage in the heavy-duty truck sector. Ramboll's study[18] on HD BE vehicles, specifically Los Angeles Metro's bus fleet operations, has shown that due to limited battery range, long charging times and unfavorable charging windows, more than one battery electric bus (BEB) will be needed to replace a conventional diesel bus. This is further corroborated by National Center for Sustainable Transportation's 2020 Study,[19] (that was funded by AQMD), on heavy duty trucks used for short haul goods movement. AQMD's assumption that a single battery electric truck can replace a diesel truck results underestimates the costs and therefore the WAIRE points that should be assigned to battery electric trucks in PR 2305. This should be corrected.

43-31

Annualized usage estimated for ZE infrastructure

Annualized usage estimated for ZE infrastructure (EV charger, Hydrogen Station, and TRU plugs) appear to be arbitrary. Appendix B of the Preliminary Draft Staff report presents the following annualized usage estimates for ZE infrastructure, without stating a source or basis for these assumptions:

43-32

- 165,000 kWh/year for an EV charger, which is equivalent to 10 hours of charging time per day on a 50 kW EV charger.
- 6,152 kg of hydrogen per year which is equivalent to the 165,000 kWh/year of EV charger usage.
- 10,658 kWh/year for TRU plugs which is equivalent to 4 hours of charging per day with an average power draw of 7.3 kW.

WAIRE MITIGATION PROGRAM

While Chapter 2 of the Preliminary Draft Staff Report states that the mitigation fee paid to AQMD by a warehouse operator will be used to fund NZE/ZE trucks or ZE charging/fueling infrastructure in the same geographic area that the warehouse is located, details of how this would be achieved are not presented. To understand how the NOx and DPM emissions reductions associated with the mitigation fee are achieved with the implementation of PR2305, AQMD should present the following details of the WAIRE Mitigation Program along with roll out of the regulation:

43-33

- project eligibility and selection criteria,
- application process,
- annual timeline for project selection, and
- tracking and verification of funded projects.

Without further substantiation, the basis for the reductions associated with mitigation fee are inadequate and may overestimate NO_X reductions associated with Scenario 7 (Pay Mitigation Fee). As

[18] 2016. Ramboll Environ US Corporation and M.J. Bradley & Associates, LLC. Zero Emission Bus Options: Analysis of 2015-2055 Cost and Emissions – New Transit Vehicle Technologies and Advanced Technology Implementation (OP33203093). September 29. Available at: https://static1.squarespace.com/static/53a09c47e4b050b5ad5bf4f5/t/5a60f1fc53450a3d768e51b6/1516302846755/MTA+RAMBOLL+ENVIRON+REPORT+SEPTEMBER+29+2016.pdf. Accessed: February 2021.

[19] 2020. Giuliano G., Dessouky M., Dexter S., Fang J., Hu S., Stimetz S., O'Brien T., Miller M., and Fulton L. Developing Markets for Zero Emission Vehicles in Short Haul Goods Movement – A Research Report from the National Center for Sustainable Transportation. November. Available at: . Accessed: February 2021.

stated in the previous paragraph, AQMD plans to use the mitigation fees collected from warehouse operators to fund NZE/ZE trucks or ZE charging/fueling infrastructure. However, the cost-effectiveness value used of $100,000 per ton of NOx used to estimate the NOx associated with Scenario 7 (Pay Mitigation Fee), is based on the "current criteria used for funding Class 8 NZE trucks". Since ZE trucks have a higher purchase price than NZE trucks, this cost effectiveness value is likely underestimated. Further, AQMD uses a cost effectiveness value of $247,600,000 per ton of diesel particulate matter (DPM) to estimate the reductions in DPM associated with Scenario 7 in their calculation spreadsheet pr-2305-draft-scenario-calculations.xlsm. The basis for this assumption is not stated in the spreadsheet or the Preliminary Draft Staff Report. Without further substantiation, this assumption is arbitrary.

43-33 (cont'd)

CLOSING

We appreciate the consideration of our comments. Please feel free to call Eric Lu at (949) 798-3650 if you have any comments or questions.

43-34

Yours sincerely,

Eric C. Lu, MS, PE
Principal
D 949-798-3650
ELu@ramboll.com

Joseph Hower
Principal
D 213-943-6319
JHower@ramboll.com

Varalakshmi Jayaram
Senior Managing Consultant
D 949-798-3689
VJayaram@ramboll.com

EL:eg

cc: Timothy Jemal, CEO, NAIOP SoCal
Robert Evans, Executive Director, NAIOP Inland Empire
Ian MacMillan, Planning & Rules Manager, AQMD
William A. Burke, AQMD Governing Board Chair
Ben Benoit, AQMD Governing Board Vice Chair
Sheila Kuehl, AQMD Governing Board Member
Lisa A. Bartlett, AQMD Governing Board Member
Joe Buscaino, AQMD Governing Board Member
Michael A. Cacciotti, AQMD Governing Board Member
Vanessa Delgado, AQMD Governing Board Member
Gideon Kracov, AQMD Governing Board Member
Larry McCallon, AQMD Governing Board Member
V. Manuel Perez, AQMD Governing Board Member
Rex Richardson, AQMD Governing Board Member
Carlos Rodriguez, AQMD Governing Board Member
Janice Rutherford, AQMD Governing Board Member

Holland & Knight

50 California Street, Suite 2800 | San Francisco, CA 94111 | T | F 415.743.6910
Holland & Knight LLP | www.hklaw.com

Marne S. Sussman
+1 415-743-6987
Marne.Sussman@hklaw.com

March 2, 2021

Via E-mail (rbanuelos@aqmd.gov; vjuan@aqmd.gov)

Ryan Bañuelos
Planning/CEQA
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Victor Juan
Planning, Rule Development and Area Sources
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: Comments for Proposed Rule 2305 – Warehouse Indirect Source Rule - Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program; and Proposed Rule 316 – Fees for Regulation XXIII

Dear Mr. Bañuelos and Mr. Juan:

Our client, the California Trucking Association ("CTA"), appreciates the opportunity to submit comments on the South Coast Air Quality Management District's ("SCAQMD" or "District") Preliminary Draft Staff Report ("PDSR") and Draft Environmental Assessment (" Draft EA") for the Proposed Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program; and Proposed Rule 316 – Fees For Regulation XXIII (collectively, the "Proposed Rules"). 44-1

Many members of the CTA will be directly regulated by the Proposed Rules and many others will be compelled to assist the covered warehouses in achieving compliance with the Proposed Rules. This will require substantial capital investment by CTA members and will have far reaching environmental and economic effects. The Proposed Rules as drafted are preempted by federal law and extend beyond the authority granted to the District by the State. For this reason, the District must revise the Proposed Rules before continuing with its rulemaking process.

I. Statement of Interest.

"Truck driver" is one of the most common jobs in California. There are approximately 550,000 commercial vehicles registered in California and an additional 1.5 million commercial vehicles registered in other states to operate in California. Most of these vehicles are owned by small businesses: 50% of all trucks are owned by fleets of 3 or fewer trucks and 80% of all trucks are owned by fleets with fewer than 50 trucks. 44-2

The CTA is the largest state trade association representing trucking in the United States. Its 1,800 members include both large and small fleets with an average fleet size of 20 trucks. CTA members are actively participating in the development, piloting, and demonstration of alternative fuel and electric-drive capable vehicles. In fact, some member fleets have been working to bring electric-drive vehicles to market for nearly ten years. The CTA continues to support a coordinated and measured transition to alternative fuel and electric-drive capable vehicles. 44-2 (cont'd)

II. The District Does Not Have Authority to Adopt an Indirect Source Rule that Applies to Existing Warehouses.

Prior to the adoption of any regulation, the District must determine under Health and Safety Code section 40727 that it has the authority to adopt the regulation under state and federal law. Health and Safety Code ("HSC") § 40727(a). The District cannot make such findings regarding the Proposed Rules. The District, as a creation of the Legislature, only possesses the authority specifically granted to it by state law. *PaintCare v. Mortensen* (2015) 233 Cal.App.4th 1292, 1305 ("An administrative agency 'has only as much rulemaking power as is invested in it by statute'"); *Friends of the Kings River v. County of Fresno* (2014) 232 Cal.App.4th 105, 117 (similar). The District is an administrative agency which has no inherent "police power" nor any other "authority" beyond that explicitly conferred on the District by statute. *Candid Enterprises v. Grossmont Union High School Dist.* (1985) 39 Cal.3d 878, 885. "An air pollution control district, as a special district, has only such powers as are given to it by statute and it is an entity, the powers and functions of which are derived entirely from the Legislature." 74 Cal. Atty. Gen. Op. 196 (1991) (citing *People ex rel. City of Downey v. Downey County Water Dist.* (1962) 202 Cal.App.2d 786, 795). "The powers of public [agencies] are derived from the statutes which create them and define their functions." *Imperial Irr. Dist. v. State Water Resources Control Bd.* 1990) 225 Cal.App.3d 548, 567; *see also Carmel Valley Fire Prot. Dist. v. State of California* (2001) 25 Cal.4th 287, 299-300. "No matter how altruistic its motives, an administrative agency has no discretion to promulgate a regulation that is inconsistent with the governing statutes." *Terhune v. Superior Court* 1998) 65 Cal.App.4th 864, 874. That an agency has been granted some authority to act within a given area does not mean that it enjoys plenary authority to act in that area. *Railway Labor Exec. Ass'n . National Mediation Bd.* (D.C. Cir. 1994) 29 F.3d 655, 670 en banc). 44-3

The District has identified no law that expressly grants it authority to adopt an indirect source rule ("ISR") that regulates existing sources. Federal law allows, but does not require, states to adopt an "indirect source review program" as part of the state implementation plan. 42 U.S.C. § 7410(a)(5)(A)(i). However, an "indirect source program" is defined by statute to mean "the facility-by-facility review of indirect sources of air pollution, including such measures as are necessary to assure . . . that a ***new or modified*** indirect source will not attract mobile sources of pollution" that would cause or contribute to an exceedance of or prevent the maintenance of a National Ambient Air Quality Standard ("NAAQS"). *Id* at § 7410(a)(5)(D) (emphasis added). The EPA expressly understood this to apply to the evaluation of indirect sources "effects on air

quality ***prior to*** their construction and modification." 38 Fed. Reg. 9599 (1973) (emphasis added).[1] Nowhere does federal law grant states the authority to develop an indirect source program that applies to ***existing*** sources.

44-3
(cont'd)

The authority granted to Air Districts to promulgate indirect source rules under the California Clean Air Act is similar. Section 40716 of the Health and Safety Code provides that a district "may adopt and implement regulations" that ***both*** "[r]educe or mitigate emissions from indirect and areawide sources of air pollution" and "[e]ncourage or require the use of measures which reduce the number or length of vehicle trips." The District does not substantiate its claim that the Proposed Rules will reduce the number or length of trips. But even if it did, the District's authority is further proscribed. First, the statute specific to the District grants limited authority for the District to create an indirect source rule. It explains that the District shall provide for indirect source controls for "any ***new*** source that will have a significant effect on air quality in the South Coast Air Basin." HSC § 40440(b)(3) (emphasis added).[2] "In the grants [of powers] and the regulation of the mode of exercise, there is an implied negative; an implication that no other than the expressly granted power passes by the grant; that it is to be expressed only in the prescribed mode…." *Wildlife Alive v. Chickering* (1976) 18 Cal.3d 190, 196. The express statutory authority of the District is thus to implement indirect source controls for ***new*** sources only, not existing, unmodified sources. "Any reasonable doubt concerning the existence of the power is to be resolved against the agency." *California Chamber of Commerce v. State Air Resources Board* (2017) 10 Cal.App.5th 604, 620. Second, the statute requires all air districts to adopt "indirect source control programs." *Id.* at § 40918. This term is not defined in California law, but is identical to the term used under the federal Clean Air Act in which indirect source control programs are limited to ***new or modified*** indirect sources. 42 U.S.C. § 7410(a)(5)(D). Thus, the Legislature did not grant the District authority to require existing, unmodified sources to comply with an indirect source control program.[3]

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[1] "It should be emphasized that the primary purpose of the review procedures is to insure that ***proposed projects*** are designed and located in a manner consistent with air quality requirements." *Id.* (emphasis added).

[2] The District has also not demonstrated that "there are high-level, localized concentrations of pollutants" in the vicinity of covered warehouses. *See* HSC 40440(b)(3). The PDSR relies on an association between CalEnviroScreen rankings and warehouses. PDSR at 16-17. CalEnviroScreen uses a suite of 19 indicators to characterize pollution burden (12 indicators) and population characteristics (7 indicators). Each indicator is assigned a score for each census tract in the state based on the most up-to-date suitable data. Scores are weighted and added together within the two groups to derive a pollution burden score and a population characteristics score. Those scores are multiplied to give the final CalEnviroScreen score. These indicators are not limited to air quality, let alone to NOx which is a basin-wide contaminant (not one of "localized concentrations"). Instead, the indicators include drinking water contaminants, pesticide use, toxic releases from facilities, lead risk from housing, clean-up sites, ground water threats, and numerous other factors wholly unrelated to "high-level, localized concentrations of pollutants." See Office of Environmental Health Hazard Assessment, Indicators Overview, available at https://oehha.ca.gov/calenviroscreen/indicators.

[3] It also appears no court has upheld such a program. *See National Association of Home Builders v. San Joaquin Valley Unified Air Pollution Control District* (2010) 627 F.3d 730 (upheld ISR program applied only to qualifying

The only support that the District references for its novel interpretation of its authority to adopt an existing source ISR is an Attorney General Opinion from 1993. Atty. Gen. Opinion 92-519 (1993). While opinions of the Attorney General are entitled to great weight, they are not binding law and may be "simply wrong." *Building Industry Assn. v. City of Livermore* (1996) 45 Cal.App.4th 719, 730. In addition, the Attorney General cannot expand the authority granted to an entity created by state law via an advisory opinion. As explained above, the District's authority only extends to the powers which it was expressly granted by the Legislature. *See PaintCare*, 233 Cal.App.4th at 1405; *Valero Refining Company-California v. Bay Area Air Quality Management District* (2020) 49 Cal.App.5th 618, 640 (same). Even if the Opinion were controlling law, it does not support the District's claims of authority to adopt an ISR. The District apparently contends that because the Attorney General concluded that air districts may impose "reasonable post-construction measures," the District's authority to adopt ISRs extends to all indirect sources, even if they are long-standing and unmodified. However, nowhere in the Opinion does the Attorney General state that "reasonable post-construction measures" may be required for indirect sources that are neither new nor modified. The District's strained interpretation is inconsistent not only with the law at the time the Opinion was issued, but also with the District's own contemporaneous Air Quality Management Plan ("AQMP"). 44-3 (cont'd)

Both the California Clean Air Act and the AQMP anticipated the implementation of control measures that could only come into effect after an indirect source was constructed. In 1993, at the time of the Opinion, Section 40716 allowed the districts to implement post-construction measures such as "encourag[ing] or requir[ing] ridesharing, vanpooling, flexible work hours, or other measures to reduce the number or length of vehicle trips." HSC § 40716 (1993). For traditional indirect sources such as shopping centers or stadiums, these measures could only be implemented post-construction. In its 1989 AQMP, the District itself included numerous similar measures it characterized as indirect source controls that would be implemented post-construction, including:

1) Alternative work weeks and flextime, *id.* app. IV-G at 47-52;

2) Telecommunications, *id.* at 53-62;

3) Employer rideshare and transit incentives, *id.* at 65-70;

4) Vanpool purchase incentives, *id.* at 77-82; and

5) Merchant transportation incentives, *id.* at 83-88.

In the context of the law at the time and the District's own contemporaneous understanding, it is clear the Opinion was referring to these types of measures as "reasonable post-construction

new or modified development); *California Building Industry Association v. San Joaquin Valley Unified Air Pollution Control District* (2009) 178 Cal.App.4th 120 (same).

measures," not establishing a carte blanche authority for the District to impose an ISR program on existing, unmodified sources. Thus, while the District may impose reasonable post-construction measures on new or modified indirect sources, the District has identified no law granting it authority to extend these measures to indirect sources that are neither new nor modified. 44-3 (cont'd)

III. The Proposed Rules Are Preempted by Federal Law.

Under the U.S. Constitution's Supremacy Clause, "Congress has the authority, when acting pursuant to its enumerated powers, to preempt state and local law." *Oxygenated Fuels Association, Inc. v. Davis* (9th Cir. 2003) 331 F.3d 665, 667. "Congressional intent to preempt state law must be clear and manifest" (*Williamson v. General Dynamics Corp.* (9th Cir. 2000) 208 F.3d 1144, 1150), but congressional purpose is the "ultimate touchstone" of preemption analysis. *Cippollone v. Liggett Group, Inc.* (1992) 505 U.S. 504, 516. In this case, Congress has been clear in reserving to the federal government the ability to regulate purchase mandates under the Clean Air Act, the Federal Aviation and Administration Authorization Act ("FAAAA"), and the Energy Policy and Conservation Act ("EPCA").. 44-4

A. The Proposed Rules Are Preempted as Purchase Mandates Under the Clean Air Act.

The District may not adopt a purchase mandate under the guise of an ISR rule. Federal law preempts the adoption of such standards. While the District claims that the Proposed Rules provide sufficient flexibility to avoid a preempted mandate, the cost differential associated with the compliance pathways constitute an offer which cannot, in practical effect, be refused.

1. Rules Establishing Purchase Mandates Are Preempted.

Section 209(a) of the Clean Air Act ("CAA") states:

> "No State or any political subdivision thereof shall adopt or attempt to enforce any standard relating to the control of emissions from new motor vehicles or new motor vehicle engines subject to this part. No State shall require certification, inspection, or any other approval relating to the control of emissions ... as condition precedent to the initial retail sale, titling (if any , or registration of such motor vehicle, motor vehicle engine, or equipment." 42 U.S.C. § 7543(a).

This prohibition is interpreted broadly. As the Supreme Court explained, because "[t]he manufacturer's right to sell federally approved vehicles is meaningless in the absence of a purchaser's right to buy them," the term "standard" is not limited to regulations on manufacturers. *Engine Manufacturers Assn v. South Coast Air Quality Management Dist.* (2004) 541 U.S. 246, 252, 255 ("*EMA*"). To that end, the Supreme Court found that, "A command, accompanied by sanctions, that certain purchasers may buy only vehicles with particular

emission characteristics is as much an 'attempt to enforce' a 'standard' as a command, accompanied by sanctions, that a certain percentage of a manufacturer's sales volume must consist of such vehicles." *Id.* at 255.

44-4
(cont'd)

The EPA has agreed and further explained that even if a standard is not a direct mandate, it may still be preempted under the CAA. Specifically in the context of ISR regulations, the EPA identified two ways that an ISR rule that on its face is authorized under CAA section 110(a)(5 could nonetheless be preempted. 76 Fed. Reg. 26609, 26611 (May 9, 2011). First, the ISR rule could be preempted if the rule in practice acts to compel either the manufacturer or user of a vehicle to change the emission control design of the engine or vehicle, or second, an ISR rule could be preempted if it creates incentives so onerous as to be in effect a purchase mandate. *Id.*

This was the exact question placed before the U.S. District Court of New York in 2009 in *Metropolitan Taxicab Bd. of Trade v. City of New York* (2009) 633 F. Supp. 2d 83 ("*MTB*"). The City of New York ("City") adopted new regulations for taxis that were designed to encourage the transition to cleaner vehicles. Specifically, the City adopted a rule, the Lease Cap Rule, increasing the maximum allowable lease rate for hybrid vehicles while decreasing the maximum allowable lease rate for conventional vehicles. While the new maximum did not eliminate the profit margin for the leasing of conventional taxis, it rendered these conventional fleets substantially less profitable than hybrid fleets. *Id.* at 85. The Court first considered whether the Lease Cap Rule effected a purchase mandate, finding that "[t]he combined effect of the lease cap changes, and even the disincentive alone, constitutes an offer which can not, in practical effect, be refused." *Id.* at 99. While the City argued that fleet operators could continue to utilize conventional taxis under the Lease Cap Rule, the Court found that the cost differential made it clear that "the Lease Cap Rules do not present viable options for Fleet Owners and instead operate as an effective mandate to switch to hybrid vehicles." *Id.* at 100.[4]

2. The Intent of the Proposed Rules Is to Force the Acquisition of ZE/NZE Vehicles.

The District has made no secret of its dissatisfaction with the state-level progress on regulating emissions from mobile sources. In its comment letter on the Draft Mobile Source Strategy ("MSS"), the District called on CARB to "go even further" since CARB's efforts to regulate

[4] This is distinct from Rule 9510 considered by the Ninth Circuit in *National Assn. of Home Builders v. San Joaquin Valley Unified Air Pollution Control Dist.* (2010) 627 F.3d 730 ("*NAHB*" . In that case, the ISR rule considered emissions that were "site-based," rather than "engine- or vehicle-based." Stated differently, Rule 9510 evaluated emissions from the whole of the development, including the emissions from the construction equipment used during development and from the vehicles of the final users of the site. While NAHB challenged the rule as a preempted purchase mandate, the court found that Rule 9510 "escape[d] preemption" because it did "not measure emissions by fleets or groups of vehicles"—the construction equipment—but rather the facility as a whole *Id.* at 740. The same cannot be said of the Proposed Rules which are entirely based on the emissions from vehicles that visit the site and for which the practical compliance mechanisms are limited to acquisition.

mobile sources were insufficient to meet upcoming 2023 and 2031 federal deadlines for ozone reduction. PDSR at 52. The District has explained the problem that the emissions reductions modeled in the Draft MSS were insufficient to meet federal deadlines and that, even in the most aggressive modeling in the Draft MSS, in 2023 more than 95% of heavy-duty trucks will be no cleaner than 2010 engine standards assumed for all trucks in the baseline emissions inventory from the 2016 AQMP and that these trucks will continue to make up about 57% of the truck fleet in 2031. PDSR at 52. In commenting on the Advance Clean Truck ("ACT") regulation, the District explained that the 15% ZEV sales requirement in 2030 "will be insufficient and must be increased to generate the needed NOx reductions." SCAQMD Letter to CARB, Comment Letter on Proposed Advanced Clean Trucks Regulation (Dec. 6, 2019).

44-4
(cont'd)

With the Proposed Rule, the District is attempting to step into CARB's shoes and regulate mobile sources by proxy, an action for which it lacks authority. The PDSR explains that the ACT Rule and the Low NOx Omnibus regulations have left a gap in that their "lower emissions occur only ***if*** trucks are sold." *Id.* (emphasis original). The Proposed Rules are designed to fill this gap by forcing acquisition of lower emission trucks. Similarly, the District explained that while the upcoming TRU regulation is expected to require lower PM standards, it "will not mandate that fleets purchase them, nor will it direct sales in certain parts of the state." *Id.* The Proposed Rules are designed to correct this deficiency by creating a de facto purchase mandate in the South Coast Basin. The District explains that NOx reductions are necessary to meet federal air quality standards and "mobile sources associated with goods movement make up about 52% of all NOx emissions" in the South Coast Basin. PDSR at 14. The Proposed Rules are intended "to support statewide efforts to increase the number of ZE vehicles." *Id.* The Proposed Rules "provide a mechanism to require warehouse operators to encourage ZE vehicle use at their facilities." *Id.* at 15. "The proposed project is intended to accelerate the use of ZE trucks and yard trucks that visit the warehouses in the South Coast AQMD region" and "encourage and incentivize the purchase and use of NZE and ZE vehicles instead of conventional gasoline and diesel vehicles." Draft EA at 4.1-1, C-46.[5] The purpose of the Proposed Rules is thus clearly to force the acquisition and deployment of ZE trucks in the Basin.

3. Beyond the District's Clear Intent to Force Purchase of ZE/NZE Vehicles, the Cost Differential Associated with the Compliance Pathways Forces Acquisition in Any Event.

While the District has ostensibly designed the Proposed Rules to provide multiple compliance pathways, the actual effect is uniform—ZE trucks must be acquired. The PDSR analyzed 18 compliance pathways as shown in Table 14. Scenarios 1, 2, 3, 6, 8, 12, 13, and 18 require the acquisition and usage of ZE vehicles by the warehouse itself. Scenarios 4, 5, 9, 10, and 14 require ZE trucks to visit the warehouses, requiring non-warehouse fleet owners to acquire such

[5] "[T]he proposed project would result in a greater turnover of diesel trucks to NZE and ZE trucks than would have occurred without the proposed project…." Draft EA at C-48–49.

vehicles. But, for the 45% of warehouses that own and operate their own fleet, relying on the indirect acquisition by non-covered fleet owners is not an option. The only scenarios that do not force an acquisition of a ZE vehicle are Scenarios 7 (pay mitigation fee), 11 (rooftop solar and mitigation fee), 15 (filter system installations) and 16 (filter purchases .[6] However, the costs of these non-acquisition pathways are far higher than acquisition.

44-4
(cont'd)

Type	Sc. #	Description	Annual Cost per Year per Sq. Ft.
Direct Acquisition	1	NZE Class 8 truck acquisitions and subsequent visits from those trucks	$0.08
Direct Acquisition	2	NZE Class 8 truck acquisitions and subsequent visits from those trucks (early purchase)	$0.11
Direct Acquisition	3	NZE Class 8 truck acquisitions (funded by Carl Moyer program and subsequent visits from those trucks	$0.05
Direct Acquisition	6	Level 3 charger installations followed by ZE Class 6 & Class 8 truck acquisitions and subsequent visits from those trucks, using installed chargers	$0.14
Direct Acquisition	8	NZE Class 6 truck acquisitions and subsequent visits from those trucks	$0.16
Direct Acquisition	12	Hydrogen station installations followed by ZE Class 8 truck acquisitions and subsequent visits from those trucks, using the hydrogen station	$0.82
Direct Acquisition	13	ZE Class 2b-3 truck acquisitions and subsequent visits from those trucks	$0.04
Direct Acquisition	18	ZE Hostler Acquisitions and Usage	$0.12
Average Annual Cost per Year per Sq. Ft. for Direct Acquisition Compliance			**$0.19**
Indirect Acquisition	4	NZE Class 8 truck visits from non-owned fleets	$0.05
Indirect Acquisition	5	ZE Class 8 truck visits from non-owned fleets	$0.74
Indirect Acquisition	9	NZE Class 6 truck visits from non-owned fleets	$0.79
Indirect Acquisition	10	ZE Class 6 truck visits from non-owned fleets	$0.04

[6] Scenario 17 requires TRU plug installations and usage in cold storage facilities but is applicable only to cold storage warehouses.

Indirect Acquisition	14	ZE Class 2b-3 truck visits from non-owned fleets	$0.48
Average Annual Cost per Year per Sq. Ft. for Indirect Acquisition Compliance			**$0.42**
Non-Acquisition	7	Pay Mitigation Fee	$0.78
Non-Acquisition	11	Rooftop solar panel installations and usage	$1.14
Non-Acquisition	15	Filter System Installations	$0.92
Non-Acquisition	16	Filter Purchases	$0.92
Non-Acquisition	17	TRU plug installations and usage in cold storage facilities	$0.50
Average Annual Cost per Year per Sq. Ft. for Non- Acquisition Compliance			**$0.85**

44-4
(cont'd)

Scenario 7 (Mitigation Fee) averages approximately $0.90 per square foot in 2025, with an average of $0.78 per square foot per year. PDSR at 66, 74. The estimated compliance cost for Scenarios 15 and 16 (Filter System Installations and Filter Purchases) is even higher at approximately $1.00 per square foot in 2025, with an average of $0.92 per square foot per year. *Id.* at 70, 74. Solar begins in 2025 at $2.50 per square foot and an average annual cost of $1.14 per square foot per year. *Id.* By contrast, the estimated compliance costs for "acquisition" based scenarios are less than $0.20 in 2025, with an annual average cost per square foot typically ranging from $0.04 to $0.16 per square foot per year. *Id.* at 66, 74. This cost differential is of the District's own making, by assigning a certain number of WAIRE points to each compliance action the District has intentionally chosen to compel acquisition by pricing other compliance pathways out of the running.

While the District may argue that the Proposed Rules are not a purchase mandate because of the varying compliance pathways, the non-acquisition pathways at least triple the compliance costs of covered warehouses. District staff acknowledged at the February 16, 2021 public workshop that facilities will find the "most cost-effective means to comply." Just as the fleet owners in *MTB*, warehouse operators are "profit oriented and business owners trying to maximize profits" and will always choose the option that the District makes the least costly. *MTB*, 633 F. Supp. 2d at 100. Looking at all the evidence, it is clear that the Proposed Rules do not "present viable options" for warehouses other than acquisition and "instead operate[] as an effective mandate to switch to [ZE] vehicles." *Id.* For this reason, the Proposed Rules are preempted as a purchase mandate.

B. The Proposed Rules Are Preempted Under the FAAAA.

44-5

The FAAAA "preempts a wide range of state regulation of intrastate motor carriage." *Californians for Safe & Competitive Dump Truck Transp. v. Mendonca* 9th Cir. 1998) 152 F.3d 1184, 1187. It specifically provides that, "a State ... may not enact or enforce a law, regulation, or other provision having the force and effect of law related to a price, route, or service of any motor carrier ... with respect to the transportation of property." 49 U.S.C. § 14501(c)(1). The terms "rates, routes, and services" were "used by Congress in the public utility sense; that is, service refers to such things as the frequency and scheduling of transportation, and to the selection of markets to or from which transportation is provided.... Rates indicates price; routes refers to courses of travel." *Air Transport Ass'n of Am. v. City & Cnty. of San Francisco* (9th Cir. 2001) 266 F.3d 1064, 1071. Congress enacted this preemption provision because it "believed that across-the-board deregulation was in the public interest as well as necessary to eliminate non-uniform state regulations of motor carriers which had caused significant inefficiencies, increased costs, reduction of competition, inhibition of innovation and technology, and curtailed the expansion of markets." *Id.* at 1187 (quotations omitted).

The Supreme Court has observed that state laws may be preempted "even if a state law's effect on rates, routes or services is only indirect." *Rowe v. New Hampshire Motor Transport Ass'n* (2008) 552 U.S. 364, 370. The District has acknowledged that the Proposed Rules will increase the costs for warehouses in the District, many of whom are fleet owners. PDSR at 58 ("there will be financial impacts to industry to implement PR 2305, and it will also require many warehouse operators and cargo owners to change their business practices to implement actions required by PR 2305"), 45 ("Of the warehouses expected to be required to earn WAIRE Points … about 45% may own a truck fleet"). The District also acknowledges that the Proposed Rules incentivize changes to routes and service. PDSR at 33 ("Because the WPCO is tied to a warehouse's annual truck trips, if a facility can find ways to improve efficiency and reduce its number of truck trips, then its compliance obligation under PR 2305 will be lower."). Because the Proposed Rules have a force and effect that is related to the price, route, and service of motor carriers, they are preempted under the FAAAA.

C. The Proposed Rules Are Preempted Under the EPCA.

44-6

The EPCA authorizes the National Highway Traffic Safety Administration ("NHTSA") to create fuel-efficiency standards in order "to conserve energy supplies through energy conservation programs, and, where necessary, the regulation of certain energy uses" and "to provide for improved energy efficiency of motor vehicles." 49 U.S.C. § 6201. "[W]hile the primary focus of the EPCA was to regulate the country's consumption of energy resources, Congress intended that passage of the EPCA would not unnecessarily restrict purchase options." *Ophir v. City of Boston* (2009) 647 F. Supp. 2d 86, 93. To that end, NHTSA may only establish a fuel economy standard after evaluating four factors: "technological feasibility, economic practicability, the effect of other motor vehicle standards of the Government on fuel economy, and the need of the United

States to conserve energy." *Id.* § 32902(f). In order to promote a uniform application, the EPCA preempts the authority of the states or any political subdivision of a state from "adopt[ing] or enforc[ing] a law or regulation ***related to*** fuel economy standards or average fuel economy standards for automobiles covered by an average fuel economy standard under this chapter." *Id.* at § 32919 (emphasis added). "Fuel economy" is defined as "the average number of miles traveled by an automobile for each gallon of gasoline (or equivalent amount of other fuel) used." *Id.* at 32901(a)(11). The EPA Administrator is directed by EPCA to "include in the calculation of average fuel economy … equivalent petroleum-based fuel economy values determined by the Secretary of Energy for various classes of electric vehicles," *id.* at 32904(a)(2)(B)), which the EPA calculates in terms of miles per gallon equivalent, or MPGe. *Id.*

44-6
(cont'd)

As described above, it is the District's intent to drive the acquisition of ZE/NZE vehicles in the District's jurisdiction. The City of Boston had a similar objective when it adopted a taxi regulation requiring the acquisition of hybrid vehicles. A federal district court found the regulation preempted by the EPCA, even though the rule was adopted to "modernize and improve the quality of appearance" of the taxi fleet, not for purposes of increased fuel economy. *Ophir*, 647 F. Supp. 2d at 89, 94. Here, the District is compelling the acquisition of a certain type of vehicle, ostensibly to reduce vehicle emissions, but with the effect of mandating lower fuel economy standards. As the Supreme Court explained in *EMA*, "if one State or political subdivision may enact such rules, then so may any other; and the end result would undo Congress's carefully calibrated regulatory scheme." 541 U.S. at 255.

IV. The Proposed Rules Are An Improper Regulatory Fee.

44-7

There are three general categories of fees or assessments that are distinguishable from special taxes and thus can be imposed without a two-thirds majority vote: special assessments based on the value of benefits conferred on property, development fees exacted in return for permits or government privileges, and regulatory fees imposed under the police power. *California Building Industry Association v. San Joaquin Valley Unified Air Pollution Control District* (2009) 178 Cal.App.4th 120, 130. ISR fees are regulatory fees in that they are not associated with the issuance of a permit or government privilege.[7] *Id.* However, a regulatory fee may not exceed the amount required to carry out the purposes and provisions of the regulation and cannot be levied for unrelated revenue purposes. *Id.* at 131.

In the first instance, the District has identified no authority allowing it to impose an ISR fee on existing, unmodified sources. See Part II, *supra*. The District has also not established a reasonable relationship between the fee charged and the activity the District seeks to regulate.

[7] In the alternative, the fees under the Proposed Rules are an improper tax under Proposition 13. Unlike the allowances at issue in *Cal. Chamber of Commerce v. State Air Resources Board* (2017) 10 Cal.App.5th 604, the WAIRE points have no economic value that can be traded, a fixed price unchanged by market forces, and—as state and federal regulations phase in—will become compulsory. Thus, they are a tax subject to the requirements of Proposition 13, which have not been met.

The District states that the amount of the fee was calculated based on the cost-per-point of various other compliance actions. PDSR at 33. However, as the District acknowledges, these costs vary across the actions. *Id.* The District does not explain its methodology for determining the $1,000 per point cost. Additionally, the District's proposed cost is based on the cost of compliance for individual entities, not on the cost of the offsets the *District* would need to fund to offset total emissions from truck trips to warehouses in the Basin to achieve the emission reductions goals of the program. The District has acknowledged that there are economies of scale associated with the compliance pathways, which the District is uniquely positioned to access as the administrator of the mitigation funds. The District is required by law to perform an analysis of administering the costs of its own program, i.e., funding the offsets necessary to reduce emissions, rather than analyzing the cost of compliance actions of individual entities. 44-7 (cont'd)

In addition, the court in *California Building Industry Association* upheld an ISR fee where the covered entities could choose whether or not to pay the fee based on their activities. However, in light of the increasing requirements for ZE/NZE vehicles discussed *infra* and the additionality requirement found in Proposed Rule 2305(d)(3), it is very likely that covered warehouses will have no option but to pay the fee at some point. As District staff acknowledged during the February 17, 2021 community meeting, Proposed Rule 2305 has no sunset and no off-ramp available for even fully electric warehouses. Yet these warehouses will continue to accumulate a compliance obligation based on the trucks that visit their locations regardless of the type of truck. Thus, no true choice between paying the fee and other compliance pathways exists in the Proposed Rules.

V. The Goals of the Proposed Rules Are Presently Infeasible.

As explained in Parts III.B and III.C, *supra*, the intent of the Proposed Rules is to accelerate the transition to ZE trucks. Yet, the District specifically acknowledges that it "cannot predict and has no feasible way to identify" suppliers of items necessary to accumulate WAIRE points and that the "investment or the quantity of items is speculative." Draft EA at 532. CARB recently rejected a proposal to require a higher sales percentage of ZE vehicles under the ACT Rule "due to concerns about the feasibility of manufacturers to comply with even higher sales requirements especially for Class 2b-3 vehicles and tractors." Advanced Clean Trucks Regulation, Final Statement of Reasons (January 2021) at 99 ("ACT FSOR"). As CARB explained just last month: 44-8

> "At this time, both Class 2b-3 and Class 7-8 tractors have more focused concerns about payload, range, towing, charging/refueling infrastructure, and model availability than other vehicles. These issues will present more challenges in identifying suitable applications for their deployment in the early market. Increasing the number of ZEV sales further also increases the likelihood that manufacturers would need to produce more costly long-range vehicles, and that vehicles may need to be placed in applications where they may not be fully

suitable. Therefore, the Board determined that the approved regulation is the most feasible path to meet ZEV deployment goals at this time." *Id.*

44-8 (cont'd)

The District has not explained how its mandate to increase the use of ZE vehicles—which is intended to be in excess of CARB's requirement (*see* PDSR at 15)—is in fact feasible when CARB determined it is not.

Additionally, the District has not contended with whether it is feasible to impose these accelerated requirements for trucks that leave the District. Industrial Economics, Incorporated determined that only 34% of goods moved within the District stay in the District; the vast majority are bound for destinations outside of the District's authority.[8] Yet the District has offered no evidence of whether the infrastructure exists in other jurisdictions to support the endpoint of these trips. A rule that is infeasible is necessarily arbitrary and capricious and unsupported by substantial evidence.

VI. The District Cannot Make the Findings Required by Health and Safety Code Section 40727.

44-9

Prior to the adoption of any new regulation, the District must make findings regarding "necessity, authority, clarity, consistency, nonduplication, and reference." HSC § 40727. The District's findings must be based on substantial evidence that is "reasonable, credible, and of solid value" (*Plastic Pipe and Fittings Ass'n v. Cal. Bldg. Standards Comm.* (2004) 124 Cal.App.4th 1390, 1407), and that bears a "rational connection" to the District's ultimate determination (*Am. Coatings Ass'n v. South Coast Air Quality Dist.* 2012) 54 Cal.4th 446, 460). The District cannot make the necessary findings for the Proposed Rules.

"Authority" is defined to mean a provision of law or of state or federal regulation that permits or requires the regional agency to adopt the regulation. *Id.* As discussed in Part II, *supra*, the District has no authority to adopt a regulation imposing an ISR on existing, unmodified sources and, as discussed in Part III, *infra*, the Proposed Rules are preempted by federal law. The District cites to Health and Safety Code sections 39002, 39650 to 39669, 40000, 40001, 40440, 40441, 40522.5, 40701, 40702, 40716, 47017 to 40728, 40910, 40920.5, 41508, 41511, and 41700 for authority for the Proposed Rules. PDSR at 83. None of these provide authority for either an ISR for existing, unmodified sources or for a program effecting a purchase mandate of vehicle sources.

"Necessity" means that a need exists for the regulation as demonstrated by the record. HSC § 40727(b). The District has failed to demonstrate that there is a need for the Proposed Rules.

[8] Industrial Economics, Inc., Assessment of Warehouse Relocations Associated with the South Coast Air Quality Management District Warehouse Indirect Source Rule (Dec. 23, 2020), available at http://www.aqmd.gov/docs/default-source/planning/fbmsm-docs/iec_pr-2305-warehouse-relocation-report-(12-23-20 .pdf?sfvrsn=8.

44-9 (cont'd)

The District explains that the District will not meet federal standards for ozone and fine particulate matter, that NOx is the primary pollutant needed to meet federal air quality standards, and that mobile sources associated with goods movement make up about 52% of all NOx emissions in the Basin. PDSR at 13-14. But the District does not bridge the analytical gap between the projected NOx emissions and the federal standards for ozone. For example, the District projects in Table 3 of the PDSR that NOx emissions per day will decrease from 42.72 tons to 26.86 tons (PDSR at 13), but does not explain or quantify how these reductions will achieve federal ozone standards, the actual cited need. Further, the District does not explain what NOx emissions are attributable to the specific entities it seeks to regulate. The Proposed Rules apply to the owners and operators of warehouses in the District's jurisdiction. Proposed Rule 2305(b). But the District has not demonstrated that the warehouses are a significant indirect source. While the District states that 52% of all NOx emissions in the Basin are attributable to the movement of goods, this figure includes locomotives, cargo handling equipment, ocean going vessels and commercial harbor craft.[9] Trucks themselves are responsible for only 58% of the 52% of NOx emissions, or less than a third of the need originally cited by the District. In its later modeling, the District claims that NOx emissions from trucks that visit warehouses account for less than 20% of the District's carrying capacity even before the Proposed Rules. PDSR at 52. The District's necessity finding is further undercut by its own scenario analysis which demonstrate that despite the enormous implementation costs, it is possible that the Proposed Rules will result in no reduced emissions of NOx and PM at all. PDSR at 63-64.

The District has also claimed that the Proposed Rules are necessary because, while CARB's Draft MSS calls for a 100% ZE truck fleet by 2045, a 100% ZE drayage truck fleet (trucks that visit ports and railyards) by 2035, and 100% ZE off-road equipment operations by 2035, CARB's policy does not include any enforceable mechanism to achieve these targets. PDSR at 10. To reach this conclusion, the District ignores the effects of the ACT Rule requiring greater sales of ZE/NZE trucks and ignores CARB's further efforts to adopt the Advanced Clean Fleets ("ACF") rule, which CARB anticipates will be implemented from 2024 to 2045.[10] During its public workshops, the District further discounted these regulations by emphasizing that the Proposed Rules will begin achieving emissions reductions beginning in 2023, where the ACT Rule and proposed ACF rule will not reach full implementation until 2035 and 2045 respectively. But the annual variable associated with the Proposed Rules indicates that they will not reach full implementation until after CARB's programs go into effect. The District thus has not demonstrated that it is necessary for it to usurp CARB's authority in this area.

Under section 40727, the District must also find that the regulation "is written or displayed so that its meaning can be easily understood by the persons directly affected by it," a required

[9] PDSR at 14, citing Southern California Association of Governments, Transportation System Goods Movement Technical Report (Sept. 2020) at 58, available at https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal_goods-movement.pdf?1606001690.
[10] CARB, Zero-Emission Fleet Rule Workshop, Advanced Clean Truck Fleets (Feb. 12, 2020), available at https://ww2.arb.ca.gov/sites/default/files/2020-02/200212presentation_ADA_1.pdf.

"clarity" finding. The District cannot make such a finding for the Proposed Rules because the means to comply with the Proposed Rules are based on a landscape of shifting sand. Specifically, each warehouse operator can only earn points toward their compliance obligation by taking actions beyond the requirements of U.S. EPA, CARB, and the District's other regulations. Proposed Rule 2305(d)(3). But as described above, these regulations are becoming increasingly stringent and new rules are being evaluated continuously. Covered warehouses are therefore unable to evaluate how the Proposed Rules will specifically affect them or the level of compliance actions that may be necessary. This materially effects the ability of covered warehouses to operate and makes the District unable to make the required finding of clarity. 44-9 (cont'd)

VII. The Environmental Assessment Fails as an Informational Document.

The basic purpose of an EIR is to "provide public agencies and the public in general with detailed information about the effect [that] a proposed project is likely to have on the environment; to list ways in which the significant effects of such a project might be minimized; and to indicate alternatives to such a project." *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502, 511 (quoting Pub. Res. Code § 21061) ("*Friant Ranch*"). "If CEQA is scrupulously followed, the public will know the basis on which its responsible officials either approve or reject environmentally significant action, and the public, being duly informed, can respond accordingly to action with which it disagrees." *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 392 ("*Laurel Heights*"). For environmental review to be successful, it must not only provide a comprehensive disclosure but also connect the analytical dots in order to explain to the decisionmakers and the public the effects of the agency's decision. 44-10

While the District has significantly improved the discussion of the environmental impacts of the Proposed Rules from the Initial Study, the Draft EA still fails to provide a full picture of the reasonably foreseeable effects of the Proposed Rules.

A. The District Improperly Relies on Analysis from an Earlier Project.

The District has abandoned its attempt to fully divorce the Proposed Rules from their indirect effects and now provides a cursory discussion of the Proposed Rules' hazards and hazardous materials, aesthetic, mineral, biological, air quality, greenhouse gases, biological resources, land use, and agricultural resources impacts. However, the analysis remains legally insufficient. The District's analysis is largely limited to incorporating CARB's analysis of the impacts associated with the ACT Rule in order to describe and assess the effects of the Proposed Rules. This is improper and misleading. The District has repeatedly explained that the Proposed Rules are designed to be in surplus of state and federal regulations, meaning that the effects of the Proposed Rules are also necessarily in surplus of the effects described in the ACT Rule Environmental Assessment. 44-11

To illustrate, the District acknowledges that the Proposed Rules will drive an increase in specialized hazardous waste, including various types of batteries and fuel cells as well as prematurely retired vehicles. The District relies on CARB's description and assessment of the ACT Rule's effects on the creation and management of hazards, but the District never explains how the specific effects of the Proposed Rule—e.g., how much more demand for recycling or solid waste disposal the Proposed Rules generate vis a vis the ACT Rule. Because the District will be driving additional fleet turnover and additional ZE/NZE deployment, the effects of the Proposed Rules are necessarily in excess of what CARB analyzed in its own assessment. The District has failed to meaningfully inform the public and the Board of the reasonably foreseeable effects of the covered warehouses' compliance actions. These incremental effects are likely substantial. While CARB predicts total deployment of 100,000 ZE vehicles under the ACT Rule by 2032 (ACT Environmental Assessment at IX-6), the District's bounding analysis indicates the Proposed Rules could add an additional 28,000 ZE trucks by 2031, a 28% increase. The District's repeated reliance on CARB's assessment thus fails to disclose the effects of the District's action in adopting the Proposed Rules.

44-11 (cont'd)

A lead agency may reuse an EIR prepared for an earlier project for another separate project if the "circumstances of the projects are essentially the same." CEQA Guidelines § 15153(a). An EIR from an earlier project "shall not be used" for a later project if any of the conditions for supplementation have been met. In *Save Berkeley's Neighborhoods v. Regents of University of California* (2020) 51 Cal.App.5th 226, the court found that the university could not rely on a previously prepared EIR that analyzed an increase in enrollment when the proposed project would further increase student enrollment. The same principles apply to the District. The District cannot crib from CARB's own analysis when the District intends its Proposed Rules to increase turnover and deployment beyond what CARB contemplated, particularly not when the District can reasonably foresee a 28% increase in deployment ***in a single air district*** beyond what CARB anticipated for the ***entire state***.

44-12

This error is not unique to the hazards analysis, although the comparison is particularly apt. The same problem permeates the District's analysis of other impact areas, including but not limited to, aesthetic, mineral, biological, air quality, greenhouse gases, biological resources, land use, and agricultural resources impacts. While the District argues that these impacts are speculative and subject to the permitting decisions of other agencies, the District has demonstrated it is capable of performing a bounding analysis to determine the maximum potential impacts associated with air emissions and electricity demand and could certainly use this scenario to forecast potential impacts across other impact areas.

1. Increased Grid Capacity.

The District has modeled 18 compliance scenarios to provide a "bracketing" of the fiscal impact associated with the Proposed Rules and should provide the same level of information for the environmental impacts. While the District now quantifies a high-electrification scenario, it does

44-13

not disclose what this means to the public or the environment. To meet the state's ambitious climate goals, nearly all of this new demand would be met by wind, solar and battery storage.[11] This would require the construction of 109,834 megawatts ("MW") of new solar capacity (a nearly 900 percent increase from current levels), 14,585 MW of new wind capacity (more than a 200 percent increase from current levels), and 73,933 MW of new available grid battery storage (a 15,560 percent increase from the current 478 MW .[12] The District can and should evaluate and disclose to the public the approximate amount of acreage required to generate the necessary electricity from wind and solar and should quantify the amount of emissions that would result from the use of natural gas power plants. 44-13 (cont'd)

2. Increased Need for Lithium Extraction.

The District could use its most battery-intense scenario along with projections of useful life to determine the demand for lithium and other necessary minerals and inform the public and decisionmakers of the potential real world impacts of the Proposed Rules, including the percentage increase over existing extraction to accommodate these Rules and other similar reasonably foreseeable electrification efforts. 44-14

3. Increased Disposal Facilities.

Using the same bounding scenario, the District could project the amount and type of waste the Proposed Rules would induce through accelerated transition. While the District indicates that conventional trucks replaced by ZE/NZE vehicles before the end of their useful life will likely replace older, dirtier trucks, the District must still contend with the disposal of these trucks. Additionally, the District's reliance on still-in-development battery recycling technology is speculative and lacks the support of substantial evidence. In order to succeed as an informational document, the District must provide an assessment of the foreseeable impacts, including increased demand for disposal facilities. This is not outside of the realm of reason. The District has demonstrated it is capable of preparing a bounding analysis and can use this, along with reasonable assumptions regarding useful life, to determine the rate of waste generation attributable to the Proposed Rules. This can and must be prepared and compared against existing disposal capacity in light of other reasonably foreseeable projects to inform the public of the potential scale of development necessary to accommodate the Proposed Rules. 44-15

[11] Ming et al., Long-Run Resource Adequacy under Deep Decarbonization Pathways for California, June 2019 https://www.ethree.com/wp-content/uploads/2019/06/E3_Long_Run_Resource_Adequacy_CA_Deep-Decarbonization_Final.pdf.
[12] Ming et al., Long-Run Resource Adequacy under Deep Decarbonization Pathways for California, June 2019 https://www.ethree.com/wp-content/uploads/2019/06/E3_Long_Run_Resource_Adequacy_CA_Deep-Decarbonization_Final.pdf.

B. The District's Analysis of Air Quality Effects Relies on Outdated Modeling and Inconsistent Assumptions.

44-16

The District relies on a version of CARB's Emission Factor ("EMFAC") from 2017 to characterize emissions and reductions. While CARB applies some post-hoc modifications to approximate the effect of CARB's more recent regulations including the ACT Rule and Low NOx Omnibus, these are merely approximations. CARB has recently released EMFAC2021 which reflects CARB's own best estimates of the effect of these regulations on emissions. The District should re-characterize its analysis based on EMFAC2021 before taking action on the Proposed Rules. At the very least, the District should verify its modifications against the latest EMFAC modeling. Not doing so means that the District's analysis supporting adoption of the Proposed Rules is not based on the most up-to-date information and thus lacks substantial evidence. Similarly, the District relies on a version of the Southern California Association of Government's ("SCAG") Regional Transportation Plan/Sustainable Community Strategy ("RTP/SCS") that is a half-decade out of date. SCAG adopted its latest RTP/SCS in September 2020 which incorporates updated trip modeling. This information was plainly available the District long before it released its draft EA and thus there is no excuse for the District not to include the updated trip modeling information in the EA. The EA thus must be updated to reflect the most recent trip lengths analysis. *See Citizens to Preserve the Ojai v. County of Ventura* 1985) 176 Cal.App.3d 421, 430; *Cleveland National Forest Foundation v. San Diego Assn. of Governments* (2017) 17 Cal.App.5th 413, 444-45 (court invalidated an EIR's analysis of farmland impacts because the agency relied on "a methodology with known data gaps, [which] produced unreliable estimates … of the [project's] impacts").

44-17

The assessment of the Proposed Rules' air quality effects also rely on faulty assumptions. First, the scenario analyses do not account for increasingly strict state-level requirements that could reduce the emission reductions achieved by the Proposed Rules. These new requirements include the ACT Rule, the Low NOx Omnibus regulation, the ACF regulation, and the Ports Clean Air Action Plan. While these regulations are at least partially incorporated into an assessment of baseline emissions through the post-hoc modifications discussed above, the District does not carry these forward through its scenario analysis. This means that the range of emission reductions stated in the PDSR do not represent realistic assumptions of potential emission reductions from the Proposed Rules. Because all WAIRE points must constitute reductions that are additional to those generated by other federal and state laws, the District over counts potential reductions as attributable to the Proposed Rules, when they will actually be attributable to the enhanced state requirements and thus not eligible for WAIRE points. In this way, the District overstates the emission reductions the Proposed Rules will achieve. Second, the scenario analyses compares apples and oranges. The District claims as benefits of the Proposed Rules decreases in emissions associated from decreased demand for utility-based electricity as a result of the installation of on-site solar. But the District neglects to perform a similar analysis regarding the increased emissions from increased demand for utility-based electricity as a result of ZE vehicle deployment and charger installations. The District cannot adequately inform the

public by quantifying only the benefits and none of the costs. The District must quantify and disclose both halves of the equation, including whether compelling ZE deployment actually results in the scale of emissions reductions the District has predicted. 44-17 (cont'd)

C. The District Fails to Adequately Explain the Proposed Rules' Effects on the Environment.

It is not enough for an agency to declare that there is an environmental effect; "there must be a disclosure of the analytic route the … agency traveled from evidence to action." *Laurel Heights*, 47 Cal.3d at 403 (quotations and citations omitted ; *Cleveland National Forest Foundation v. San Diego Assn. of Governments* (2017) 3 Cal.5th 497, 514-15 ("an EIR's designation of a particular adverse environmental effect as 'significant' does not excuse the EIR's failure to reasonably describe the nature and magnitude of the adverse effect"); *Berkeley Keep Jets Over the Bay Com. v. Board of Port Commissioners* 2001) 91 Cal.App.4th 1344, 1371 ("The EIR's approach of simply labeling the effect 'significant' without accompanying analysis of the project's impact on the health of the Airport's employees and nearby residents is inadequate to meet the environmental assessment requirements of CEQA."). Unfortunately, the District has obfuscated the real impacts of the Proposed Rules and failed to provide a meaningful analysis of the effects. 44-18

For example, the District declares that "impacts associated with the need for new or substantially altered power utility systems, new and expanded infrastructure, and effects on peak and base period demands to accommodate the increase in demand from electric vehicles and refueling infrastructure by compliance year 2031" are conservatively considered a significant environmental effect of the proposed project, but it fails to provide a meaningful analysis of this effect. Like the agency in *Friant Ranch*, the District has analyzed the issue and disclosed the general effects, but it "did not connect the raw" energy numbers and their effects to specific adverse effects on the built environment. 6 Cal.5th at 518. After reading the EA, "the public would have no idea of the … consequences that result from" dramatically increasing electricity demand. *Id.* at 519.

And the increase will be dramatic. The Draft EA discloses the electricity demands created by various compliance options, including Scenario 6 which would result in an additional 847 gigawatt hours per year of electricity demand. But the District never explains to the reader what this means for the electricity grid. The District predicts up to 28,569 new ZE/NZE trucks in 2031 as a result of the Proposed Rules (Draft EA at 4.1-24) and states that the California Energy Commission ("CEC") assumed that 100,000 ZE trucks will be deployed by 2031 (Draft EA at 4.2-17), but fails to bridge the analytical divide and further fails to contextualize this increase. A cursory review of the ACT Rule Environmental Assessment indicates that CARB already anticipates driving the deployment of the full 100,000 ZE capacity assumed by the CEC by 2032 through the ACT Rule. ACT Environmental Assessment at IX-6. The additional 28,569 NE/NZE trucks that would occur from implementation of the Proposed Rules are thus wholly unaccounted 44-19

for in the CEC's assumptions—as the District has gone to great pains to ensure that all trucks under the Proposed Rules will be in addition to those required by CARB. Thus, the District has failed the lead agency's obligation to explain how the large increase in ZE/NZE trucks will affect electricity demand and energy supply, and lead to environmental impacts in California. 44-19 (cont'd)

Further, the District never explains what a nearly 30% increase in ZE/NZE trucks in a single air district means for the human environment. What are the "effects on peak and base period demands to accommodate the increase in demand from electric vehicles and refueling infrastructure by compliance year 2031"? The public and the Board are left—figuratively and possibly literally—in the dark. 44-20

This cursory conclusion without a full disclosure of the real effects on the human environment is widespread throughout the District's analysis. "Because the [EA] as written makes it impossible for the public to translate the bare numbers provided into adverse health impacts or to understand why such translation is not possible at this time (and what limited translation is, in fact, possible)" (*Friant Ranch*, 6 Cal.5th at 521), the EA fails in its purpose as an informational document. 44-21

D. The Draft EA Fails to Adequately Analyze the Proposed Rule's Impacts on the Transportation Sector.

As raised in CTA's Scoping Comment letter, the Proposed Rules create significant uncertainty in commercial transportation. By compelling the early transition to ZE/NZE vehicles, the Proposed Rules drive rapid and premature fleet turnover for high-cost ZE/NZE vehicles while imposing the uncertain but often high costs of electricity and hydrogen fuel on the logistics sector. Additionally, while the Proposed Rules may incentivize the transition to ZE/NZE vehicles in the District's jurisdiction, neither the Initial Study nor the Draft EA appears to have considered whether there is sufficient charging infrastructure to support these fleets outside of the District. Goods move across the air districts, but there is no analysis of whether the infrastructure exists for the anticipated ZE/NZE vehicles to complete these trips. Additionally, as California responds to increasing wildfire threats, public safety power shutoff ("PSPS") events have become increasingly common. 44-22

In response to CTA's Scoping Comment, the District first states that it is not feasible to anticipate the frequency of PSPS events or to analyze their effects. Draft EA at C-34. This is incorrect. Following each PSPS event, California utilities are required to file reports with the Public Utilities Commission disclosing what occurred. These reports are publicly available and the District can and should assess the number and coverage of PSPS events in its jurisdiction to understand, evaluate, and disclose the interaction between increased electrification and increasing grid instability. The District also deflects from the impacts of PSPS events by relying on the additional solar and battery technologies that it envisions will be implemented at covered warehouses. *Id.* at C-35. However, the District repeatedly explained throughout the PDSR and 44-23

the Draft EA that predicting the manner in which the warehouse may choose to comply would be pure speculation. The District's reliance on solar infrastructure to defray the potential significant effects of reliance on unstable grids thus is similarly pure speculation. Additionally, as discussed *supra*, the cost differential created by the District in fact disincentivizes the deployment of on-site solar in favor of ZE/NZE acquisition. Thus, there is evidence that the District's reliance on solar infrastructure to defray potentially significant effects on the grid is misplaced. 44-23 (cont'd)

While impacts to the State's logistics infrastructure are not specifically listed as impacts in Appendix G, the Appendix "is only an illustrative checklist and does not set forth an exhaustive list of potentially significant environmental impacts under CEQA or standards of significance for those impacts." *City of San Diego v California State University* (2011) 201 Cal.App.4th. 1134, 1191; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th 1099, 1108-1111. "Also, the lack of precise quantification or criteria for determining whether an environmental effect is 'significant' under CEQA does not excuse a lead agency from using its best efforts to evaluate whether an effect is significant. *City of San Diego*, 201 Cal.App.4th at 1191; *Berkeley Keep Jets Over the Bay Com. v. Board of Port Cmrs.* (2001) 91 Cal.App.4th 1344, 1370. The District provides no satisfactory explanation for its failure to analyze and disclose the effects of the Proposed Rules on the State's logistics infrastructure. The EA should consider the interaction between expedited electrification and PSPS events. It is reasonably foreseeable that the Proposed Rules will lead to significant disruptions to freight transportation, specifically in light of PSPS events. 44-24

E. The District Omits Projects from Its Cumulative Impact Analysis.

An EIR must discuss a cumulative impact if the project's incremental effect combined with the effects of other projects is "cumulatively considerable." CEQA Guidelines § 15130(a). This determination is based on an assessment of the project's incremental effects "viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." *Id.* at § 15065(a)(3); *Banning Ranch Conservancy v. City of Newport Beach* (2012) 211 Cal.App.4th 1209, 1228. 44-25

The District contends that a cumulative impact analysis is not required because the Proposed Rules are consistent with the 2016 AQMP, the State SIP Strategy, and the ACT Rule. Draft EA at 4-11–12. However, the Proposed Rules are not consistent with the ACT Rule in that they are specifically designed to be additional to the requirements of the ACT Rule. Similarly, the District cannot rely on the analysis completed for the State SIP strategy since that analysis was focused on statewide emission control strategies adopted by CARB (including the ACT Rule), and did not contemplate further purchase mandates from local air districts. 44-26

As to the 2016 AQMP, the District may only rely on the cumulative analysis discussion to the extent cumulative effects were previously adequately addressed and there are no new significant cumulative effects. CEQA Guidelines § 15152(f). In the half decade that has elapsed since the 44-27

environmental review for the 2016 AQMP, numerous other proposals to reduce emissions through electrification have been proposed both within and outside the District's jurisdiction that will impact the same electric grid and resources. For example, the cities of Santa Monica and West Hollywood have adopted Reach Building Codes driving full electrification. The cities of Culver City and Hermosa Beach are considering similar initiatives. The California Public Utilities Commission has initiated a rulemaking along with the CEC on building decarbonization (R.19-01-011) and on transitioning from natural gas (R.20-01-007). The cumulative effects of these and other electrification initiatives must be analyzed. CEQA Guidelines § 15130(a)(1); *City of Long Beach v. Los Angeles Unified Sch. Dist.* 2009) 176 Cal.App.4th 889, 907 (an EIR's analysis of cumulative impacts must consider all sources of related impacts, not just similar sources or projects). While a lead agency has discretion to establish a reasonable cutoff date for future projects to include in its cumulative impact analysis, that determination must be supported by substantial evidence. *South of Market Community Action Network v. City & County of San Francisco* (2019) 33 Cal.App.5th 321, 336. The cumulative effects of mass electrification initiatives adopted and proposed since the 2016 AQMP may risk environmental disaster or severe environmental harm and require evaluation. *Whitman v. Board of Supervisors* 1979 88 Cal.App.3d 397, 408; *San Joaquin Raptor/Wildlife Rescue Ctr. v. County of Stanislaus* 1994) 27 Cal.App.4th 713, 720. The EA must disclose these new projects and their cumulative effects.

44-27 (cont'd)

F. The Draft EA Unlawfully Rejects Alternative B.

The Draft EA impermissibly dismisses an alternative that, if appropriately analyzed and characterized, could reduce environmental impacts. "Pursuant to CEQA's 'substantive mandate,' an agency may not approve a proposed project if feasible alternatives exist that would substantially lessen its significant environmental effects." *Save Panoche Valley v. San Benito County* (2013) 217 Cal.App.4th 503, 520; see Pub. Resources Code § 21002. Despite identifying environmental benefits associated with Alternative B (Decreased Emissions Reductions), the Draft EA determines that it is not environmentally superior to the Proposed Rules. The Draft EA does not adequately support its conclusion that only Alternative C (Increased Emissions Reductions) is "environmentally superior." Draft EA at 5-27.

44-28

The Draft EA indicates that the Proposed Rules would have significant and unavoidable direct impacts (1) on energy resources, (2) from hazardous materials and solid and hazardous waste, and (3) on transportation and significant and unavoidable indirect impacts on (1) aesthetics, (2) agriculture and forestry, (3) biological resources, (4) cultural resources, (5) geology and soils, (6) hydrology and water quality, (7) noise, (8) mineral resources and (9) utilities and service systems. Draft EA at 6-2–3. The Draft EA further acknowledges that ***all*** of these significant and unavoidable impacts are in fact ***worsened*** by Alternative C. *Id.* at 5-16–17. Yet the District paradoxically labels this as the environmentally superior alternative because the NOx and PM emissions will be lower than under the Proposed Rules. The District is measuring with the wrong yardstick. The environmentally superior alternative is an alternative that ***lessens*** the project's ***significant effects***. The District itself acknowledges that the Proposed Rules have a less than

44-29

significant effect on long-term air quality impacts. *Id.* at ES-4. There is no significant effect of the Proposed Rules that Alternative C in fact lessens. 44-29 (cont'd)

By contrast, Alternative B would "lead to less cargo growth potentially being diverted to other ports and resulting in less GHG emissions from cargo growth diversion than the proposed project," "lead to a lower demand on utilities," reduce infrastructure needs, "reduce the number of batteries that need to be recycled, and "have less adverse direct impacts to energy and hazardous materials and solid and hazardous waste." *Id.* at 5-15. "Alternative B's indirect adverse environmental impacts on air quality and GHG emissions, energy, hazardous materials and solid and hazardous waste, and transportation would likely be less than the proposed project." *Id.* "The reduction in the number or intensity of development of new facilities and grid improvement would likely lead to less adverse indirect environmental impacts in the areas of Aesthetics, Agriculture and Forestry, Biological Resources, Cultural Resources, Geology and Soils, Hydrology and Water Quality, Mineral Resources (with regards to long-term operational-related impacts from reduced demand for new mines and mining activities because of the reduced use and demand of lithium-based batteries in ZE vehicles), Noise, and Utilities than the proposed project." *Id.* The only metric by which the District finds Alternative B insufficient is that "Alternative B's ongoing, long-term, and permanent air quality and public health ***benefits would be less*** when compared to the proposed project." *Id.* at 5-16. But as described above, this is not the standard—the question is whether the alternative would lessen the significant effects and the District has determined that the Proposed Rules' effect on long-term air quality impacts is ***less than significant.*** 44-30

The only grounds on which the District may reject an environmentally superior alternative is if it is infeasible. The District evaluated five alternatives to the Proposed Rules, including a no project alternative. One of these, Alternative B, was a version of the Proposed Rules with a narrower application (only to warehouses greater than 200,000 square feet), a year delay in compliance obligations, and less aggressive emissions reduction targets as a result of a decreased rule stringency factor. Draft EA at 5-6. As noted in Table 5-2, Alternative B would accomplish ***all*** of the District's objectives. Draft EA at 5-12. Despite the reduced environment impacts described above, the District rejected Alternative B because it did not reduce emissions quite as much. However, a lead agency cannot adopt artificially narrow project objectives that would preclude consideration of reasonable alternatives for achieving the project's underlying purpose. *North Coast Rivers Alliance v. Kawamura* (2015) 243 Cal.App.4th 647, 669; *County of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185, 203. Alternative B accomplishes the District's aims while reducing the environmental impacts. 44-31

VIII. Conclusion.

The District has not been granted the authority to impose a sweeping purchase mandate on existing, unmodified warehouses under the guise of an ISR regulation. While the District's goals of reducing air emissions in the Basin are laudable, the District has only the rulemaking authority 44-32

invested in it by statute. Even if the Legislature had granted the District such authority, it is preempted by federal law. The regulation as proposed fails to meet the standards specified by the Health and Safety Code and the accompanying Draft EA fails to meet the District's obligations under CEQA and fails as an informational document. For this reason, the District must revise the Proposed Rules and EA before adoption in order to bring them into compliance with state and federal law. 44-32 (cont'd)

Sincerely yours,

HOLLAND & KNIGHT LLP



Marne S. Sussman

cc: Chris Shimoda

IWLA
The Resource for Warehouse Logistics

6540 Alder Park Circle
Roseville, CA 95678
www.IWLA.com

P: 916.704.2392
F: 916.666.7575
E: mwilliams@IWLA.com

March 2, 2021

Ian McMillan, Planning and Rules Manager
Victor Juan, Program Supervisor
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178 **Sent via email**

Re: Comments on Proposed Rule 2305

Dear Mr. McMillan & Mr. Juan:

The California Chapter of the International Warehouse Logistics Association (IWLA) would like to request that the comments in this letter be included in the administrative record in response to the Draft Staff Report for proposed rule 2305. 45-1

Members of the IWLA are an integral part of Southern California supply chain and face unique challenges as a frontline essential workforce. Our members provide warehouse and other logistics services in every sector of the economy: manufacturers, wholesalers and retailers, and handle all kinds of products ranging from food to pharmaceuticals, medical supplies to consumer goods, domestically and internationally. Approximately 18 million people who live in Southern California rely on warehouses and the goods movement system to get them the items they need to survive.

Comments for consideration:

- The SCAQMD has authority over stationary sources in our region and has reached outside their mandate with the proposed rule to regulate mobile sources as this authority resides with the California Air Resources Board (CARB). 45-2
- The proposed rule requires warehouses to control truck fleets and decrease truck emissions, but technology is not available for heavy-duty electric trucks at present. 45-3
- Warehouses don't control which trucks come to their facilities, when they arrive, where they come from or anything related to truck trips, so using truck trips as a way to meet the rule requirements is not feasible and arbitrary. 45-4
- Warehouses have no control over how truck engines are made and in most cases don't own trucks nor control what type of trucks shipping companies purchase. 45-5
- The Stringency factor seems to be arbitrary as there doesn't seem to be any rational, modeling or science behind how the number .0025 was derived. It's based off hypothetical cost emission reductions that don't appear to be practical. 45-6

- Warehouses provide a vast array of jobs for people of any level of education and skill set that provide upward mobility in the job market, especially in light of the economic downturn and the COVID-19 pandemic. 45-7

- The proposed rule will impose a significant burden and expense in the hundreds of thousands for an average size 250 thousand square foot warehouse. This is at a time where over 18 million people who live in Southern California and rely on warehouses and the goods movement system to get them the items they need to survive will face increased costs that will be regressive and hit lower income communities the hardest. 45-8

- Warehouses in SCAQMD coverage areas will be placed at a competitive disadvantage and beneficial cargo owners will look to divert their cargo to alternative areas in surrounding states or alternative ports of entry to warehouse and distribute their cargo. 45-9

- Jobs are scarce now, and a mitigation fee/tax of $1 per square foot of warehouse space will critically impact warehouse operator's ability to create new jobs or sustain existing ones. This would be a permanent increase that has no sunset clause or limits to how it could rise. Most if not all warehouses will end up paying the fee/tax due to the impossibility of compliance with this mandate. 45-10

We appreciate your consideration and look forward to your response to our comments. Additionally we would like to be included in your distribution list for all future correspondence concerning Proposed Rule 2305. 45-11

Sincerely,

Mike Williams

Mike Williams
Executive Director
IWLA California Government Relations
(916) 704-2392

WATSON
LAND COMPANY

March 2, 2021

VIA E-MAIL

Ian MacMillan
Victor Juan
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178
imacmillan@aqmd.gov / vjuan@aqmd.gov

Re: Comments on Proposed Rule 2305 (Warehouse Indirect Source Rule

Dear Mr. MacMillan and Mr. Juan:

Watson Land Company is an owner and developer of master planned business and industrial centers in Southern California and the East Coast. The company strives to be a good corporate citizen by attracting quality companies that bring jobs and other economic benefits to the communities where Watson has real estate holdings.

As an owner of logistics facilities ("warehouses" , Watson Land Company provides needed infrastructure and is proud to be part of the supply chain industry that has been deemed essential by both state and federal governments. As you know, the warehouse industry has played a vital role in the regional and national response to the Covid-19 pandemic. Many of our customers are warehouse operators engaged in the delivery of much-needed goods and medicines to the population of Southern California during these difficult times. 46-1

We adamantly oppose the adoption of Proposed Rule 2305 (Warehouse Indirect Source Rule or "ISR"). We believe the District's proposed ISR would have severe unintended consequences and is ill-timed in the midst of the COVID-19 pandemic and what will likely be a long economic recovery. The District is pursuing a regulation targeted at a specific sector that serves our region and nation, and which is experiencing enormous strains due to the challenges of the current pandemic. 46-2

The ISR will impose an entirely new regulatory compliance regiment onto distribution warehouse operators. Many warehouse operators are not structured or staffed with the systems and personnel needed to satisfy the oppressive compliance requirements embodied in the proposed rule. They generally lack the personnel and systems needed to gather the information required to be reported. Thus, the District's rulemaking would divert industry resources and attention to this rule at a time when the industry needs to maintain focus on the efficient and reliable delivery of essential goods. 46-3

Watson Land Company has the following comments regarding the ISR:

1. The SCAQMD does not have the legal authority to adopt the ISR. The District has the authority to engage in such rulemaking with NEW Construction projects, but not EXISTING facilities. The proposed ISR seeks to regulate existing buildings/facilities. In addition, the District has not substantiated its jurisdiction/authority to regulate the trucking industry, which is integral part of interstate commerce. As noted in the name of the proposed rule, the proposed rule is an 46-4

"indirect" means of regulating the trucking industry through warehouses. The District should publicly explain its rationale in seeking to regulate interstate commerce activity, thereby presenting Federal preemption issues with this proposed ISR. 46-4 (cont'd)

2. This rule would impose additional/permanent costs on our customers of approximately $90,000 to over $1 million annually. Many of these businesses are struggling to remain in California, given the current regulatory environment. The proposed ISR targets a specific essential industry with $1 billion in annual taxes/fees during the worst possible time, as it responds to the challenges of the pandemic on behalf of our region and nation. 46-5

3. The District has not clarified how these "fees" would provide any benefit/service to the group from which it is collected (the warehouse industry . Thus, these "fees" may easily be classified as a tax. This presents a question of the District exceeding its jurisdiction/authority in imposing this tax. 46-6

4. It is not feasible for the warehouse industry to comply with the ISR due to the following: Under the current proposed rule, reporting obligations begin only 60 days from rule adoption, and the substantive WAIRE Points obligations will commence as soon as July, 2021. The proposed rule requires warehouses to control truck fleets and decrease truck emissions but warehouse operators are not able to accomplish this task. Warehouses have no control over how truck engines are manufactured. Warehouse operators do not own truck fleets nor control what type of trucks shipping companies purchase. Warehouse operators do not control which trucks come to warehouses, when they arrive, where they come from or any other variables related to truck trips. 46-7 46-8

5. The technology is not fully available to accomplish items on the WAIRE menu. For example, there are no heavy-duty electric trucks available that are 100% viable from a technology and/or economically reasonable standard. 46-9

6. Warehouses provide a broad range of jobs for people with diverse levels of education and skill sets, leading to upward mobility. The San Pedro Bay Ports are an economic engine responsible for approximately 3.1 million jobs throughout the nation. The warehouse industry serves as essential infrastructure to these ports. This socioeconomic benefit is threatened by the onerous costs imposed by the ISR. 46-10

Should you have any questions or wish to discuss our perspective, please feel free to contact me. 46-11

Respectfully,

Jeffrey R. Jennison
President and Chief Executive Officer
Watson Land Company

cc: SCAQMD Governing Board

March 2, 2021

Victor Juan
Program Supervisor
South Coast Air Quality Management District
28165 Copley Drive
Diamond Bar, CA 91765

Re: Proposed Rule 2305: Warehouse Indirect Source - WAIRE Program and Proposed Rule 316 - Fees for Regulation

Dear Mr. Juan,

On behalf of the Los Angeles Cleantech Incubator (LACI), thank you for providing the opportunity to comment on South Coast Air Quality Management District's (SCAQMD) *Proposed Rule 2305: Warehouse Indirect Source - Warehouse Actions and Investment in Reduction of Emissions (WAIRE) Program and Proposed Rule 316 - Fees for Regulation.* LACI supports passing an Indirect Source Rule focused on warehouses, as its enforcement is a necessary effort to reduce air pollution and climate emissions in the region. LACI also believes that a strong WAIRE Program will accelerate deployment of the zero emissions technology required to meet air pollution and climate goals of the state while also providing economic benefits to the local workforce and goods movement industry. These effects of the WAIRE Program align with LACI's efforts to advance transportation electrification in the greater Los Angeles region. 47-1

In May 2018, LACI convened the Transportation Electrification Partnership (TEP), an unprecedented regional public-private collaboration to accelerate deep reductions in climate and air pollution by the time of the 2028 Olympic and Paralympic Games by pursuing bold targets, pilots, initiatives, and policies that are equity-driven, create quality jobs, and grow the economy. The 30+ members of TEP represent state regulators, local government, utilities, industry leaders, labor organizations and startups, all of whom are working to achieve bold transportation electrification targets in Los Angeles County, including the following:

- 95,000 chargers installed for goods movements to enable 60% of medium-duty delivery trucks to be electric and 40% of short-haul and drayage trucks on the road to be zero emissions by 2028

Implementation of the WAIRE Program will provide a regulatory solution to difficult problems, including access to depot charging infrastructure for fleets that do not own the facilities on which they operate. To further advance reductions in air pollution and climate emissions, LACI wishes to offer the following specific support and recommendations to Proposed Rule 2305:

1. Maintain Zero Emission Yard Trucks as the Sole Acceptable Yard Truck Technology for Earning WAIRE Points

   Zero emission yard trucks have been in commercial operation at warehouses and rail yards in SCAQMD territory since 2017, having long proved their economic and operational viability. As structured, acquiring and deploying zero emission yard tractors provides an opportunity to earn large quantities of WAIRE points, and SCAQMD should not distract from this incentive by including any ability to earn points from deployment of NZE yard tractors. 47-2

2. Consider Offering WAIRE Points per EVSE Successfully Installed and Energized

   As structured, purchasing EVSE earns WAIRE Points for each unit acquired, while beginning and completing an installation chargers earns WAIRE Points per construction permit, whether the construction project entailed installing one or ten EVSE. We encourage SCAQMD to review this structure to ensure that the Program incentivizes timely completion of construction projects and energizing of EVSE, as well as maximizing the size of EVSE depots deployed. 47-3

3. Consider Increasing the Stringency Level

   We consider the current proposed stringency value of 0.0025 WAIRE points/WATT as too low to accelerate deployment of zero emission vehicles and reduce air pollution in burdened communities, and urge the Air District to evaluate and consider higher stringency values for the final rule. 47-4

   In the face of increasing rents and cargo diversion, the regional warehousing industry continues growing. Thus, the industry can, and must, shoulder regulatory costs aimed at reducing air pollution. We request that the agency adopt at least a 0.005 WAIRE points per WATT stringency and agree to revisit the effectiveness of this rule at a later date. The Air District's own analysis shows that a stronger rule would have a marginal result in warehouses leaving the region, and a higher stringency value is necessary to bring about a transformation of Southern California's goods movement industry.

4. Consider Increasing the Mitigation Fee to Further Encourage Investments in Zero Emissions Technology

   Implementing too low of a mitigation fee option would allow regulated facilities to pay their way into compliance, rather than invest in on-site WAIRE menu items to clean up operations. This is proven by the agency's own projections showing that the $1000/point fee remains a cheaper compliance pathway in the initial phases of the rule. In order to incentivize investment in the WAIRE menu items, we ask that staff consider a higher mitigation fee. Additionally, should warehouses opt to pay their way into compliance, the 47-5

Air District should require that these funds are spent in the communities surrounding those facilities.

5. Provide Transparency on Data Relevant to Enforcing Compliance

   The Air District must make certain information relevant to Proposed Rule 2305 available to the public to ensure transparency in enforcement and compliance effectiveness. This type of information includes, but is not limited to, the number of truck trips to each regulated facility and those trucks' fuel types. This traffic information is critical to understanding the impacts of warehouses on adjacent communities and will be essential for proper enforcement of the rule, as well as targeted advancement of zero emission deployments. 47-6

We thank you for the opportunity to provide comment on Proposed Rule 2305. LACI believes this is an important step towards the region and the state realizing its air pollution and climate emissions goals, and supports an equitable and immediate implementation of the rule that maximizes the opportunities for the region to remain a leader in goods movement and clean transportation. 47-7

Sincerely,

Jack Symington
Program Manager, Transportation
Los Angeles Cleantech Incubator

Los Angeles World Airports

Submit via-email

March 2, 2021

South Coast Air Quality Management District
c/o Victor Juan
Program Supervisor
Planning and Rules
21865 Copley Drive
Diamond Bar, CA 91765

LAX

Van Nuys

City of Los Angeles

Eric Garcetti
Mayor

Board of Airport Commissioners

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Valeria C. Velasco
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Beatrice C. Hsu
Nicholas P. Roxborough
Dr. Cynthia A. Telles
Karim Webb

Justin Erbacci
Chief Executive Officer

RE: Comments Regarding Proposed Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program and Proposed Rule 316 – Fees for Rule 2305

Dear Mr. Juan:

Los Angeles World Airports (LAWA) appreciates the opportunity to participate in the South Coast Air Quality Management District's (AQMD) Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program and Proposed Rule 316 – Fees for Rule 2305 (proposed rule) rule making development. LAWA supports the need to develop programs to achieve applicable national ambient air quality standards (NAAQS) and reduce greenhouse gas emissions in the South Coast region. AQMD and LAWA recently entered into a Memorandum of Understanding with mutually agreed upon air quality emission reduction programs at Los Angeles International Airport (LAX that will achieve State Implementation Plan (SIP) creditable emission reductions. 48-1

We would like to offer the following comments on the proposed rule as staff continues to develop the rule and emission reduction opportunities for the Warehouse Indirect Source Rule.

First, LAWA is concerned about the potential to overcount truck trips that visit cargo and warehouse facilities on a single campus like LAX. LAX has several cargo facilities in close proximity to one-another. Often, one truck will visit two different cargo operators within the same physical facility (physically moving from one loading dock to another) or visit multiple cargo facilities at LAX before departure. Under the proposed rule, where actual truck trips will be collected by each cargo operator and operators will accrue WAIRE points compliance obligations based on the number of truck trips to their facility, this may result in overcounting truck trips at LAX and unfairly penalize warehouse operators at LAX by inflating the number of WAIRE points compliance obligations as compared to warehouse operators at off-airport facilities. The counting of truck trips by each operator will also make it appear that there is far more truck traffic at LAX than 48-2

there actually is. LAWA requests AQMD refine its methodology for calculating an operator's Weighted Annual Truck Trips (WATTs) to eliminate the overcounting of truck trips to a single campus like LAX. Revising the methodology for calculating WATTs to account for trucks that pick-up cargo from multiple operators on a single campus will better represent the actual number of truck trips and the actual oxides of nitrogen (NOx) emissions from warehouse activity and thereby not unfairly burden cargo operators located on a single campus with excessive compliance obligations that require them to undertake additional mitigation actions. 48-2 (cont'd)

Second, LAWA would like additional flexibility to develop a custom WAIRE project to assist LAX cargo operators earn WAIRE points based on LAWA's modernization projects and electric infrastructure upgrades. LAWA is currently undergoing several large capital improvement projects, including the Landside Access Modernization Program (LAMP), that support emission reduction activities. A component of LAMP is the Automated People Mover, which will be a zero-emission electric train system connecting LAX to the regional rail system and transporting passengers, guests, and employees to and from the Central Terminal Area at LAX more efficiently. LAWA would like to be able to use these campus-wide upgrades, such as LAMP, as actions that count towards an individual operator's WAIRE points. 48-3

Third, LAX depends upon financial incentives, including the Federal Aviation Administration's Voluntary Airport Low Emission Program (VALE), to fund emission reduction programs. VALE funding supports a wide-range of emission reduction activities at airports and could include electrification of cargo operations. Projects recently funded under the VALE program include the purchase of electric buses and infrastructure to provide ground power to parked aircraft. In order to be eligible for VALE grant funds, airport emission reduction projects must be voluntary. If airport projects are the result of a regulatory program, such as the proposed rule, LAWA will lose eligibility for VALE funding, and important emission reduction projects may not be implemented as a result. 48-4

Fourth, the AQMD should consider potential preemption issues under 49 U.S.C. §§ 41713(b) [the Airline Deregulation Act] and 14501(c) [the Federal Motor Carrier Act], which, respectively, restrict the ability of local authorities to enact or enforce any regulation related to a price, route, or service of any air carrier or any motor carrier engaged in the transportation of property. 48-5

Lastly, consider clarifying or replacing the phrase "may be used" in the Requirements section on page 4, section (d)(1), from the proposed rule. This phrase is not defined and raises confusion about what constitutes "floor area" in a warehouse that "may be used" for warehousing activities and how warehouse operators apply the rule to their warehouses. 48-6

> ***Section (d)(1) "…Only warehouse operators in buildings with greater than or equal to 100,000 square feet of floor area that <u>may be used</u> for warehousing activities and who operate at lease 50,000 square feet of the warehouse are required to earn WAIRE Points." (emphasis added).***

LAWA supports the AQMD's goal to improve air quality in the region and would like to work with staff to create a framework that better reflects cargo operations at airports and does not unfairly penalize cargo operators on airport property. We believe these revisions to the proposed rule will provide greater visibility and understanding of cargo operations and related air quality improvement programs at airports and encourage the development of new programs resulting in 48-7

cleaner air. Active engagement between SCAQMD staff, airports, and other stakeholders can drive the change towards cleaner air. 48-7 (cont'd)

LAWA appreciates the opportunity to provide these comments and looks forward to continuing to work with SCAQMD staff and the Warehouse Indirect Source Rule Development Group to achieve emissions reductions through a collaborative approach. If you have any questions, please contact Tami Mccrossen-Orr of LAWA's Environmental Programs Group, at (424) 646-6734. 48-8

Sincerely,

Samantha Bricker

Samantha Bricker
Chief Sustainability & Revenue Management Officer
Los Angeles World Airports

SB:TMO:eb

cc: Councilman Joe Busciano, City of Los Angeles Representative, AQMD Board Member
Wayne Nastri, Executive Office, AQMD
Ian MacMillan, Planning and Rules Manager, AQMD

CENTER FOR COMMUNITY ACTION & ENVIRONMENTAL JUSTICE
EARTHJUSTICE
EAST YARD COMMUNITIES FOR ENVIRONMENTAL JUSTICE
LONG BEACH ALLIANCE FOR CHILDREN WITH ASTHMA
NATURAL RESOURCES DEFENSE COUNCIL
PARTNERSHIP FOR WORKING FAMILIES
SAN PEDRO & PENINSULA HOMEOWNERS COALITION
SIERRA CLUB
THE LOS ANGELES COUNTY ELECTRIC TRUCK BUS COALITION
WAREHOUSE WORKER RESOURCE CENTER
WEST LONG BEACH ASSOCIATION

March 2, 2021

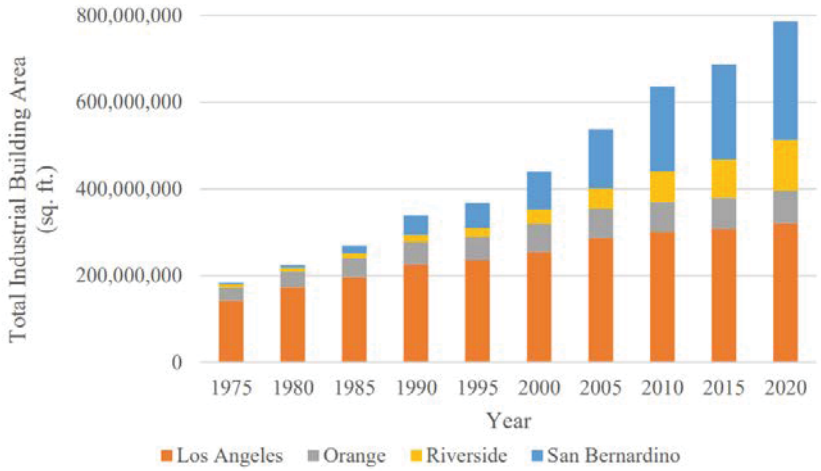
Victor Juan
Program Supervisor
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: Comments on the Warehouse Indirect Source Rule (Proposed Rule 2305)

Dear Mr. Juan,

On behalf of the undersigned coalition of organizations, we submit these comments on Proposed Rule 2305. We appreciate staff's continued work on the warehouse indirect source rule, but we remain concerned that the current proposal will not meaningfully regulate an industry that has polluted communities for years. As demonstrated in the figure below, the warehouse industry has grown steadily in the South Coast Air Basin in the past two decades,[1] and nearby communities continue to be disproportionately impacted by the polluting trucks visiting these facilities. 49-1

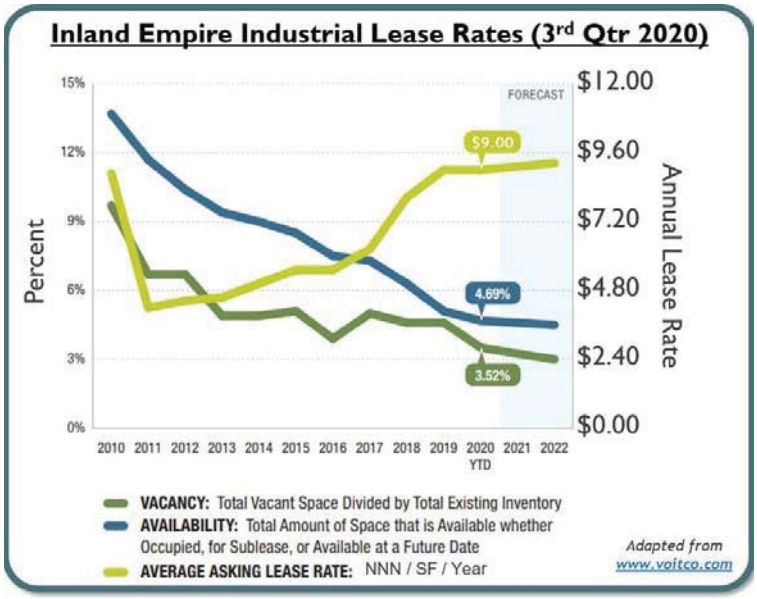
Figure 10: Industrial Building Growth by County



[1] SCAQMD, Preliminary Draft Staff Report, 45.

The ongoing covid-19 pandemic has exacerbated the unacceptable health risks that these frontline communities face every day. Last year, this public health crisis coincided with one of the worst smog seasons in the South Coast Air Basin in decades – with a total of 157 days of ozone pollution levels exceeding state and federal air quality standards.[2]

Meanwhile, the warehouse industry has reported record-breaking profits during the pandemic as consumers increasingly rely on e-commerce. Last year, the San Pedro Bay Ports hit record freight volumes for several months. At the Port of Long Beach, December 2020 was the Port's busiest month in its 110-year history, and 2020 was the Port's "all-time busiest year."[3] This increased port activity has only accelerated the expansion of an already booming warehouse industry, further compounding the health burdens on nearby communities.[4] In the Inland Empire, warehouse vacancy rates have reached their lowest in a decade while lease rates have increased.[5]



Industry analysts have further noted that the industry is doing particularly well financially. "Major investors like Blackstone; and household tenants like Amazon; and landlords like Dedeaux Properties, Prologis, and Rexford Industrial Realty are raking in all the chips in the changing landscape brought on by the coronavirus crisis."[6]

A strong warehouse indirect source rule will address these growing disproportionate pollution burdens, provide basic health protections to our communities, and put the South Coast on track to attain

---

[2] Tony Barboza, *L.A. began 2020 with a clean-air streak but ended with its worst smog in decades*, Los Angeles Times (Dec. 6, 2020), https://www.latimes.com/california/story/2020-12-06/2020-la-air-quality-southern-california-pollution-analysis.

[3] Port of Long Beach, Port Moves a Record 8.1 Million TEUs in 2020, Jan. 15, 2021, https://www.polb.com/port-info/news-and-press/port-moves-a-record-8-1-million-teus-in-2020-01-15-2021/.

[4] *See* Justin Ho, *As imports boom, warehouses fill up, and businesses face a storage shortage*, Marketplace (Oct. 1, 2020 , https://www.marketplace.org/2020/10/01/imports-boom-warehouses-fill-up-businesses-face-storage-shortage-online-shopping-covid19/.

[5] *See also* Greg Cornfield, *Southern California Industrial Real Estate Market: What to Know for 2021*, Commercial Observer (Feb. 3, 2021), https://commercialobserver.com/2021/02/southern-california-industrial-real-estate-2021-warehouse/.

[6] *Id.*

federal and state ambient air quality standards. But the Air District must prioritize public health and take into account community needs in the development of this rule.

I. The Air District must increase the proposed stringency in order to meaningfully address public health concerns.

We oppose the current proposed stringency value of 0.0025 WAIRE points per WATT and urge the Air District to evaluate and consider higher stringency values for the final rule. The undersigned organizations have repeatedly asked for a rule that starts with sufficient stringency to provide relief to communities sooner.

The Air District has identified several factors that were taken into consideration in determining the stringency.[7] We disagree with the agency's approach of "balancing all factors." Public health concerns are unequivocally of greater importance than the financial impact to an industry that profits at the expense of our communities' health. As the Air District has acknowledged, the warehouse industry is experiencing record profits and all-time low vacancies. Despite increasing rents and cargo diversion, the industry continues to grow in the region and facilities are not choosing to leave the area.[8] The industry can, and must, shoulder these regulatory costs. A transformation of the warehouse industry is long overdue, and public health must be the single most important factor in guiding the stringency of this rule. 49-2

The current range of stringency values, if implemented, is far too low to bring about meaningful change to warehouse operations.[9] The lowest stringency value studied by the Air District (0.0001 would only reduce, at a maximum, 1.5 tons per day of nitrogen oxide emissions and 0.01 tons per day of diesel particulate matter emissions.[10] Due to the annual variable and phase-in schedule, the full stringency would not even apply to many warehouses for years.[11] These emissions reductions will not be sufficient to bring relief to communities living adjacent to warehouse facilities in the near future. We request that the agency adopt at least a 0.005 WAIRE points per WATT stringency and agree to revisit whether this is sufficient at a later date. The Air District's analysis shows that a stronger rule would have a marginal result in warehouses leaving the region (i.e. six warehouses leaving under a 0.005 stringency level and three for a 0.0025 stringency level), and a higher stringency value is necessary to bring about a transformation of this industry.

II. A strong warehouse ISR must prioritize zero-emissions technology.

As noted in our previous comment letters, a strong warehouse indirect source rule must prioritize zero-emissions technology and infrastructure, the only solution that will effectively address the air quality and health impacts caused by this industry. Yet, the Air District's scenario analysis continues to overestimate the emissions reductions for near-zero technologies. For example, facilities earn the same amount of points for NZE class 4-7 truck visits and ZE class 4-7 truck visits.[12] This obscures the real costs of near-zero technologies – further investment in natural gas and oil infrastructure that will perpetuate harm in frontline communities. We request that the Air District update the WAIRE menu to incentivize investment in zero-emissions technology and infrastructure. 49-3

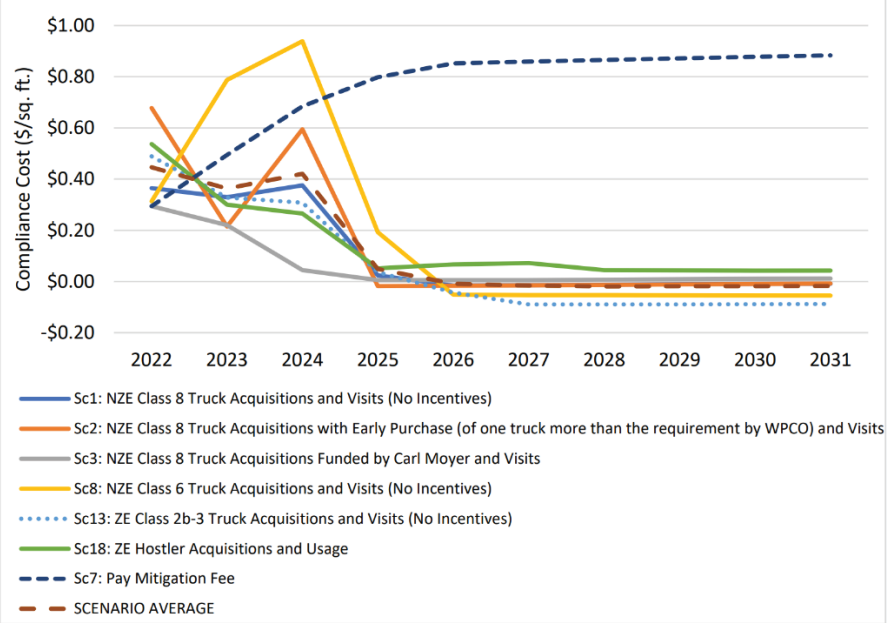
[7] Preliminary Draft Staff Report, 6.
[8] *Id.* at 58.
[9] SCAQMD, *Warehouse ISR Working Group Presentation* (Dec. 17, 2020), slides 21-22.
[10] *Id.* at slide 22.
[11] Preliminary Draft Staff Report, 29.
[12] *Id.* at 97.

A rule that incentivizes zero-emissions technology will protect the health of our communities and create quality jobs. The transition towards zero-emissions will require the installation of charging infrastructure, on-site solar panels, and the manufacturing of electric vehicles – all of which will lead to meaningful job opportunities in the implementation of cleaner technologies at warehouses. The manufacturing of zero-emission buses and solar panel installation on larger commercial buildings have created and broadened access to unionized jobs with quality wages and benefits for workers. The warehouse indirect source rule can facilitate a similar transformation that will further increase demand for quality jobs in the greening energy, transportation, and manufacturing sectors. The Air District should not waste an opportunity to develop a rule that will lead to significant emissions reductions and create access to good jobs. 49-3 (cont'd)

III. The Air District must increase the mitigation fee to encourage investment in zero-emissions.

We remain concerned about the mitigation fee option as it allows regulated facilities to pay their way into compliance, rather than invest in on-site WAIRE menu items to clean up operations. Although the scenario cost analysis estimates that the mitigation fee will be a more costly option and not frequently used, the agency's projections show that the $1000/point fee remains a cheaper compliance pathway in the initial phases of the rule.[13] 49-4

Figure 14: Potential Bounding Analysis Costs from Truck Acquisition and Subsequent Usage Scenarios



In order to incentivize investment in the WAIRE menu items, we ask that staff consider a higher mitigation fee. In the event that warehouses opt to pay their way into compliance, the Air District should require that these funds are spent in the communities surrounding those facilities.

IV. The Air District should release data on warehouse facilities that is relevant to compliance.

In order to ensure proper public engagement, the Air District must make certain information relevant to compliance available to the public. Specifically, we request that the agency release the 49-5

[13] *Id.* at 66.

following data: the number of truck trips to each regulated facility; the number of trucks and tractors serving a warehouse, by truck class and fuel type; the trucking companies servicing the regulated facilities; and the truck routes to and from each facility.

This information is critical to understanding the impacts of warehouses in nearby communities. There is no legal rationale to withhold this information from the public. Such data does not constitute confidential business information and will be essential for proper enforcement of the rule. 49-5 (cont'd)

V. We cannot afford further delays of the warehouse indirect source rule.

Finally, the Air District must adopt the warehouse indirect source rule as expeditiously as possible, and no later than April. We appreciate staff's continued work on this critical regulation, but the rule has experienced numerous delays while the freight industry continues to pollute communities living near warehouses. The Air District has the opportunity to adopt a strong and equitable warehouse indirect source rule that will provide significant health benefits to frontline communities. We ask that staff continue to engage with community members so that community needs and concerns can be addressed in the development of this rule. 49-6

We appreciate your consideration of these comments and the staff's work on this important rule. We look forward to continuing to work with the Air District to develop a regulation that prioritizes public health. 49-7

Sincerely,

Regina Hsu
Michelle Ghafar
Adrian Martinez
Earthjustice

Ivette Torres
Center for Community Action & Environmental Justice

Taylor Thomas
East Yard Communities for Environmental Justice

Sylvia Betancourt
Long Beach Alliance for Children with Asthma

Heather Kryczka
Natural Resources Defense Council

Kathy Hoang
Partnership for Working Families

Peter M. Warren
San Pedro & Peninsula Homeowners Coalition

Carlo De La Cruz
Sierra Club

Yasmine Agelidis
The Los Angeles County Electric Truck & Bus Coalition

Andrea Vidaurre
Warehouse Worker Resource Center

Theral Golden
West Long Beach Association

cc:

Wayne Nastri
Executive Officer
South Coast Air Quality Management District

Sarah Rees
Deputy Executive Officer
Planning, Rule Development & Area Sources
South Coast Air Quality Management District

Ian MacMillan
Planning and Rules Manager
South Coast Air Quality Management District

Los Angeles County Business Federation
Strengthening the Voice of Business Since 2008

March 2, 2021

Ian MacMillan
Victor Juan
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178

Sent Via Email: imacmillan@aqmd.gov / vjuan@aqmd.gov

Subject: Comments on Proposed Rule 2305 (Warehouse Indirect Source Rule)

Dear Mr. MacMillan:

BizFed opposes the adoption of Rule 2305 (Indirect Source Rule). Warehouses are integral to the Southern California logistics industry. The logistics industry plays a crucial role in the response to the COVID-19 pandemic—not only in the distribution of medical supplies, vaccines, and equipment but also in delivering goods to a public that has become increasingly dependent on e-commerce. 50-1

The District's proposed ISR seems to be a misguided policy during the COVID-19 pandemic. The District is pursuing a regulation targeting a sector that serves as a lifeline to our region and the nation and is deemed essential by federal and state governments. Under the current draft rule, reporting obligations begin only 60 days from rule adoption. The substantive WAIRE Points obligations will commence as soon as July 2021. 50-2

The following further comments are provided in response to the District's Proposed Rule 2305:

1. This rule would impose additional/permanent costs on warehouses of approximately $.90 per square foot. This extra cost would amount to targeting a specific essential industry with $1 billion in annual fees during the worst possible time and while responding to the pandemic's challenges on behalf of our nation. 50-3

2. It is not feasible to comply with the ISR due to the following:

a) The proposed rule requires warehouses to control truck fleets and decrease truck emissions. Yet, warehouse operators are not able to accomplish this task

b) Warehouses have no control over how truck engines are manufactured.

c) Warehouses do not own truck fleets, nor do they control what type of trucks shipping companies purchase 50-4

d) Warehouse operators do not control which trucks come to warehouses, when they arrive, where they come from, or any other variables related to truck trips.

3. The technology is not available to accomplish items on the WAIRE menu. For example, there are no heavy-duty electric trucks available that are viable from a technology and/or economically reasonable standard. 50-5

4. Warehouses have been deemed to be essential businesses by the State for important reasons including: 50-6

a) The approximately 18 million people who live in Southern California rely on warehouses as an integral part of the goods movement system to get them the items they need to survive, like food, medical supplies, clothes etc.

5. This rule creates tremendous uncertainty in the economy as the full negative impact of this ISR is not known. 50-7

a) Uncertainty should not be created in this critical, essential business sector, especially considering the current economic downturn/unemployment crisis associated with the COVID-19 pandemic.

6. Warehouses provide a broad range of jobs for people of every level of education and skillset. Warehouses and the logistics industry offer jobs that lead to upward ability. This job creation is a socioeconomic benefit that the proposed ISR's onerous costs would threaten. 50-8

7. The proposed ISR seeks to "indirectly" regulate the trucking industry through the Warehouse industry. The District should publicly explain how it has the jurisdiction/authority to regulate a mobile source that is such an integral part of interstate commerce as the trucking industry. 50-9

Thank you for your attention to these comments. Please include these comments as part of the official record for Proposed Rule 2305 (Warehouse Indirect Source Rule) so that all SCAQMD Board Members may have the opportunity to review the above. 50-10

If you have any questions, please contact sarah.wiltfong@bizfed.org.

Respectfully,



Donna Dupperon
BizFed Chair
Torrance Area Chamber



David Fleming
BizFed Founding Chair



Tracy Hernandez
BizFed Founding CEO
IMPOWER, Inc.

Los Angeles County Business Federation

Strengthening the Voice of Business Since 2008

BizFed Association Members

7-Eleven Franchise Owners Association of Southern California
Action Apartment Association
Alhambra Chamber of Commerce
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Apartment Association, CA Southern Cities, Inc.
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AREAA North Los Angeles SFV SCV
Armenian Trade and Labor Association
Associated Builders & Contractors, Inc. Southern California Chapter
Association of Club Executives
Association of Independent Commercial Producers
Azusa Chamber of Commerce
Bell Gardens Chamber of Commerce
Beverly Hills Bar Association
Beverly Hills Chamber of Commerce
Black Business Association
BNI4SUCCESS
Bowling Centers of Southern California
Boyle Heights Chamber of Commerce
Building Industry Association - Baldyview
Building Industry Association - LA/Ventura Counties
Building Industry Association - Southern California
Building Owners & Managers Association of Greater Los Angeles
Burbank Association of REALTORS
Burbank Chamber of Commerce
Business and Industry Council for Emergency Planning and Preparedness
Business Resource Group
CA Natural Resources Producers Assoc
CalAsian Chamber
California Apartment Association- Los Angeles
California Asphalt Pavement Association
California Bankers Association
California Business Properties Association
California Business Roundtable
California Cannabis Industry Association
California Cleaners Association
California Construction Industry and Materials Association
California Contract Cities Association
California Fashion Association
California Gaming Association
California Grocers Association
California Hispanic Chamber
California Hotel & Lodging Association
California Independent Oil Marketers Association (CIOMA)
California Independent Petroleum Association
California Life Sciences Association
California Manufacturers & Technology Association
California Metals Coalition
California Restaurant Association
California Retailers Association
California Small Business Alliance
California Self Storage Association
California Society of CPAs - Los Angeles Chapter
California Trucking Association
Californians for Balanced Energy Solutions
Carson Chamber of Commerce
Carson Dominguez Employers Alliance
CDC Small Business Finance
Central City Association
Century City Chamber of Commerce
Cerritos Regional Chamber of Commerce
Chatsworth/Porter Ranch Chamber of Commerce
Citrus Valley Association of Realtors
Coalition for Renewable Natural Gas
Coalition for Small Rental Property Owners
Commercial Industrial Council/Chamber of Commerce
Construction Industry Air Quality Coalition
Construction Industry Coalition on Water Quality
Council on Trade and Investment for Filipino Americans
Covina Chamber
Crescenta Valley Chamber of Commerce
Culver City Chamber of Commerce
Downey Association of REALTORS
Downey Chamber of Commerce
Downtown Center Business Improvement District
Downtown Long Beach Alliance
El Monte/South El Monte Chamber
El Segundo Chamber of Commerce
Employers Group
Encino Chamber of Commerce
Engineering Contractor's Association
EXP
F.A.S.T.- Fixing Angelenos Stuck in Traffic
FilmLA
Friends of Hollywood Central Park
FuturePorts
Gardena Valley Chamber
Gateway to LA
Glendale Association of Realtors
Glendale Chamber
Glendora Chamber
Greater Antelope Valley AOR
Greater Bakersfield Chamber of Commerce
Greater Lakewood Chamber of Commerce
Greater Los Angeles African American Chamber
Greater Los Angeles Association of REALTORS
Greater Los Angeles New Car Dealers Association
Greater San Fernando Valley Regional Chamber
Harbor Association of Industry and Commerce
Harbor Trucking Association
Historic Core BID of Downtown Los Angeles
Hollywood Chamber
Hong Kong Trade Development Council
Hospital Association of Southern California
Hotel Association of Los Angeles
Huntington Park Area Chamber of Commerce
Independent Cities Association
Industrial Environmental Association
Industry Business Council
Inland Empire Economic Partnership
International Cannabis Business Women Association
Irwindale Chamber of Commerce
La Cañada Flintridge Chamber
LA Fashion District BID
LA South Chamber of Commerce
Lancaster Chamber of Commerce
Larchmont Boulevard Association
Latin Business Association
Latino Food Industry Association
Latino Restaurant Association
LAX Coastal Area Chamber
League of California Cities
Long Beach Area Chamber
Long Beach Economic Partnership
Los Angeles Area Chamber
Los Angeles County Board of Real Estate
Los Angeles County Waste Management Association
Los Angeles Gateway Chamber of Commerce
Los Angeles Gay & Lesbian Chamber of Commerce
Los Angeles Latino Chamber
Los Angeles Parking Association
Malibu Chamber of Commerce
Marketplace Industry Association
Motion Picture Association of America, Inc.
MoveLA
Multicultural Business Alliance
NAIOP Southern California Chapter
National Association of Tobacco Outlets
National Association of Women Business Owners - CA
National Association of Women Business Owners - LA
National Hispanic Medical Association
National Hookah Community Association
National Latina Business Women's Association
Orange County Business Council
Pacific Merchant Shipping Association
Pacific Palisades Chamber
Panorama City Chamber of Commerce
Paramount Chamber of Commerce
Pasadena Chamber
Pasadena Foothills Association of Realtors
PhRMA
Planned Parenthood Affiliates of California
Pomona Chamber
Propel LA
Rancho Southeast Association of Realtors
ReadyNation California
Recording Industry Association of America
Regional Black Chamber-San Fernando Valley
Regional Hispanic Chamber of Commerce
Regional San Gabriel Valley Chamber
Rosemead Chamber
San Dimas Chamber of Commerce
San Gabriel Chamber of Commerce
San Gabriel Valley Economic Partnership
San Pedro Peninsula Chamber
Santa Clarita Valley Chamber
Santa Clarita Valley Economic Development Corp.
Santa Monica Chamber of Commerce
Sherman Oaks Chamber
South Bay Association of Chambers
South Bay Association of Realtors
South Gate Chamber of Commerce
Southern California Contractors Association
Southern California Golf Association
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Southern California Leadership Council
Southern California Minority Suppliers Development Council Inc.
Southern California Water Coalition
Southland Regional Association of Realtors
Sunland/Tujunga Chamber
Torrance Area Chamber
Town Hall Los Angeles
Tri-Counties Association of Realtors
United Cannabis Business Association
United Chambers – San Fernando Valley & Region
United States-Mexico Chamber
Unmanned Autonomous Vehicle Systems Association
US Green Building Council
US Resiliency Council
Valley Economic Alliance, The
Valley Industry & Commerce Association
Vermont Slauson Economic Development Corporation
Vernon Chamber
Veterans in Business Network
Vietnamese American Chamber
Warner Center Association
West Hollywood Chamber
West Los Angeles Chamber
West San Gabriel Valley Association of Realtors
West Valley/Warner Center Chamber
Western Electrical Contractors Association
Western Manufactured Housing Association
Western States Petroleum Association
Westside Council of Chambers
Whittier Chamber of Commerce
Wilmington Chamber
World Trade Center

COALITION FOR CLEAN AIR

March 2, 2021

Victor Juan
Program Supervisor
South Coast Air Quality Management District
21865 Copley Drive Diamond Bar, CA 91765

Re: Comments Proposed Rule 2305 (the Warehouse Indirect Source Rule)

Dear Mr. Juan,

The Coalition for Clean Air (CCA) appreciates the opportunity to provide comments on Proposed Rule (PR) 2305. Southern California has long been a hub of the global goods movement industry. Nearly 40 % of all imports into the United States enter through the Ports of Los Angeles and Long Beach. Most of these imports are then transported via truck to warehouses in the Harbor Area, East Los Angeles, and increasingly, in the Inland Empire. 51-1

As a result, communities near goods movement corridors or facilities suffer disproportionately from emissions. Diesel particulate matter – a known carcinogen – is the primary air toxic contaminant in the South Coast Air Basin. This impact is even more severe in communities near goods movement corridors and facilities. Ozone continues to plague the South Coast Air Basin; not only is the district in Extreme Nonattainment of the National Ambient Air Quality Standards, but the district is also on track to fail meeting standards by the 2023 deadline. Meanwhile, residents near warehouses are impacted by emissions, traffic and other intrusions and disruptions.

Given the exponential growth of the warehousing industry and the associated impacts on air quality, SCAQMD should implement a strong, effective warehouse Indirect Source Rule (ISR.) Four of the five AB 617 Community Steering Committees in the South Coast Air Basin have explicitly identified ISRs as a strategy for reducing emissions from trucks. Failure to consider, adopt, and implement a warehouse ISR would break the commitments made to these communities. Further, failing to pass a strong warehouse ISR would create a bad precedent for other indirect sources, such as railyards, ports, and airports.

For the warehouse ISR to be effective, PR 2305 must prioritize public health and addressing community needs. To this end, we offer the following comments on how PR 2305 could be strengthened and improved.

660 S. Figueroa Street, Suite 1140
Los Angeles, California 90017
(213) 223-6860

1107 Ninth Street, Suite 440
Sacramento, California 95814
(916) 527-8048

www.ccair.org

1. **The stringency value should be increased to maximize emissions reductions. Further, the WAIRE formula should consider cumulative impacts from warehousing and other emissions sources.**

The proposed "stringency value" (.0025) in the Warehouse Actions and Investments to Reduce Emissions (WAIRE) points compliance obligation formula is insufficient and should be increased. Using this stringency value, SCAQMD staff anticipates emissions reductions of 2.5-4 tons per day (tpd) once PR 2305 is fully phased in by the district. This is not significantly higher than the lowest potential stringency value of .0001, which would yield emissions reductions of 1.5 tpd. As such, we join other environmental and air quality advocates in calling on the district to increase the stringency value to increase PR 2305's emissions reductions. 51-2

Further, community advocates are concerned that PR 2305 does not address local needs. Warehouses do not operate in a vacuum – in many cases, communities are adjacent to multiple warehouses. These communities are also often impacted by other emissions sources, such as freeways, railyards, and industrial sources. As such, the district should revise the WAIRE formula to take cumulative community impacts in consideration. 51-3

2. **The potential for loopholes, emissions trading and paper compliance must be eliminated.**

We laud SCAQMD staff for explicitly stating WAIRE points will not be tradable among different warehouse operators. We remain concerned, however, that PR 2305 leaves the door open to game the system. In particular, the transferability of points between the same warehouse operator and the ability to pay a compliance fee in lieu of earning WAIRE points could result in loopholes and opportunities for paper compliance rather than actual emissions reductions. 51-4

Regarding the transferring of WAIRE points, we understand the district's intent is to discount points based on their "vintage" (age or from where the points are transferred. Yet, the district must take care to ensure benefits from emissions reductions are not being transferred out of disadvantaged communities. For example, a warehouse operator could transfer excess points from a warehouse in a non-disadvantaged community to a warehouse in a disadvantaged community. This would have the effect to reducing the emissions reductions in the disadvantaged community.

Further, we remain concerned that warehouse operators can buy their way out of compliance and merely pay a "mitigation fee." While the proceeds of this compliance fee would result in some emissions reductions due to truck replacements or funding other actions, it does not truly maximize emissions reductions. Rather, allowing warehouses to pay a mitigation fee could result in a pay-to-pollute scenario where paying the fee is

incentivized over actual emissions reductions. As such, SCAQMD must ensure earning WAIRE points is the primary way to achieve compliance with PR 2305. 51-4 (cont'd)

3. **We agree mitigation fee revenues should be used locally; however, SCAQMD must use the fee to support clean technology, infrastructure deployment, and other actions which will reduce emissions.**
   We appreciate SCAQMD Board Members expressing a desire to see mitigation fee revenues be used in the same communities from where they are collected. Using mitigation fee revenues will maximize PR 2305's benefits to warehouse-adjacent communities as well as deliver broader benefits to the South Coast Air Basin. Yet, we are concerned about the potential overreliance on air filtration. At the last Mobile Source Committee meeting, a Board Member cited filtration **as an example** of projects eligible for mitigation fee revenues. We do not believe; however, the comment should be construed as the Governing Board prioritizing air filtration over other projects. While air filtration may have a role, mitigation is no substitute for emissions reductions. As such, SCAQMD should commit to prioritizing projects which would reduce emissions in communities impacted by warehouses and the goods movement industry. 51-5

4. **Any emissions reductions from the WAIRE program and PR 2305 must be above and beyond the reductions stemming from California Air Resources Board (CARB) regulations or state and local action.**
   To maximize emissions reductions, PR 2305 should exceed the reductions built into previously adopted regulations by CARB, SCAQMD and other governmental entities. While the draft staff report notes, at the current time, it is too speculative to determine if PR 2305 will result in State Implementation Plan SIP)-creditable actions, SCAQMD should ensure that emissions reductions exceed pre-existing commitments. 51-6

Thank you for considering our comments. 51-7

Sincerely,

Chris Chavez
Deputy Policy Director

CALIFORNIA BUSINESS PROPERTIES ASSOCIATION

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DANIEL WINTON, Daniel K. Winton Law Office

March 2, 2021

Sarah Rees, Deputy Executive Officer
South Coast Air Quality Management District
21865 Copley Dr.
Diamond Bar, CA 91765

Dear Ms. Rees:

The California Business Properties Association representing over 400 individual companies and every major commercial real estate association is opposed to the South Coast Air Quality Management District's (SCAQMD proposed Warehouse Indirect Source Rule (ISR . 52-1

CBPA is the designated legislative advocate for the International Council of Shopping Centers (ICSC , the California Chapters of the Commercial Real Estate Development Association (NAIOP), the Building Owners and Managers Association of California (BOMA), the Retail Industry Leaders Association (RILA), the Institute of Real Estate Management IREM), and the Association of Commercial Real Estate – Northern and Southern California (ACRE) the National Association of Real Estate Investment Trusts (NAREIT), and AIR Commercial Real Estate Association (AIR CRE).

Our members believe the draft ISR Warehouse Actions and Investments to Reduce Emissions "WAIRE Points," is too complicated, costly, and duplicative of existing efforts, and will not achieve the stated desired outcomes. 52-2

California already regulates mobile sources pursuant to its waiver under federal Clean Air Act, and this power is unique in the nation. The California Air Resources Board (CARB) has used this power to adopt the country's strictest emission laws, including adopting the world's first mandate to manufacture and sell zero-emission commercial vehicles. 52-3

CARB has also stated its intent to adopt regulations by the end of 2021 that will require nearly every equipment type at warehouses to operate in a zero-emission mode.

On behalf of the commercial real estate industry, I ask that SCAQMD not engage in duplicative rulemaking that will have a disastrous effect on the economy of the state, make goods more difficult and expensive to get to consumers, and will have marginal – if any – environmental benefit. 52-4

Thank you for taking our views into consideration. 52-5

Sincerely,

Rex S. Hime
President & CEO

cc: Governor Gavin Newsom
All Members SCAQMD
CBPA Board of Directors

Comment Letter #53 (email) – Disneyland Resort – 2/22/2021

From: Jiang, Hao <Hao.Jiang@disney.com>
Sent: Monday, February 22, 2021 4:31 PM
To: Ian MacMillan <imacmillan@aqmd.gov>
Subject: RE: PR2305 Definition Electric Charger

Ok.

Now does "the use of onsite EV charging' in Table 3 WAIRE Menu include kWh charged into employee personal vehicle? 53-1

From: Ian MacMillan [mailto:imacmillan@aqmd.gov]
Sent: Monday, February 22, 2021 3:41 PM
To: Jiang, Hao <Hao.Jiang@disney.com>
Subject: RE: PR2305 Definition Electric Charger

In our experience, it appears that electric forklifts are the default for warehouses covered by PR 2305. They are therefore not included in the menu.

From: Jiang, Hao <Hao.Jiang@disney.com>
Sent: Monday, February 22, 2021 3:38 PM
To: Ian MacMillan <imacmillan@aqmd.gov>
Subject: PR2305 Definition Electric Charger

Hi Ian,

I could not make it sure on whether or not an electric forklift charger is included in the definition of PR2305 for Electric Charger. We have e-Forklift chargers that cannot charge EV truck.

Thank you
Hao

PR2305(c)(15):
ELECTRIC CHARGER means an electric charging station for vehicles. Each unique plug that can charge an individual vehicle at any time, regardless of whether other electric chargers/plugs are operating, counts as one electric charger. This equipment is also referred to as Electric Vehicle Supply Equipment (EVSE). 53-2

ATTN: Clerk of the Board, clerkofboard@aqmd.gov, Wayne Nastri, wnastri@aqmd.gov, Sarah Reese, SRees@aqmd.gov Ian Macmillan imacmillan@aqmd.gov

To the Governing Board of the South Coast Air Quality Management District and Senior Staff:

These comments are submitted on behalf of the Natural Resources Defense Council (NRDC) and our roughly 3 million members and activists. NRDC uses law, science, and the support of its members to ensure the rights of all people to the air, the water, and the environment.

We at NRDC believe that action must be taken now to combat climate change and solve the air quality issues of southern California, environmental crises that harm residents in the region every day. As we continue to contend with the ongoing COVID-19 pandemic, essential workers and their families - particularly in the logistics industry - are put at even greater risk due to unsafe work conditions and worsening air quality. Our workers deserve higher workplace standards so that they are able to breathe safely and power their business without creating harmful air pollution. 54-1

To date, the warehouse industry continues to operate in ways that put workers and communities at risk every day. My organization believes that the **Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program Fees for Rule 2305** is a critical step to addressing the air quality impacts of this sector of the goods movement industry. 54-2

We must work together to clean up warehouses. The Warehouse Indirect Source Rule will be critical to holding these facilities accountable, and we urge the South Coast AQMD to pass a strong rule that protects our communities' health.

Warehouses have spewed toxic air pollution in nearby communities for years and a strong program, like the warehouse indirect source rule, is necessary to transform this industry. But to effectively clean up the warehouse industry, the rule must be more stringent to provide relief for communities that breathe the most ozone-polluted air in the nation. 54-3

We also believe that warehouses must move towards zero emission technology and the warehouse indirect source rule should incentivize this shift. This will provide air quality benefits and create access to quality jobs by increasing demand for labor as the industry begins to 54-4

implement zero emission technologies. These job opportunities have been proven to provide quality wages and benefits for workers, unlike many temporary low-wage warehouse jobs. 54-4 (cont'd)

We hope the Board will pass a strong warehouse indirect source rule that serves public health, supports a new green economy, and provides regional air quality benefits. 54-5

Sincerely,

Heather Kryczka
Project Attorney
Natural Resources Defense Council

David Pettit
Senior Attorney
Natural Resources Defense Council

9300 Arrowpoint Blvd.
Charlotte NC 28273

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March 2, 2021

Sarah Rees, Deputy Executive Officer
Ian MacMillan, Planning and Rules Manager
Victor Juan, Program Supervisor
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Subject: **Comments on Proposed Rule 2305 – Warehouse Indirect Source Rule and Related Fees and Staff Report**

Submitted via email

Dear Ms. Rees, Mr. MacMillan and Mr. Juan:

Thank you for this opportunity to comment on SCAQMD's proposed Rule 2305 – Warehouse Indirect Source Rule and related Fees and Staff Report. 55-1

Maersk is an integrated international container logistics company. Our container vessels make over 500 calls in California ports each year, with both inbound freight and extensive exports of California agriculture and medical goods, technologies and the huge variety of materials and products essential to our lives. The goods brought to California by these vessels are unloaded in four California Ports, and we both operate and contract with a significant number of California trucking and warehousing companies to provide smooth inland supply chain flow.

Maersk has long been an environmental leader in goods movement and is committed to going beyond compliance to achieve environmental excellence. Some of our commitments include Net Zero Carbon Shipping by 2050, a 60% reduction in emissions by 2030, and launching our first carbon neutral biofuel/e-fuel vessel by 2023. As we continue to fine tune our inland capabilities to better serve our customers, we are bringing that same level of sustainability to the full end-to-end supply chain operation. More information on these programs is available on our website and in our annual sustainability reports at www.maersk.com/about/sustainability.

We have attended SCAQMD presentations on the Warehouse Indirect Source Rule (ISR) and reviewed materials provided. However, we have not had the opportunity to review the materials provided on the morning of March 3, when these comments are due. We therefore reserve the option to provide further comments on the proposal as it evolves or is better understood. We also participated in the 55-2

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development of the industry coalition letter submitted to SCAQMD by the California Trucking Association and other stakeholders on the Warehouse ISR, and endorse and incorporate those more detailed comments by reference. 55-2 (cont'd)

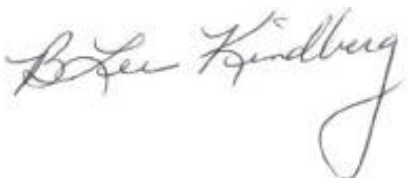
We would like to particularly emphasize the following high-level concerns:

1. The California Air Resources Board (CARB) has the authority to regulate mobile sources and is already well into the process of regulating freight sources with several rules that are comprehensive, complex and costly. We question SCAQMD's authority to impose separate regulations on these same operations, and specifically with regards to existing freight and warehousing facilities. 55-3
2. The proposed SCAQMD rule has significant overlap with the many programs being actively implemented and developed at the state level by CARB. 55-4
    a. It is unclear whether the proposed rule will achieve reductions beyond those that will be achieved by the CARB programs.
    b. The proposed rule differs from the CARB approaches in metrics, management and reporting, adding significant cost and administrative burden. 55-5
3. The SCAQMD Warehouse ISR rules, and especially the WAIRE points system, are extremely complex, and highly variable in cost and opportunities based on facility locations. This will result in uneven competitive conditions for operations in a highly competitive market. Supply chain operations are highly fluid and very cost-sensitive; the business flows to the locations with the most efficient operations and lowest costs. 55-6

We therefore respectfully request that the SCAQMD Board and Staff take the time needed to fully understand the authority question, the probability of achieving additional reductions, the complexity of the approach and the cost-benefit analysis in light of CARB's existing and planned regulations. 55-7

I am available to discuss these concerns or provide further information if it will be helpful.

Sincerely,



Lee Kindberg, PhD, GCB.D

Head of Environment & Sustainability, North America

Classification: Public

MOTIVATIONAL FULFILLMENT & LOGISTICS SERVICES

VIA E-MAIL

March 3, 2021

Mr. Ian MacMillan
Mr. Victor Juan
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178
imacmillan@aqmd.gov
vjuan@aqmd.gov

RE: *Warehouse Indirect Source Rule (ISR)*

Dear Messrs. MacMillan and Juan:

I am one of the owners of Motivational Fulfillment & Logistics Services. We currently occupy four facilities in Chino and we would like to express our strong opposition to the South Coast Air Quality Management District's (SCAQMD) proposed Warehouse Indirect Source Rule (ISR). 56-1

The draft ISR creates a complicated system of Warehouse Actions and Investments to Reduce Emissions "WAIRE Points" that must be earned by owners and operators of warehouses, mostly through a fee on warehouse operators. This rule is a costly and duplicative effort that is not poised to achieve demonstrable improvements in air quality in the South Coast basin. 56-2

The goods movement system serves as the lifeblood of California's economy, delivering essential goods, services, and medicines. Never has this industry been more important than during the COVID-19 pandemic. Grocery store shelves have been stocked, vaccines delivered, and small retailers kept alive by e-commerce thanks to power of the modern supply chain, allowing Californians to shelter in place and abate the spread of COVID-19. 56-3

Goods movement also powers blue-collar jobs vital to our economy. An estimated 1 in 22 jobs in Southern California are tied to the logistics industry. 56-4

California has the cleanest supply chain in the United States. Thanks to two decades of investment in the cleanest available equipment, including early adoption by our collective members, localized emissions associated with warehouses have never been lower, falling by over 95% in the last decade. 56-5

As you know, California is the only state in the nation with the power to regulate mobile sources pursuant to its waiver under federal Clean Air Act. The California Air Resources Board (CARB) has used this power to adopt the country's strictest emission laws, including adopting in July the world's first mandate to manufacture and sell zero-emission commercial vehicles. CARB has also stated its intent to adopt regulations that will require nearly every equipment type at warehouses to operate in a zero-emission mode within the next year. 56-6

SCAQMD's proposed Warehouse ISR is duplicative of these regulations, exceeds the District's authority to regulate mobile sources, and will create burdensome, expensive requirements for the supply chain for questionable environmental benefit. 56-7

During presentations, SCAQMD justified the draft rule by stating that additional action is necessary to address ozone and NOx concentrations in the basin. With respect to NOx, a recent technical analysis of the draft staff report found that the report does not adequately demonstrate that the proposed Warehouse ISR will provide NO_X reductions beyond those generated by CARB regulations, despite the enormous costs that will be involved in complying with this rule. 56-8

Further, as stated during AQMD's Scientific, Technical & Modeling Peer Review Advisory Group Meeting on January 27, 2021, the small quantities of NO_X reductions generated by this rule will not be sufficient to decrease the ozone concentrations in the basin. One is left with the impression that the rule, instead of addressing environmental concerns, is being used as a funding mechanism.

Duplicative rulemaking by CARB and the SCAQMD that does not move the needle on environmental benefit in the basin not only wastes the state's resources, but unnecessarily increases the cost of compliance for an industry that is gearing up for the all-electric future envisioned by CARB and Governor Newsom. We hope SCAQMD will reconsider this untimely, duplicative, and costly regulation and work with industry to develop a rule that takes into account the emissions reductions that already will occur due to CARB rulemaking and appropriately addresses emissions that are within the bounds of SCAQMD authority. 56-9

With kind regards,



Anthony Altman
Chief Operating Officer and General Counsel

15820 Euclid Avenue • Chino, CA • 91708
909-517-2200 - Phone • 909-517-1570 - Facsimile


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INLAND EMPIRE CHAPTER


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CALIFORNIA MANUFACTURERS & TECHNOLOGY ASSOCIATION


California
Business
Properties
Association


CalTax
California Taxpayers Association


FUTUREPORTS
Supporting SoCal's Sustainable Supply Chain


HTA
Harbor Trucking Association


PMSA
PACIFIC MERCHANT SHIPPING ASSOCIATION


CFCA
CALIFORNIA FUELS & CONVENIENCE ALLIANCE


ICSC


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California


BOMA
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CALIFORNIA
RAILROADS


GREATER
High Desert
CHAMBER OF COMMERCE
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IWLA
The Resource for Warehouse Logistics


WAIB
western aerosol information bureau, inc.


Rebuild SoCal
Partnership


CIAQC
Construction Industry
Air Quality Coalition


CDA
California Distributors Association


SCLC
SOUTHERN CALIFORNIA
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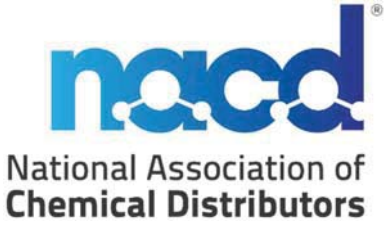






"Promoting Jobs in a Competitive Business Climate"





March 3, 2021

Sarah Rees, Deputy Executive Officer
South Coast Air Quality Management District
21865 Copley Dr.
Diamond Bar, CA 91765

Submitted electronically

The California Trucking Association, the California Chamber of Commerce, and the **55** undersigned organizations submit this letter in strong opposition to the South Coast Air Quality Management District's (SCAQMD) proposed Warehouse Indirect Source Rule ISR). 57-1

The draft ISR creates a complicated system of Warehouse Actions and Investments to Reduce Emissions WAIRE) Points that must be earned by owners and operators of warehouses, mostly through a fee on warehouse operators or by turnover of already regulated mobile sources. This rule is a costly and duplicative effort that fails to achieve demonstrable improvements in air quality in the South Coast basin. 57-2

The goods movement system serves as the lifeblood of California's economy, delivering essential goods, services, and medicines. Never has this industry been more important than during the COVID-19 pandemic. Grocery store shelves have been stocked, vaccines delivered, and small retailers kept alive by e-commerce thanks to the power of the modern supply chain, allowing Californians to shelter in place and abate the spread of COVID-19. 57-3

Goods movement also powers blue-collar jobs vital to our economy. An estimated 1 in 22 jobs in Southern California are tied to the logistics industry. 57-4

California has the cleanest supply chain in the United States. Thanks to two decades of investment in the cleanest available equipment, including early adoption by our collective members, localized emissions associated with warehouses have never been lower, falling by over 95% in the last decade. 57-5

As you know, California is the only state in the nation with the power to regulate mobile sources pursuant to its waiver under federal Clean Air Act. The California Air Resources Board (CARB) has used this power to adopt the country's strictest emission laws, including adopting the world's first mandate to manufacture and sell zero-emission commercial vehicles. CARB has also stated its intent to adopt regulations by the end of 2021 that will require nearly every equipment type at warehouses to operate in a zero-emission mode. 57-6

SCAQMD's proposed Warehouse ISR is duplicative of these regulations, exceeds the District's authority to regulate mobile sources, and will create burdensome, expensive requirements for the supply chain for questionable environmental benefit. 57-7

SCAQMD has justified the draft rule by stating that additional action is necessary to address ozone and NOx concentrations in the basin. With respect to NOx, a recent technical analysis of the draft staff report found that SCAQMD does not adequately demonstrate that the proposed Warehouse ISR will provide NOx reductions beyond those generated by CARB regulations, despite the enormous costs that will be involved in complying with this rule. 57-8

Further, as stated during AQMD's Scientific, Technical Modeling Peer Review Advisory Group Meeting on January 27, 2021, the small quantities of NOx reductions generated by this rule will not be sufficient to decrease the ozone concentrations in the basin.

Duplicative rulemaking by CARB and the SCAQMD that does not move the needle on environmental benefit in the basin not only wastes the state's resources, but unnecessarily increases the cost of compliance for an industry that is gearing up for the all-electric future envisioned by CARB and Governor Newsom. We ask SCAQMD to reconsider this untimely, duplicative, and costly regulation and work with industry to develop a rule that takes into account the emissions reductions due to CARB rulemaking and appropriately addresses emissions that are within the bounds of SCAQMD authority. 57-9

If you have any questions, please feel free to contact: 57-10

Chris Shimoda, VP of Government Affairs
California Trucking Association
cshimoda@caltrux.org

Leah Silverthorn, Policy Advocate
California Chamber of Commerce
Leah.Silverthorn@calchamber.com

Thank You,

California Trucking Association
California Chamber of Commerce
Beaumont Chamber of Commerce
Big Bear Chamber of Commerce
Building Owners and Managers Association of California
Building Owners and Managers Association of Los Angeles
Californians for Affordable and Reliable Energy
California Beer and Beverage Distributors

California Business Properties Association
California Business Roundtable
California Distributors Association
California Fuels and Convenience Alliance
California Manufacturers and Technologies Association
California Railroads Association
California Retailers Association
California Taxpayers Association
Carson-Dominguez Employers Alliance
Chino Valley Chamber of Commerce
Construction Industry Air Quality Coalition
Engineering Contractors Association
Fontana Chamber of Commerce
Futureports
Greater Coachella Valley Chamber
Greater High Desert Chamber of Commerce
Greater Ontario Business Council
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Industry Business Council
Inland Action
Inland Empire Economic Partnership
International Council of Shopping Centers
International Warehouse Logistics Association
Long Beach Area Chamber of Commerce
Los Angeles Area Chamber of Commerce
Los Angeles County Business Federation (BizFed)
Moreno Valley Chamber of Commerce
Murrieta/Wildomar Chamber of Commerce
NAIOP of California
NAIOP Inland Empire
NAIOP SoCAL
National Association of Chemical Distributors
Orange County Business Council
Pacific Merchant Shipping Association
Perris Valley Chamber of Commerce
Pomona Chamber of Commerce
Rancho Cucamonga Chamber
Rebuild SoCal Partnership
Redlands Chamber of Commerce
San Gabriel Valley Economic Partnership
Southern California Leadership Council

Temecula Valley Chamber of Commerce
Upland Chamber of Commerce
Western Aerosol Information Bureau
Wilmington Chamber of Commerce

cc:
SCAQMD Governing Board Members

March 2, 2021

Sarah Rees, Deputy Executive Officer
South Coast Air Quality Management District
21865 Copley Dr.
Diamond Bar, CA 91765

Re: Warehouse Indirect Source Rule (Rule 2305)

Submitted via Email

On behalf of the California Retailers Association (CRA), I write to express our opposition to the adoption of Rule 2305. We believe the pursuit of such a policy is deeply misguided at this time given the enormous pandemic-related challenges already facing California's supply chain and goods movement. It would also create substantial new fees and other costs that will serve only to raise the cost of goods to consumers and displace local jobs. 58-1

The California Retailers Association is the only statewide trade association representing all segments of the retail industry including general merchandise, department stores, mass merchandisers, restaurants, convenience stores, supermarkets and grocery stores, chain drug, and specialty retail such as auto, vision, jewelry, hardware and home stores. CRA works on behalf of California's retail industry, which prior to the pandemic operated over 400,000 retail establishments with a gross domestic product of $330 billion annually and employs over 3 million people—one fourth of California's total employment.

Localized emissions related to warehouse operations have fallen over 95% over the last decade. Given these substantial reductions plus the California Air Resources Board's (CARB) clean fleet rule and its stated intent to adopt regulations in the next year to require most warehouse equipment types to operate at zero emissions, we question what marginal additional benefit could be derived from the enormous costs and practical challenges posed by the ISR. 58-2

In pursuit of questionable benefits this proposal imposes considerable costs on warehousing. The proposed mitigation fee of $.90/sf would add up to $1 billion in new costs on warehouses which will impact which will be felt by everyone throughout the supply chain, including consumers. The ISR further punishes warehouse operators for circumstances out of their control. For instance: 58-3

- SCAQMD would implement these rules well before truck manufacturers can make zero or near-zero emission fleets available and affordable. The obligation to accrue substantive WAIRE Points will commence as soon as July 2021, yet these fleets are not anticipated to be widely available until sometime between 2025 and 2030. There is nothing that our retailers or warehouse operators can do to accelerate those timelines in order to comply. 58-4

- The proposed ISR establishes unrealistic timeframes for collecting and reporting of data that retailers and other warehouse owners or operators currently do not have. Under the current draft rule, reporting obligations begin only 60 days from rule adoption, and require reporting of information that either does not currently exist or is held by other entities and not readily accessible. Obtaining and reporting the necessary data will in some cases require significant changes to how facilities operate, particularly at cross-docking facilities where there is little to no storage of freight and drivers may visit multiple times per day. This requirement would be extremely challenging even on a much longer timeline. 58-5

This is both an inappropriate time and method for targeting a key part of our state's critical infrastructure. Approximately 18 million people who live in Southern California rely on warehousing as an integral part of the supply chain for items they need like food, medical supplies, and clothing. Warehouses also provide a broad range of jobs for people of every level of education and skillset – a benefit which this ISR would threaten. 58-6

Given its high costs, compliance challenges, questionable benefits, the massive challenges currently facing goods movement in our state as well as the current economic uncertainty, CRA urges the Board to reject this costly, duplicative rule. 58-7

Sincerely,



Steve McCarthy
Vice President, Public Policy
California Retailers Association

Comment Letter #59 (email) – Disneyland Resort – 3/2/2021

*An email on 3/4/2021 the commenter requested the comments below be disregarded, they are maintained in the record but will not receive a response as requested by the commenter.

From: Jiang, Hao <Hao.Jiang@disney.com>
Sent: Tuesday, March 2, 2021 4:46 PM
To: Ian MacMillan <imacmillan@aqmd.gov>
Subject: RE: another question

Ian,

Another thought, why the District do not offer activity threshold? Our warehouses are large in space (to store off season stuff like Christmas decos) but with very little traffic. So our warehouses are subject to R2305 solely due to the size. Tracking truck traffic at our warehouse will have significant impact to our operation cost. A low activity threshold would be reasonable.

Thank you
Hao

From: Jiang, Hao
Sent: Tuesday, March 02, 2021 4:31 PM
To: Ian MacMillan <imacmillan@aqmd.gov>
Subject: another question

Ian,

I know the District would not endorse any product/service, but you did mention a few warehouse truck traffic monitoring systems. Do you mind to let me know the brands? I am new to this business and Disneyland is not in warehousing business as well.

Thank you
Hao

From: Jiang, Hao <Hao.Jiang@disney.com>
Sent: Tuesday, March 2, 2021 1:33 PM
To: Ian MacMillan <imacmillan@aqmd.gov>
Subject: PR2305 NZE question

Hi Ian,

For PR 2305 a NZE truck is one in which the engine meets CARB's lowest Optional Low NOx standard **at the time of manufacture**, which is currently 0.02 g/hp-hr NOx. We own 4 CNG tractors that purchased in 2011 with certified 0.1 g/hp-hr NOx. Do you have a resource for us to determine they meeting NZE in 2011?

And if a 3rd party dispatched CNG trucks visiting our warehouses, shall we have to determine its NZE status in order for us to take credit from WAIRE menu?

Thank you
Hao

Hao Jiang, P.E.
Environmental Affairs
Disneyland Resort
714-781-4504
Hao.jiang@disney.com

From: Sari Fordham <sfordham@lasierra.edu>
Sent: Thursday, March 4, 2021 8:00 AM
To: Clerk of Board <Front_PC@aqmd.gov>; Wayne Nastri <wnastri@aqmd.gov>; Sarah Rees <SRees@aqmd.gov>; Ian MacMillan <imacmillan@aqmd.gov>
Subject: Warehouse Indirect Source Rule

To the Governing Board of the South Coast Air Quality Management District and Senior Staff:

We at Riverside 350 believe that we have a moral imperative to respond to climate change and improve the air quality of the Inland Empire. Our children breathe some of the most unhealthy air in the country, and our COVID-19 first responders are at increased risk because of their exposure to ozone-pollution. To fix these problems, we must identify the problem. 60-1

To date, the warehouse industry operates without being subject to any proper regulations, putting workers and communities at risk. My organization believes that the **Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program Fees for Rule 2305** is an important piece to stop this abuse in the goods movement sector. 60-2

The logistics industry wants to be here. They aren't leaving if we hold them to higher standards. Rather, we have the opportunity to ensure that they become good neighbors. The Warehouse Indirect Source Rule will be critical to holding these facilities accountable, but only if the South Coast AQMD passes a rule that is strong enough to protect our communities' health.

Warehouses have spewed toxic air pollution in nearby communities for years and a strong mandatory program, like the warehouse indirect source rule, is necessary to transform this industry. But to effectively clean up the warehouse industry, the rule must be more stringent to provide relief for our communities.

We also believe that warehouses must move towards zero emission technology and the warehouse indirect source rule should incentivize this shift. This will provide air quality benefits and create access to quality jobs by increasing demand for labor as the industry begins to implement zero emission technologies. These job opportunities have been proven to provide quality wages and benefits for workers, unlike many temporary low-wage warehouse jobs. 60-3

We hope the Board will pass a strong warehouse indirect source rule that serves public health, supports a new green economy, and provides regional air quality benefits. 60-4

Sincerely,

Sari Fordham
President
Riverside 350



--
"In a time of destruction, create something," Maxine Hong Kingston

Sari Fordham, (she/her), MFA in creative writing
Associate Professor, The Department of English
Faculty editor: The Roadrunner Review
Author website: www.sarifordham.com
Subscribe to Cool it: Simple Steps to Save the Planet, a monthly (free) newsletter for busy people who care about the environment--created by Sari Fordham.

PR2305 questions

JH

Jiang, Hao <Hao.Jiang@disney.com>
To Victor Juan; Ian MacMillan

Reply | Reply All | Forward | ...

Thu 3/4/2021 10:48 AM

You forwarded this message on 3/4/2021 10:59 AM.

Good Morning Juan and Ian,

Please discard email questions I sent to Ian last week as I places them here together with a few new questions. I have to admit that I might over thought this and posted some stupid questions/concerns. 61-1

(1) For PR 2305 a NZE truck is one in which the engine meets CARB's lowest Optional Low NOx standard **at the time of manufacture**, which is currently 0.02 g/hp-hr NOx. We own 4 CNG Class 8 tractors that purchased in 2011 with certified 0.1 g/hp-hr NOx. Do you have a resource for us to determine if they are meeting NZE in 2011? And if a 3rd party dispatched CNG trucks visiting our warehouses, shall we have to determine its NZE status in order for us to take credit from WAIRE menu? 61-2

(2) I know the District would not endorse any product/service, but you did mention a few warehouse truck traffic monitoring systems. Do you mind to let me know the brands? Our WHs gates are not staffed 24x7. We only have security camera in use at this time. 61-3

(3) Why the District does not offer low activity exemption threshold? Our warehouses are large in space (to store off season stuff like Christmas decos) but with very little traffic. So our warehouses are subject to R2305 solely due to the size. Tracking truck trips will have significant impact to our operational cost. A low activity exemption threshold would be reasonable. 61-4

(4) Vehicle Miles Traveled (VMT) is required only for the Initial Site Information Report. It is not required nor used in Annual WAIRE Report, correct? If this is true, recording VMT is not required, right? 61-5

(5) Per Truck Trip definition, one should not count for a truck trip if the truck entered the gate but did not deliver nor pick freight. For our home base where also is warehouse in Anaheim, we should not count truck trip if a truck left home base warehouse **empty**, we should count as one when it returns with goods, correct? 61-6

(6) One of Disneyland operated WH has solar panels that were installed by property owner. Solar generated electricity is exported to utility grid. Disneyland has no operational control over it. Can we still claim is as WAIRE points? 61-7

(7) Disneyland Resort operates a few warehouses that are leased by Disney using different business names. For example Disney Enterprises, Inc. and Walt Disney Parks and Resorts, U.S., Inc. My question is should the owner, in the **Initial Owner Notification Report**, disclose the relationships by stating something like "Disneyland Resort DBA Disney Enterprises, Inc."? 61-8

Again I thank you in advance.

Thank you
Hao

Hao Jiang, P.E.
Environmental Affairs
Disneyland Resort
714-781-4504
Hao.jiang@disney.com

LOS ANGELES AREA
CHAMBER OF COMMERCE

March 4, 2021

Sarah Rees, Deputy Executive Officer
South Coast Air Quality Management District
21865 Copley Dr.
Diamond Bar, CA 91765

SUBJECT: Opposition – Proposed Rule 2305 Warehouse Indirect Source Rule)

Dear Ms. Rees,

On behalf of the Los Angeles Area Chamber of Commerce (Chamber), one of the largest and most influential business organizations in the Los Angeles region, I am writing to express our opposition to the Warehouse Indirect Source Rule, Proposed Rule 2305 (PR 2305). Our organization represents over 1,400 organizations, which employ over 650,000 employees in the region. The logistics industry is critical to Southern California's economy, and warehouses are an integral part of that system. While we appreciated that SCAQMD's staff has discussed and engaged with the Chamber on this issue, the estimated $1 billion in annual fees for this essential industry and compliance infeasibilities PR 2305 creates uncertainty in an increasingly uncertain economy. 62-1

The COVID-19 pandemic highlighted both the successes and limits of our regional and national supply chain, as people were forced to transform their daily lives and spending patterns to adapt to shelter in place measures. Goods movement was and continues to be the life blood of our modern economy, ensuring that vaccines and personal protective equipment necessary to save lives are delivered, and that our grocery stores and restaurants are stocked for customers. This industry, and the warehouses that are a part of them, rose to the challenge of COVID-19. 62-2

California's supply chain is one of the cleanest in the world, and certainly the cleanest in the United States. Cleanest available technology adoptions by the trucking and warehousing sectors have decreased localized emissions over the past decade. SCAQMD and CARB are creating duplicative regulations, with CARB's mandate that manufactures sell zero-emission commercial vehicle and SCAQMD's Warehouse ISR. As well, reports on direct investments and plans for a zero-emission transition required by Governor Newsom's EO-N-79-30 are due back to the legislature this summer. 62-3

Furthermore, it is exceedingly difficult for real world warehouses to comply with PR 2503. It puts the responsibility of reducing truck emissions on warehouse operators and owners that do not control truck fleets. Nor do warehouse operators control the types of trucks that utilize their facilities or the schedules of these vehicles. From a technological stand point, there are items on the WAIRE menu that are not available. One prominent example of this is the technological availability and economic feasibility of zero-emission trucks. 62-4

350 S. Bixel St. | Los Angeles, CA 90017 | P: 213.580.7500 | F: 213.580.7511 | lachamber.com

We appreciate SCAQMD's efforts to enhance our regional air quality, however we believe that the District should work closely with industry to develop regulations that appropriately address air quality, balance costs, and realistically account for technological feasibility. Thank you for your consideration. Please contact Senior Manager, Kendal Asuncion, with any questions at kasuncion@lachamber.com or 213-580-7518. 62-5

Thank you for your consideration.

Sincerely,



Maria S. Salinas
President & CEO

Cc: SCAQMD Governing Board Members

March 4, 2021

Ian MacMillan
Victor Juan
South Coast Air Quality Management District
865 Copley Drive
Diamond Bar, California 91765-4178
Sent Via Email: imacmillan@aqmd.gov / vjuan@aqmd.gov

Subject: Comments on Proposed Rule 2305 (Warehouse Indirect Source Rule)

Dear Mr. MacMillan and Mr. Juan:

The Western Electrical Contractors Association (WECA) opposes the adoption of Rule 2305 (Indirect Source Rule). Warehouses are integral to the Southern California logistics industry. The logistics industry plays a crucial role in the response to the COVID-19 pandemic—not only in the distribution of medical supplies, vaccines, and equipment but also in delivering goods to a public that has become increasingly dependent on e-commerce. 63-1

The District's proposed ISR seems to be a misguided policy during the COVID-19 pandemic. The District is pursuing a regulation targeting a sector that serves as a lifeline to our region and the nation and is deemed essential by federal and state governments. Under the current draft rule, reporting obligations begin only 60 days from rule adoption. The substantive WAIRE Points obligations will commence as soon as July 2021. 63-2

The following further comments are provided in response to the District's Proposed Rule 2305:

- This rule would impose additional/permanent costs on warehouses of approximately $.90 per square foot. This extra cost would amount to targeting a specific essential industry with $1 billion in annual fees during the worst possible time and while responding to the pandemic's challenges on behalf of our nation. 63-3
- It is not feasible to comply with the ISR due to the following: 63-4
    a) The proposed rule requires warehouses to control truck fleets and decrease truck emissions. Yet, warehouse operators are not able to accomplish this task.
    b) Warehouses have no control over how truck engines are manufactured.
    c) Warehouses do not own truck fleets, nor do they control what type of trucks shipping companies purchase.
    d) Warehouse operators do not control which trucks come to warehouses, when they arrive, where they come from, or any other variables related to truck trips.

. The technology is not available to accomplish items on the WAIRE menu. For example, there are no heavy-duty electric trucks available that are viable from a technology and/or economically reasonable standard. 63-5

. Warehouses have been deemed to be essential businesses by the State for important reasons including: 63-6
    a) The approximately 18 million people who live in Southern California rely on warehouses as an integral part of the goods movement system to get them the items they need to survive, like food, medical supplies, clothes etc.

5. This rule creates tremendous uncertainty in the economy as the full negative impact of this ISR is not known.
    a) Uncertainty should not be created in this critical, essential business sector, especially considering the current economic downturn/unemployment crisis associated with the COVID-19 pandemic.

6. Warehouses provide a broad range of jobs for people of every level of education and skillset. Warehouses and the logistics industry offer jobs that lead to upward ability. This job creation is a socioeconomic benefit that the proposed ISR's onerous costs would threaten. 63-7

7. The proposed ISR seeks to "indirectly" regulate the trucking industry through the Warehouse industry. The District should publicly explain how it has the jurisdiction/authority to regulate a mobile source that is such an integral part of interstate commerce as the trucking industry. 63-8

Thank you for your attention to these comments. Please include these comments as part of the official record for Proposed Rule 2305 (Warehouse Indirect Source Rule) so that all SCAQMD Board Members may have the opportunity to review the above. 63-9

Sincerely,

Richard Markuson

Richard Markuson



ViewSonic®

March 4, 2021

Ian MacMillan
Victor Juan
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178
Sent Via Email: imacmillan@aqmd.gov / vjuan@aqmd.gov

Subject: Comments on Proposed Rule 2305 (Warehouse Indirect Source Rule)

Dear Mr. MacMillan:

My name is Rachel Wang, from ViewSonic Corporation. I am writing this letter to oppose the adoption of Rule 2305 (Indirect Source Rule) ("ISR"). Warehouses are integral to the Southern California logistics industry. The logistics industry plays a crucial role in the response to the COVID-19 pandemic—not only in the distribution of medical supplies, vaccines, and equipment but also in delivering goods to a public that has become increasingly dependent on e-commerce. 64-1

The District's proposed ISR seems to be a misguided policy during the COVID-19 pandemic. The District is pursuing a regulation targeting a sector that serves as a lifeline to our region and the nation and is deemed essential by federal and state governments. Under the current draft rule, reporting obligations begin only 60 days from rule adoption. The substantive WAIRE Points obligations will commence as soon as July 2021.

The following further comments are provided in response to the District's Proposed Rule 2305:

1. This rule would impose additional/permanent costs on warehouses of approximately $.90 per square foot. This extra cost would amount to targeting a specific essential industry with $1 billion in annual fees during the worst possible time and while responding to the pandemic's challenges on behalf of our nation. 64-2

2. It is not feasible to comply with the ISR due to the following:
   a) The proposed rule requires warehouses to control truck fleets and decrease truck emissions. Yet, warehouse operators are not able to accomplish this task.
   b) Warehouses have no control over how truck engines are manufactured.
   c) Warehouses do not own truck fleets, nor do they control what type of trucks shipping companies purchase.
   d) Warehouse operators do not control which trucks come to warehouses, when they arrive, where they come from, or any other variables related to truck trips. 64-3

3. The technology is not available to accomplish items on the WAIRE menu. For example, there are no heavy-duty electric trucks available that are viable from a technology and/or economically reasonable standard. 64-4

4. Warehouses have been deemed to be essential businesses by the State for important reasons including:
   a) The approximately 18 million people who live in Southern California rely on 64-5

warehouses as an integral part of the goods movement system to get them the items they need to survive, like food, medical supplies, clothes etc. 64-5 (cont'd)

5. This rule creates tremendous uncertainty in the economy as the full negative impact of this ISR is not known.

a) Uncertainty should not be created in this critical, essential business sector, especially considering the current economic downturn/unemployment crisis associated with the COVID-19 pandemic. 64-6

6. Warehouses provide a broad range of jobs for people of every level of education and skillset. Warehouses and the logistics industry offer jobs that lead to upward ability. This job creation is a socioeconomic benefit that the proposed ISR's onerous costs would threaten. 64-7

7. The proposed ISR seeks to "indirectly" regulate the trucking industry through the Warehouse industry. The District should publicly explain how it has the jurisdiction/authority to regulate a mobile source that is such an integral part of interstate commerce as the trucking industry. 64-8

Thank you for your attention to these comments. Please include these comments as part of the official record for Proposed Rule 2305 (Warehouse Indirect Source Rule) so that all SCAQMD Board Members may have the opportunity to review the above. 64-9

Respectfully,

Rachel Wang
Director, Logistics & Sales Support
ViewSonic Corporation

Cc: Governing Board Members

EARTHJUSTICE

March 5, 2021

Chair Burke and Members of the Governing Board
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: Item No. 2.B – Set Public Hearing April 2, 2021 to Adopt Proposed Rules 2305 and 316 (Warehouse Indirect Source Rule)

Dear Chair Burke and Members of the Governing Board:

On behalf of Earthjustice, we submit these comments on the warehouse indirect source rule, a critical regulation that will protect the health and safety of communities who live and work adjacent to warehouses and finally address the region's pollution crisis. Specifically, we request that the Governing Board set public hearing on April 2, 2021 to adopt Proposed Rules 2305 and 316. This rule has been years in the making, and all the while communities continue to suffer high levels of pollution from the freight industry. The agency's vision and leadership in the development and adoption of a strong regulation will advance the warehouse industry's long overdue transition to zero-emissions and prioritize the frontline communities who are disproportionately harmed by this industry every day. 65-1

As is well documented by now, the COVID-19 pandemic has devastated communities in our region and continues to exacerbate the health impacts of poor air quality, just as we had one of the worst smog seasons in decades. Meanwhile, warehouses and ports have had record-breaking profit levels as consumers increasingly rely on e-commerce,[1] further compounding the health risks that nearby communities are already forced to shoulder. While those with ownership stakes in the freight system have profited handsomely, reportedly "raking in all the chips in the changing landscape brought on by the coronavirus crisis,"[2] communities, particularly low-income communities and communities of color, have suffered the brunt of the air pollution harms. 65-2

Proposed Rule 2305 will mean significant benefits to our region in reduced smog-forming emissions and the creation of meaningful, good quality jobs that put people to work to clean up warehouse pollution through retrofitting warehouses with clean transportation and clean 65-3

[1] *See* Justin Ho, *As imports boom, warehouses fill up, and businesses face a storage shortage*, Marketplace (Oct. 1, 2020).
[2] Greg Cornfield, *Southern California industrial real estate market: What to know for 2021*, Commercial Observer (Feb. 3, 2021).

energy resources. Moreover, it will mean the Governing Board finally delivering on its promise made years ago to adopt an indirect source rule to control pollution from freight facilities. 65-3 (cont'd)

We appreciate your consideration of these comments, and the Air District staff's hard work on this important, life-saving rule. We look forward to working together with the staff and Governing Board to prioritize public health, create good quality jobs, and help our region finally achieve clean air by adopting this vital rule on April 2. 65-4

Sincerely,



Michelle Ghafar
Adrian Martinez
Regina Hsu
Earthjustice

cc:

Wayne Nastri
Executive Officer
South Coast Air Quality Management District
wnastri@aqmd.gov

Sarah Rees
Deputy Executive Officer
Planning, Rule Development & Area Sources
srees@aqmd.gov

Ian MacMillan
Planning and Rules Manager
South Coast Air Quality Management District
imacmillan@aqmd.gov

Victor Juan
Program Supervisor
South Coast Air Quality Management District
vjuan@aqmd.gov


California Trucking Association
We drive for a living. Safety is our priority.


CalChamber
CALIFORNIA CHAMBER OF COMMERCE


CALIFORNIA
RETAILERS
ASSOCIATION
Consumers Economy Jobs


BizFed
Los Angeles County Business Federation
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ECONOMIC PARTNERSHIP


The Chamber
Long Beach Area Chamber of Commerce


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SoCAL CHAPTER


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NAIOP OF CALIFORNIA


NAIOP
COMMERCIAL REAL ESTATE DEVELOPMENT ASSOCIATION
INLAND EMPIRE CHAPTER


CMTA
CALIFORNIA MANUFACTURERS & TECHNOLOGY ASSOCIATION


California
Business
Properties
Association


CalTax
California Taxpayers Association


FUTUREPORTS
Supporting SoCal's Sustainable Supply Chain


HTA
Harbor Trucking Association


PMSA
PACIFIC MERCHANT SHIPPING ASSOCIATION


CFCA
CALIFORNIA FUELS & CONVENIENCE ALLIANCE


ICSC


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California


BOMA
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Greater Los Angeles
1915 - 2015


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RAILROADS


GREATER
High Desert
CHAMBER OF COMMERCE
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IWLA
The Resource for Warehouse Logistics


WAIB
western aerosol information bureau, inc.


Rebuild SoCal
Partnership


CIAQC
Construction Industry
Air Quality Coalition


CDA
California Distributors Association


SCLC
SOUTHERN CALIFORNIA
LEADERSHIP COUNCIL


INLAND EMPIRE
ie
ECONOMIC PARTNERSHIP


LOS ANGELES AREA
CHAMBER OF COMMERCE


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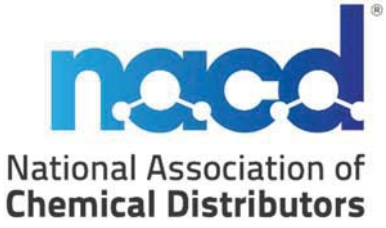






"Promoting Jobs in a Competitive Business Climate"





Comments on Proposed Rule 2305 (Warehouse Indirect Source Rule)

Jennifer Ward <jward@ocbc.org>
To Ian MacMillan; Victor Juan

You forwarded this message on 3/26/2021 5:14 PM.
If there are problems with how this message is displayed, click here to view it in a web browser.

Warehouse ISR_Oppose_SCAQMD.pdf
1 MB

Dear Mr. MacMillan:

The Orange County Business Council (OCBC) opposes the adoption of Rule 2305 (Indirect Source Rule). Please see the attached letter for further details. Thank you for your consideration.

Jennifer Ward
Sr. Vice President of Advocacy and Government Affairs
Orange County Business Council

2 Park Plaza, Suite 100 | Irvine, CA 92614
C: 530.219.1845 | O: 949.794.7215 | jward@ocbc.org

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66-1

The California Trucking Association, the California Chamber of Commerce, and the **55** undersigned organizations submit this letter in strong opposition to the South Coast Air Quality Management District's (SCAQMD) proposed Warehouse Indirect Source Rule ISR).

The draft ISR creates a complicated system of Warehouse Actions and Investments to Reduce Emissions WAIRE) Points that must be earned by owners and operators of warehouses, mostly through a fee on warehouse operators or by turnover of already regulated mobile sources. This rule is a costly and duplicative effort that fails to achieve demonstrable improvements in air quality in the South Coast basin.

66-2

The goods movement system serves as the lifeblood of California's economy, delivering essential goods, services, and medicines. Never has this industry been more important than during the COVID-19 pandemic. Grocery store shelves have been stocked, vaccines delivered, and small retailers kept alive by e-commerce thanks to the power of the modern supply chain, allowing Californians to shelter in place and abate the spread of COVID-19.

66-3

Goods movement also powers blue-collar jobs vital to our economy. An estimated 1 in 22 jobs in Southern California are tied to the logistics industry.

66-4

California has the cleanest supply chain in the United States. Thanks to two decades of investment in the cleanest available equipment, including early adoption by our collective members, localized emissions associated with warehouses have never been lower, falling by over 95% in the last decade.

66-5

As you know, California is the only state in the nation with the power to regulate mobile sources pursuant to its waiver under federal Clean Air Act. The California Air Resources Board (CARB) has used this power to adopt the country's strictest emission laws, including adopting the world's first mandate to manufacture and sell zero-emission commercial vehicles. CARB has also stated its intent to adopt regulations by the end of 2021 that will require nearly every equipment type at warehouses to operate in a zero-emission mode. 66-6

SCAQMD's proposed Warehouse ISR is duplicative of these regulations, exceeds the District's authority to regulate mobile sources, and will create burdensome, expensive requirements for the supply chain for questionable environmental benefit. 66-7

SCAQMD has justified the draft rule by stating that additional action is necessary to address ozone and NOx concentrations in the basin. With respect to NOx, a recent technical analysis of the draft staff report found that SCAQMD does not adequately demonstrate that the proposed Warehouse ISR will provide NOx reductions beyond those generated by CARB regulations, despite the enormous costs that will be involved in complying with this rule. 66-8

Further, as stated during AQMD's Scientific, Technical Modeling Peer Review Advisory Group Meeting on January 27, 2021, the small quantities of NOx reductions generated by this rule will not be sufficient to decrease the ozone concentrations in the basin.

Duplicative rulemaking by CARB and the SCAQMD that does not move the needle on environmental benefit in the basin not only wastes the state's resources, but unnecessarily increases the cost of compliance for an industry that is gearing up for the all-electric future envisioned by CARB and Governor Newsom. We ask SCAQMD to reconsider this untimely, duplicative, and costly regulation and work with industry to develop a rule that takes into account the emissions reductions due to CARB rulemaking and appropriately addresses emissions that are within the bounds of SCAQMD authority. 66-9

If you have any questions, please feel free to contact: 66-10

Chris Shimoda, VP of Government Affairs
California Trucking Association
cshimoda@caltrux.org

Leah Silverthorn, Policy Advocate
California Chamber of Commerce
Leah.Silverthorn@calchamber.com

Thank You,

California Trucking Association
California Chamber of Commerce
Beaumont Chamber of Commerce
Big Bear Chamber of Commerce
Building Owners and Managers Association of California
Building Owners and Managers Association of Los Angeles
Californians for Affordable and Reliable Energy
California Beer and Beverage Distributors

California Business Properties Association
California Business Roundtable
California Distributors Association
California Fuels and Convenience Alliance
California Manufacturers and Technologies Association
California Railroads Association
California Retailers Association
California Taxpayers Association
Carson-Dominguez Employers Alliance
Chino Valley Chamber of Commerce
Construction Industry Air Quality Coalition
Engineering Contractors Association
Fontana Chamber of Commerce
Futureports
Greater Coachella Valley Chamber
Greater High Desert Chamber of Commerce
Greater Ontario Business Council
Harbor Trucking Association
Hemet/San Jacinto Chamber of Commerce
Highland Area Chamber of Commerce
Industry Business Council
Inland Action
Inland Empire Economic Partnership
International Council of Shopping Centers
International Warehouse Logistics Association
Long Beach Area Chamber of Commerce
Los Angeles Area Chamber of Commerce
Los Angeles County Business Federation (BizFed)
Moreno Valley Chamber of Commerce
Murrieta/Wildomar Chamber of Commerce
NAIOP of California
NAIOP Inland Empire
NAIOP SoCAL
National Association of Chemical Distributors
Orange County Business Council
Pacific Merchant Shipping Association
Perris Valley Chamber of Commerce
Pomona Chamber of Commerce
Rancho Cucamonga Chamber
Rebuild SoCal Partnership
Redlands Chamber of Commerce
San Gabriel Valley Economic Partnership
Southern California Leadership Council

Temecula Valley Chamber of Commerce
Upland Chamber of Commerce
Western Aerosol Information Bureau
Wilmington Chamber of Commerce

cc:
SCAQMD Governing Board Members

March 6, 2021

Ian MacMillan
Victor Juan
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178
Sent Via Email: imacmillan@aqmd.gov / vjuan@aqmd.gov

Subject: Comments on Proposed Rule 2305 (Warehouse Indirect Source Rule)

Dear Mr. MacMillan:

The Multicultural Business Alliance opposes the adoption of Rule 2305 (Indirect Source Rule). Warehouses are integral to the Southern California logistics industry. The logistics industry plays a crucial role in the response to the COVID-19 pandemic—not only in the distribution of medical supplies, vaccines, and equipment but also in delivering goods to a public that has become increasingly dependent on e-commerce. 67-1

The District's proposed ISR seems to be a misguided policy during the COVID-19 pandemic. The District is pursuing a regulation targeting a sector that serves as a lifeline to our region and the nation and is deemed essential by federal and state governments. Under the current draft rule, reporting obligations begin only 60 days from rule adoption. The substantive WAIRE Points obligations will commence as soon as July 2021. 67-2

The following further comments are provided in response to the District's Proposed Rule 2305:

1. This rule would impose additional/permanent costs on warehouses of approximately $.90 per square foot. This extra cost would amount to targeting a specific essential industry with $1 billion in annual fees during the worst possible time and while responding to the pandemic's challenges on behalf of our nation. 67-3

2. It is not feasible to comply with the ISR due to the following: 67-4
   a) The proposed rule requires warehouses to control truck fleets and decrease truck emissions. Yet, warehouse operators are not able to accomplish this task.
   b) Warehouses have no control over how truck engines are manufactured.
   c) Warehouses do not own truck fleets, nor do they control what type of trucks shipping companies purchase.
   d) Warehouse operators do not control which trucks come to warehouses, when they arrive, where they come from, or any other variables related to truck trips.

3. The technology is not available to accomplish items on the WAIRE menu. For example, there are no heavy-duty electric trucks available that are viable from a technology and/or economically reasonable standard. 67-5

4. Warehouses have been deemed to be essential businesses by the State for important reasons including:

a) The approximately 18 million people who live in Southern California rely on warehouses as an integral part of the goods movement system to get them the items they need to survive, like food, medical supplies, clothes etc.

67-6

5. This rule creates tremendous uncertainty in the economy as the full negative impact of this ISR is not known.

a) Uncertainty should not be created in this critical, essential business sector, especially considering the current economic downturn/unemployment crisis associated with the COVID-19 pandemic.

67-7

6. Warehouses provide a broad range of jobs for people of every level of education and skillset. Warehouses and the logistics industry offer jobs that lead to upward ability. This job creation is a socioeconomic benefit that the proposed ISR's onerous costs would threaten.

67-8

7. The proposed ISR seeks to "indirectly" regulate the trucking industry through the Warehouse industry. The District should publicly explain how it has the jurisdiction/authority to regulate a mobile source that is such an integral part of interstate commerce as the trucking industry.

67-9

Thank you for your attention to these comments. Please include these comments as part of the official record for Proposed Rule 2305 (Warehouse Indirect Source Rule) so that all SCAQMD Board Members may have the opportunity to review the above.

67-10

Respectfully,

Roberto C. Arnold, Multicultural Business Alliance

Cc: Governing Board Members

tabletops unlimited since 1983

March 8, 2021

I, Mosen Asgari being the President of Tabletops Unlimited Inc. known as one of the major distributor of houseware since 1983 in Carson California, express our strong opposition to the South Coast Air Quality Management District's (SCAQMD) proposed Warehouse Indirect Source Rule (ISR). 68-1

The draft ISR creates a complicated system of Warehouse Actions and Investments to Reduce Emissions "WAIRE Points" that must be earned by owners and operators of warehouses, mostly through a fee on warehouse operators. This rule is a costly and duplicative effort that is not poised to achieve demonstrable improvements in air quality in the South Coast basin. 68-2

The goods movement system serves as the lifeblood of California's economy, delivering essential goods, services, and medicines. Never has this industry been more important than during the COVID-19 pandemic. Grocery store shelves have been stocked, vaccines delivered, and small retailers kept alive by e-commerce thanks to power of the modern supply chain, allowing Californians to shelter in place and abate the spread of COVID-19. 68-3

Goods movement also powers blue-collar jobs vital to our economy. An estimated 1 in 22 jobs in Southern California are tied to the logistics industry. 68-4

California has the cleanest supply chain in the United States. Thanks to two decades of investment in the cleanest available equipment, including early adoption by our collective members, localized emissions associated with warehouses have never been lower, falling by over 95% in the last decade. The warehouse operators are paying millions of dollars in pier pass to help improve the South Coast Air Quality by helping the trucking companies to use new trucks to reduce the emissions. 68-5

As you know, California is the only state in the nation with the power to regulate mobile sources pursuant to its waiver under federal Clean Air Act. The California Air Resources Board (CARB) has used this power to adopt the country's strictest emission laws, including adopting in July the world's first mandate to manufacture and sell zero-emission commercial vehicles. CARB has also stated its intent to adopt regulations that will require nearly every equipment type at warehouses to operate in a zero-emission mode within the next year. 68-6

SCAQMD's proposed Warehouse ISR is duplicative of these regulations, exceeds the District's authority to regulate mobile sources, and will create burdensome, expensive requirements for the supply chain for questionable environmental benefit.

23000 Avalon Blvd., Carson CA 90745 T 310 549 6000 F 310 549 8500 www.ttucorp.com

During presentations, SCAQMD justified the draft rule by stating that additional action is necessary to address ozone and NOx concentrations in the basin. With respect to NOx, a recent technical analysis of the draft staff report found that the report does not adequately demonstrate that the proposed Warehouse ISR will provide NO_X reductions beyond those generated by CARB regulations, despite the enormous costs that will be involved in complying with this rule.

Further, as stated during AQMD's Scientific, Technical & Modeling Peer Review Advisory Group Meeting on January 27, 2021, the small quantities of NO_X reductions generated by this rule will not be sufficient to decrease the ozone concentrations in the basin. One is left with the impression that the rule, instead of addressing environmental concerns, is being used as a funding mechanism. 68-7

Duplicative rulemaking by CARB and the SCAQMD that does not move the needle on environmental benefit in the basin not only wastes the state's resources, but unnecessarily increases the cost of compliance for an industry that is gearing up for the all-electric future envisioned by CARB and Governor Newsom. We hope SCAQMD will reconsider this untimely, duplicative, and costly regulation and work with industry to develop a rule that takes into account the emissions reductions that already will occur due to CARB rulemaking and appropriately addresses emissions that are within the bounds of SCAQMD authority.

Sincerely,



Mohsen Asgari
President

Todd R. Rouse, Manager
Environmental Policy
Global Regulatory Development

General Motors Global Headquarters
MC: 482-C30-B92
300 Renaissance Center
Detroit, MI 48265-3000
Phone : 419-205-2667

March 12, 2021

Mr. Ian MacMillan
Planning & Rule Manager
South Coast Air Quality Management District (SCAQMD)
21865 Copley Dr
Diamond Bar, CA 91765-4178

Transmitted via e-mail

RE: Proposed Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program

Dear Mr. MacMillan,

General Motors GM) supports South Coast Air Quality Management District's innovative approach to begin the transition to zero emission trucks in the region through the implementation of Proposed Rules 2305 and 316. 69-1

GM owns and operates one warehouse in Rancho Cucamonga for smaller aftermarket auto parts and operates one warehouse in Fontana for bulk aftermarket auto parts. Both warehouses are roughly 400,000ft^2. These warehouses supply GM auto parts to much of the Pacific Coast region and are part of GM's Customer Care and Aftersales warehousing network. Globally, GM offers hundreds of thousands of parts, with about 8% of its annual volume flowing through California.

General Motors' vision is a world with Zero Crashes, Zero Emissions, and Zero Congestion. Our company's recent announcements show we are committed to our vision's emissions strategy by aspiring to only sell electric vehicles in our light-duty portfolio by 2035. Additionally, GM plans to achieve carbon neutrality by 2040. GM is also expanding its Zero Emissions vehicle strategy into the goods movement market through the addition of BrightDrop commercial electric vehicles and pallets and through collaborative agreements with Nikola and Navistar to produce fuel cell powered semi-trucks. 69-2

Clearly, GM cannot fulfill its vision of Zero Emissions without sound energy and environmental policies that encourage and enable the shift to electric vehicles. Accelerating the transition to a Zero Emission future will require a comprehensive suite of well-designed policies and incentives, including vehicle incentives, utility engagement and infrastructure support, and complementary policies to reduce costs and overcome hurdles. 69-3

Like many of the warehouses in operation in the South Coast District, GM does not own the fleets that service our warehouses and must work with our suppliers and partners to encourage this transition. The Warehouse ISR directs a gradual transition through a phased-in approach that allows warehouses both time to phase in the use of zero emission trucks and offers flexibility in 69-4

achieving WAIRE points obligations through other projects such as installing zero emission charging or fueling infrastructure, installing onsite solar panels, or through the use of an approved custom approach. As this is a first-of-its-kind regulation striving to encourage rapid uptake of vehicles that are in the early stages of pre-commercial or early commercial deployment, GM also believes the proposed stringency factor is appropriate to encourage this transition while providing needed flexibilities. Implementing this regulation now – in conjunction with complementary policies such as incentives and infrastructure support – will likely speed up the transition to cleaner air quality directly in the communities where warehouses are abundant providing a better quality of life for our employees and neighbors.

69-4
(cont'd)

Please reach out with any questions to Todd Rouse, Environmental Policy Manager, at todd.rouse@gm.com or 419-205-2667.

Respectfully,

Todd Rouse
Environmental Policy Manager
Phone: 419-205-2667
Email: todd.rouse@gm.com

March 16, 2021

Victor Juan, Program Supervisor
South Coast Air Quality Management District
28165 Copley Drive
Diamond Bar, CA 91765

Re: Proposed Rule 2305: Warehouse Indirect Source - WAIRE Program

Dear Mr. Juan,

Orange EV looks forward to the upcoming implementation of the Warehouse ISR and the many benefits it will bring to Southern California's air quality. As the makers of 100% pure electric terminal tractors, we appreciate the SCAQMD's acknowledgement that zero-emissions ZE) technologies offer the most proven and efficient way to enact comprehensive air quality advances for the benefit of community health. 70-1

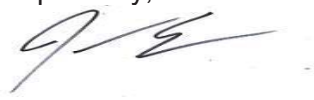
We believe your preference for zero-emission vehicles within this rule is especially important as it sends a strong signal to fleets that ZE heavy-duty trucks are, indeed, the future of California's goods movement industry. Not only will ZE fleets prove invaluable for the state's economy, but – with 42% of NOx emissions in Southern California coming directly from goods movement – this transition stands to dramatically improve local and regional air conditions. Furthermore, including non-ZE vehicles in the program would only prolong the use of combustion vehicles in this application and would also perpetuate the pipeline of those vehicles to secondary markets. 70-2

Orange EV respects the goals of the San Bernardino/Muscoy AB 617 Community Steering Committee as key partners in your efforts to mitigate against the negative effects of mobile indirect sources powered by combustion engines. As stated unequivocally in their Community Emissions Reduction Plan CERP), addressing emissions from warehouses is vital for improving neighborhood air quality throughout the specially designated community and beyond. We recognize the Warehouse ISR as an integral part of SCAQMD's efforts to address the larger climate crisis while simultaneously prioritizing environmental justice for those living communities near warehouses. 70-3

Orange EV's T-Series terminal tractor has been chosen by more than 85 fleets across 18 states, Canada, and the Caribbean, and our fleet has surpassed 734,000 key-on hours and driven over 2.3 million miles. In short, we have proven that 100% pure electric yard trucks can be successfully deployed in commercial operation at warehouses and rail yards. As such, we urge the SCAQMD not to be distracted from its goal of bringing about real and dramatic air quality improvements by allowing near-zero-emission and combustion engine-powered yard trucks to earn points from the WAIRE menu. 70-4

Thank you for considering these comments regarding this important regulation. While challenges may lie ahead for growing ZE fleets across the region, we appreciate that the SCAQMD is committed to this course of action and trust you shall remain so long into the future. 70-5

Respectfully,



Jason Dake
Vice-President of Legal and Regulatory Affairs

909 355-4100
8600 Banana Avenue
Fontana, CA 92335, United States
RDSRally.com

March 12, 2021

Victor Juan
South Coast Air Quality Management District
28165 Copley Drive
Diamond Bar, CA 91765

Re: Proposed Rule 2305: Warehouse Indirect Source – WAIRE Program

Dear Mr. Juan,

We would like to take this opportunity to provide feedback in support of our goal as an organization towards reducing emissions. At our Fontana campus we have replaced our gas forklifts and yard spotters and have now nearly completely replaced all movable equipment with electric powered units. We also installed two CARB compliant automatic generators to become self-sufficient when the GRID failed to function. 71-1

In collaboration with one of our large accounts located in Ontario, CA, we are in the process of converting our diesel yard spotters with new electric units. This transition will help this client meet its Corporate 2050 zero emissions objectives. 71-2

The benefits of zero emission yard spotter equipment in addition to reducing emissions are driver safety. Zero fuel exhaust, noise is minimal and ease of use due to minimal vibration during operation. With a goal of achieving zero emissions and reducing our carbon footprint, we will also be purchasing zero emission yard spotters for our new campus in Bloomington, CA. 71-3

Should you have any questions about our goals or experience with zero emission yard tractors, please do not hesitate to contact me directly. 71-4

Sincerely,

Debbie Thomas
Vice President Logistics Solutions
RDS Logistics Group
Debbie.thomas@rdsrally.com
(909) 630-6708

To whom it may concern,

In response to: Proposed Rule 2305 WAIRE PROGRAM

Upon review of the proposed rule 2305 WAIRE PROGRAM as a business that employs over 500+ associates locally we strongly urge the SCAQMD to reconsider this rule. If passed this will not only jeopardize jobs but without doubt drive us to include other providers out of Southern California.

72-1

Sincerely,

David Nester

Facilites Manager

P: 714-995-4800 x 518

M: 714-713-7899

Dnester@exemplis.com

one place. every space.™

6415 Katella Ave, Cypress, CA 90630

March 3, 2021

Ian MacMillan
Victor Juan
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178
Sent Via Email: imacmillan@aqmd.gov / vjuan@aqmd.gov

Subject: Comments on Proposed Rule 2305 (Warehouse Indirect Source Rule)

Dear Mr. MacMillan:

We oppose the adoption of Rule 2305 (Indirect Source Rule). Warehouses are integral to the Southern California logistics industry. The logistics industry plays a crucial role in the response to the COVID-19 pandemic—not only in the distribution of medical supplies, vaccines, and equipment but also in delivering goods to a public that has become increasingly dependent on e-commerce. 73-1

The District's proposed ISR seems to be a misguided policy during the COVID-19 pandemic. The District is pursuing a regulation targeting a sector that serves as a lifeline to our region and the nation and is deemed essential by federal and state governments. Under the current draft rule, reporting obligations begin only 60 days from rule adoption. The substantive WAIRE Points obligations will commence as soon as July 2021. 73-2

The following further comments are provided in response to the District's Proposed Rule 2305: 73-3

1. This rule would impose additional/permanent costs on warehouses of approximately $.90 per square foot. This extra cost would amount to targeting a specific essential industry with $1 billion in annual fees during the worst possible time and while responding to the pandemic's challenges on behalf of our nation.

2. It is not feasible to comply with the ISR due to the following: 73-4
   a) The proposed rule requires warehouses to control truck fleets and decrease truck emissions. Yet, warehouse operators are not able to accomplish this task.
   b) Warehouses have no control over how truck engines are manufactured.
   c) Warehouses do not own truck fleets, nor do they control what type of trucks shipping companies purchase.
   d) Warehouse operators do not control which trucks come to warehouses, when they arrive, where they come from, or any other variables related to truck trips.

3. The technology is not available to accomplish items on the WAIRE menu. For example, there are no heavy-duty electric trucks available that are viable from a technology and/or economically reasonable standard. 73-5

4. Warehouses have been deemed to be essential businesses by the State for important reasons including: 73-6

a) The approximately 18 million people who live in Southern California rely on warehouses as an integral part of the goods movement system to get them the items they need to survive, like food, medical supplies, clothes etc.

5. This rule creates tremendous uncertainty in the economy as the full negative impact of this ISR is not known.

a) Uncertainty should not be created in this critical, essential business sector, especially considering the current economic downturn/unemployment crisis associated with the COVID-19 pandemic.

6. Warehouses provide a broad range of jobs for people of every level of education and skillset. Warehouses and the logistics industry offer jobs that lead to upward ability. This job creation is a socioeconomic benefit that the proposed ISR's onerous costs would threaten. 73-7

7. The proposed ISR seeks to "indirectly" regulate the trucking industry through the Warehouse industry. The District should publicly explain how it has the jurisdiction/authority to regulate a mobile source that is such an integral part of interstate commerce as the trucking industry. 73-8

Thank you for your attention to these comments. Please include these comments as part of the official record for Proposed Rule 2305 (Warehouse Indirect Source Rule) so that all SCAQMD Board Members may have the opportunity to review the above. 73-9

Respectfully,

Donald E. Kazanjian
Lee & Associates Commercial Real Estate Services

Cc: Governing Board Members

March 3, 2021

Ian MacMillan
Victor Juan
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178
Sent Via Email: imacmillan@aqmd.gov / vjuan@aqmd.gov

Subject: Comments on Proposed Rule 2305 (Warehouse Indirect Source Rule)

Dear Mr. MacMillan:

As a building owner, we oppose the adoption of Rule 2305 (Indirect Source Rule). Warehouses are integral to the Southern California logistics industry. The logistics industry plays a crucial role in the response to the COVID-19 pandemic—not only in the distribution of medical supplies, vaccines, and equipment but also in delivering goods to a public that has become increasingly dependent on e-commerce. 74-1

The District's proposed ISR seems to be a misguided policy during the COVID-19 pandemic. The District is pursuing a regulation targeting a sector that serves as a lifeline to our region and the nation and is deemed essential by federal and state governments. Under the current draft rule, reporting obligations begin only 60 days from rule adoption. The substantive WAIRE Points obligations will commence as soon as July 2021. 74-2

The following further comments are provided in response to the District's Proposed Rule 2305:

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a) The approximately 18 million people who live in Southern California rely on warehouses as an integral part of the goods movement system to get them the items they need to survive, like food, medical supplies, clothes etc. 74-6

5. This rule creates tremendous uncertainty in the economy as the full negative impact of this ISR is not known.

a) Uncertainty should not be created in this critical, essential business sector, especially considering the current economic downturn/unemployment crisis associated with the COVID-19 pandemic.

6. Warehouses provide a broad range of jobs for people of every level of education and skillset. Warehouses and the logistics industry offer jobs that lead to upward ability. This job creation is a socioeconomic benefit that the proposed ISR's onerous costs would threaten. 74-7

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Thank you for your attention to these comments. Please include these comments as part of the official record for Proposed Rule 2305 (Warehouse Indirect Source Rule) so that all SCAQMD Board Members may have the opportunity to review the above. 74-9

Respectfully,

Don Kazanjian
KLK Vineyard, LLC.

Cc: Governing Board Members

Howard Industrial Partners

March 16, 2021

Sarah Rees, Deputy Executive Officer
Ian MacMillan, Planning and Rules Manager
Victor Juan, Program Supervisor
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Sent via Email

Re: Proposed Warehouse Indirect Source Rule ("ISR")

Dear Ms. Rees, Mr. MacMillan and Mr. Juan,

Howard Industrial Partners ("HIP") is a developer of warehouse and industrial buildings throughout the Southern California basin. The principals at HIP have a combined seventy years of experience working in the markets throughout the basin and we have dealt with an entitlement landscape over the years that has become more and more complicated. We have continued to be at the forefront of designing our buildings to meet stringent environmental standards. We believe, however, that the ISR is an overreach by SCAQMD that is complicated and costly and we question its ability to demonstrably improve air quality. That is why we strongly oppose the adoption of this rule. 75-1

There are so many ways that the expansion of the warehouse/industrial markets in Southern California is improving the quality of life for its citizens. This has been especially true during the COVID-19 pandemic as efficient goods movement provided by the influx of regional and local warehousing has allowed goods to be available for the multitude of people sheltering in place to avoid spreading COVID-19. The expansion has also created more blue-collar jobs in areas of the basin where unemployment has tended to be higher that are vital to our economy. 75-2

It is not an exaggeration to say that a rule like the ISR could have a profound negative effect on future development of warehouse space in the basin. Having worked in this area for the last 35 years, the principals of HIP have seen firsthand how the addition of a complicated system that penalizes tenants and landlords can dampen demand and supply alike. This would obviously reduce the benefits that increased warehouse development would provide. 75-3

California already has the most stringent requirements of any state, the cleanest supply chain of any state, and has seen a tremendous reduction in emissions associated with warehouse activities over the last decade at the same time there has been an influx of warehouse development. Given 75-4

1944 North Tustin Street, Ste. 122 • Orange, CA 92865 • (714) 602-7345

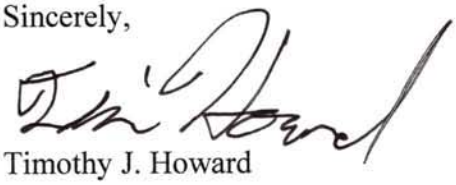
the positive news coming from the warehouse sector, it seems like overkill to introduce another piece of legislation to further hinder its growth.

75-4 (cont'd)

HIP remains committed to developing warehouse projects that meet the needs of consumers in the Southern California markets but there is a real chance that rules like ISR could make our business virtually obsolete.

75-5

Sincerely,



Timothy J. Howard

----Original Message-----
From: Bryan Bradford <bryanbradford25@gmail.com>
Sent: Wednesday, March 17, 2021 9:48 AM
To: Clerk of Board <Front_PC@aqmd.gov>; Wayne Nastri <wnastri@aqmd.gov>; Sarah Rees <SRees@aqmd.gov>; Ian MacMillan <imacmillan@aqmd.gov>
Subject: Support for the Indirect Source Rule

Dear Governing Board of the South Coast Air Quality Management District,

I'm a resident of the city of Riverside, and I'm writing to voice my support for the Indirect Source Rule that is soon to be considered by the Mobile Source Committee. 76-1

As someone who has made financial sacrifices to utilize clean energy and improve the health of our community, I believe the business community should be willing to do the same. I understand the need to preserve jobs, but the warehouse industry isn't going to abandon the Riverside area. Empty land near major ports is not a readily available resource, and they need us more than we need them. To require them to make an investment in the health of their employees and the other residents of our community is not unreasonable. Indeed, it is the ethical thing to do. 76-2

I hope the Mobile Source Committee will recognize the value of the ISR. Thank you for your consideration. 76-3

Best,

Bryan Bradford
4383 Oakwood Pl
Riverside, CA

ROCKEFELLER
GROUP

March 17, 2021

Mr. Ian MacMillan
Mr. Victor Juan
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178
Sent Via Email: imacmillan@aqmd.gov / vjuan@aqmd.gov

Subject: Comments on Proposed Rule 2305 (Warehouse Indirect Source Rule)

Dear Mr. MacMillan:

Rockefeller Group opposes the adoption of Rule 2305 (Indirect Source Rule). Warehouses are integral to the Southern California logistics industry. The logistics industry plays a crucial role in the response to the COVID-19 pandemic—not only in the distribution of medical supplies, vaccines, and equipment but also in delivering goods to a public that has become increasingly dependent on e-commerce. 77-1

The District's proposed ISR seems to be a misguided policy during the COVID-19 pandemic. The District is pursuing a regulation targeting a sector that serves as a lifeline to our region and the nation and is deemed essential by federal and state governments. Under the current draft rule, reporting obligations begin only 60 days from rule adoption. The substantive WAIRE Points obligations will commence as soon as July 2021. 77-2

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   b) Warehouses have no control over how truck engines are manufactured.
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    a) Uncertainty should not be created in this critical, essential business sector, especially considering the current economic downturn/unemployment crisis associated with the COVID-19 pandemic.

77-7

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77-8

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77-9

Thank you for your attention to these comments. Please include these comments as part of the official record for Proposed Rule 2305 (Warehouse Indirect Source Rule) so that all SCAQMD Board Members may have the opportunity to review the above.

77-10

Sincerely,

ROCKEFELLER GROUP



James V. Camp
Senior Managing Director

Cc: Governing Board Members

PACIFIC INDUSTRIAL

March 19, 2021

Ian MacMillan
Victor Juan
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178

sent via email: *imacmillan@aqmd.gov*
vjuan@aqmd.gov

Subject: Comments on Proposed Rule 2305 (Warehouse Indirect Source Rule)

Dear Messrs. MacMillan & Juan:

Pacific Industrial opposes the adoption of Rule 2305 (Indirect Source Rule). Warehouses are integral to the Southern California logistics industry and the industry plays a crucial role in the supply chain from food, medical supplies, household goods, clothing, equipment, and raw materials to just about everything that is consumed. As the public grows increasingly more dependent on e-commerce which has been accelerated by the COVID-19 pandemic, the resulting tax if ISR is implemented, has the consequence of crippling Southern California's supply infrastructure which is already reeling from COVID impact shortages and disruptions. 78-1

The District's proposed ISR seems to be a misguided policy especially during the COVID-19 pandemic. The District is pursuing a regulation targeting a sector that serves as a lifeline to our region and the nation and is deemed essential by federal and state governments. Under the current draft rule, reporting obligations begin only 60 days from rule adoption. The substantive WAIRE Points obligations will commence as soon as July 2021 with insufficient time for the warehousing industry to plan and prepare for proper implementation. 78-2

More importantly, Rule 2305 is targeting an industry with a specific tax to reduce emissions in the region yet the subject of the tax in this case, a warehouse, has no power to regulate the indirect sources. This seems illogical and is frustrating and confusing to business owners as to why they are being singled out. While true that trucks and autos visit warehouses and create emissions through the trips generated, the same sources also visit grocery stores, shopping malls, restaurants, hotels, airports, entertainment centers, retail centers, farms, manufacturing facilities, agricultural fields and nearly every other activity or service. In only targeting warehouses for a special tax under Rule 2035, ISR is rendered even more punitive by the arbitrary nature of its application. 78-3

In response to the proposed Rule 2305, we implore you to consider the following:

1. This rule would impose additional and permanent taxes on warehouses of approximately $.90-$1.00 per square foot. This tax would create an unfair burden on the warehousing industry which is providing an essential benefit to the economy.

2. The ISR impact could generate an estimated $1 billion in annual fees but no information has been provided to date on how those funds will be spent or what the expected return will be. 78-4

3. Most warehouses impacted under Rule 2305 are not household names with deep pockets but local and regional suppliers of key goods and materials. Some of those warehouse operators will not survive the impact of this tax further worsening the unemployment rate.

4. As presented, it is not feasible to comply with the ISR as the proposed rule will require warehouses to control truck fleets and decrease truck emissions, but warehouse operators are not able to accomplish this task due to the following:

    a) Warehouses have no control over how truck engines are manufactured.

    b) Warehouses largely do not own truck fleets, nor do they control what type of trucks shipping companies purchase. 78-5

    c) Warehouse operators do not control which trucks come to warehouses, when they arrive, where they come from, or any other variables related to truck trips.

    d) The technology is not available to accomplish items on the WAIRE menu. For example, there are no heavy-duty electric trucks available that are viable from a technology and/or economically reasonable standard.

5. Warehouses have been deemed to be essential businesses by the State for important reasons as approximately 18 million people who live in Southern California rely on warehouses as an integral part of the goods movement system to get them the items they need to survive. 78-6

6. This rule creates tremendous uncertainty in the economy as the full negative impact of this ISR is not known. 78-7

7. Warehouses provide a broad range of jobs for people of every level of education and skillset. Warehouses and the logistics industry offer jobs that lead to upward ability. This job creation is a socioeconomic benefit that the proposed ISR's onerous costs would threaten. 78-8

8. The proposed ISR seeks to "indirectly" regulate the trucking industry through the warehouse industry. The District should publicly explain how it has the jurisdiction/authority to regulate a mobile source that is such an integral part of interstate commerce as the trucking industry. 78-9

While we live and work in Southern California and all support the goal of lowering emissions and promoting better health for our region and community, this is not the correct approach. 78-10

Thank you for your attention to these comments. Please include these comments as part of the official record for Proposed Rule 2305 (Warehouse Indirect Source Rule) so that all SCAQMD Board Members may have the opportunity to review the above. 78-10 (cont'd)

Respectfully,

Terri Allen
Chief Operating Officer

cc: Governing Board Members

GARRETT
STIEPEL RYDER LLP

Allyssa Holcomb
Mobile No.
(949) 573-4936
Email Address
aholcomb@garrettllp.com

March 19, 2021

VIA ELECTRONIC MAIL (cob@aqmd.gov) AND VIA OVERNIGHT DELIVERY

Chair William Burke and Governing Board Members
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765-4178

Re: Comments to Proposed Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program ("PR2305") and Proposed Rule 316 – Fees for Regulation XXIII ("PR316" and collectively with PR2305, the "Proposed Rules")

Ladies and Gentlemen:

This firm represents Warland Investments Company and affiliated entities (collectively, "**Warland**"), which has real estate holdings consisting of over 3.5 million square feet of space within the South Coast area. Warland's presence brings great value to the area by maintaining facilities that draw first-class operators. Warland is an interested party in that its holdings include numerous warehouses that would be impacted by the Proposed Rules referenced above. As such, Warland hereby respectfully submits its comments on the Proposed Rules prior to the final vote by South Coast Air Quality Management District ("**SCAQMD**") regarding the same. 79-1

While Warland supports the SCAQMD's intended objectives of reducing emissions of nitrogen oxides and particulate matter in order to improve air quality, Warland objects to adoption of the Proposed Rules as written for the reasons set forth below.

I. Lack of Legal Authority.

A. PR2035 Exceeds SCAQMD's Indirect Source Rule Authority. 79-2

Section 40440 of the California Health and Safety Code authorizes SCAQMD to adopt indirect source rules that serve to provide controls (i) for areas of the South Coast District "in which there are high-level, localized concentrations of pollutants", or (ii) related to "any new source that will have a significant effect on air quality in the South Coast Air Basin".

Under PR2305 Section (b) (Applicability), PR2305 would apply to all owners and operators of warehouses located in the SCAQMD jurisdiction with at least 100,000 square feet of indoor floor space in a single building that may be used for warehousing activities by one or more warehouse operators. PR316 would apply to owners and operators of facilities subject to PR2305. Accordingly, as drafted, the Proposed Rules would apply to all warehouses of a certain size, without any regard to whether the warehouse in question is

either located in an area "in which there are high-level, localized concentrations of pollutants" or already exists and, therefore, is not a "new source". This attempt to regulate warehouses based on size via an indirect source rule alone clearly exceeds SCAQMD's authority pursuant to the California Health and Safety Code. 79-2 (cont'd)

B. SCAQMD Lacks Authority to Impose Special Taxes.

The Proposed Rules, if adopted, would require owners and operators of warehouses with at least 100,000 square feet of indoor space in a single building to either (i) reduce emissions through certain and arguably non-feasible methods, or (ii) pay a so-called "mitigation fee". However, any such charge must meet certain requirements under the California Constitution to be deemed a permitted fee rather than a special tax. In this case, the proposed "mitigation fee" does not satisfy those requirements. 79-3

Proposition 26, approved by voters in 2010, expressly defined the distinction between taxes, which require a vote of two-thirds of the electorate in order to be enacted, and fees, which regulatory agencies have authority to impose. Any taxes or fees enacted on or after January 1, 2010 must comply with the requirements of Proposition 26, which became Article XIII C, section 1 to the California Constitution. The "mitigation fee" contemplated by the Proposed Rules is not a permitted fee under such section because it (i) does not provide a specific benefit to the payor, (ii) is not fairly apportioned among payors, (iii) generates money for a regulatory program, and (iv) is not reasonable. As such, the "mitigation fee" would be considered a special tax, rather than a fee, under the California Constitution. SCAQMD does not have authority to impose any special tax without first obtaining approval of two-thirds of the electorate, which approval has not yet been obtained.

II. The Proposed Rules Will Negatively Impact the South Coast Area.

The Proposed Rules unduly burdens warehouse owners and operators in that they would have to either assume substantial costs of upgrading their facilities and/or purchasing near-zero emission trucks, or assume an average annual compliance cost of approximately $0.90/square foot as soon as the year 2025. Although improving air quality is important to South Coast businesses and residents, the Proposed Rules will substantially increase the costs to operate by warehouse owners and operators, which will in turn increase the costs of goods and services for those same businesses and residents. Even more critically, the Proposed Rules will almost certainly drive warehouse owners and operators, as well as jobs, out of the South Coast area. The potential negative economic impact of the Proposed Rules cannot be overstated and demands further evaluation. 79-4 79-5

III. Compliance with Proposed Rules is Not Feasible.

As noted by many other citizens and groups opposing the Proposed Rules, much remains unclear on how warehouse owners and operators would feasibly comply with the Proposed Rules. For example, numerous proposed scenarios in the Staff Report on the Proposed Rules ("**PDSR**") suggest compliance could be achieved by purchasing near-zero emissions trucks with a gross vehicle weight rating of greater than 33,001 pounds; however, no such trucks are currently commercially available. As another example, the PDSR contemplates installing charging stations at warehouse facilities, but the PDSR lacks sufficient analysis on how warehouse charging stations would be built, where such charging stations would fit within existing warehouse properties, and how the existing electrical infrastructure is sufficient to support such charging 79-6

stations. In addition, the PDSR's "estimated" costs of compliance for the Proposed Rules are based on just eighteen (18) different theoretical scenarios; however, many other complicated compliance scenarios would be bound to arise and the projected cost of compliance for such scenarios remains unknown. Some potential credits are discussed in the PDSR and Proposed Rules, such as the State Implementation Plan Credit, but such credits are unclear and no defined guidelines exist to obtain such credits. At this time, compliance with the Proposed Rules appears generally unfeasible for most warehouse owners and operators, which suggests the proposed "mitigation fee" will ultimately serve as such parties' sole source of compliance. Adopting the Proposed Rules without first outlining reasonable metrics for compliance is unreasonable and will not achieve SCAQMD's stated objections of improving air quality. 79-7 79-8 79-9

In conclusion, the Proposed Rules should not be adopted as drafted. SCAQMD lacks legal authority to impose the PR2035 as an indirect source rule. The "mitigation fee" is not a permitted fee and, therefore, SCAQMD lacks authority to impose it. The Proposed Rules will profoundly impact warehouse owners and operators, which will, without question, negatively impact the South Coast economy as a whole. Finally, there are no feasible metrics for compliance outside of paying annual mitigation fees. We respectfully request that SCAQMD disapprove the Proposed Rules until the foregoing issues have been thoroughly and appropriately addressed and resolved. 79-10

Regards,

Allyssa J. Holcomb

Allyssa J. Holcomb

cc: Mr. Carl W. Robertson, Jr. (via email)
Ms. Hope I. Warschaw (via email)

March 18, 2021

Chair Burke and Members of the Governing Board
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765
cob@aqmd.gov

Re: Comments on the Warehouse Indirect Source Rule (Proposed Rule 2305)

Dear Chair Burke and Members of the Governing Board,

We write to express our support for Proposed Rule 2305. GRID Alternatives is a nonprofit organization working towards a rapid and equitable transition to renewable energy. Solar power is key to promoting economic growth and alleviating environmental harms in communities most impacted by environmental harms such as air pollution. 80-1

The South Coast Air Basin is home to more than1.4 billion square feet of warehouses and that number will continue to grow. These warehouses attract a large number of polluting trucks that contribute significant pollution in surrounding communities. The warehouse indirect source rule is an important tool that will help bring clean zero-emission trucks to southern California and reduce this toxic pollution. However, warehouses in the South Coast also use a significant amount of energy primarily generated by dirty power plants, which also negatively impacts air quality in one of the most polluted regions in the nation. The warehouse indirect source rule has the potential to shift over 800 million square feet of warehouses in southern California towards renewable energy. A transition to solar energy at these facilities will reduce our reliance on fossil fuels and provide significant economic and environmental benefits to overburdened communities sited near warehouses. 80-2

We appreciate that the Warehouse Actions and Investments to Reduce Emissions (WAIRE) program includes solar installation as a compliance option. Clean energy solutions like solar power are critical to lessening the environmental footprint of the warehouse industry. The installation and use of onsite solar panels at warehouses will reduce emissions from dirty power plants and provide much needed regional emissions reductions of nitrogen oxides. This rule will provide significant air quality benefits that will alleviate health risks imposed on residents by polluting industries.

As warehouses shift towards renewable energy, the region will also benefit from additional training and employment opportunities in the green-tech economy. GRID Alternatives is committed to creating a solar workforce that provides opportunities to all by ensuring access to groups traditionally underrepresented in in the solar industry. Additionally, we partner with local solar companies to ensure that trainees learn through participation on real-world solar installations. GRID Alternatives stands ready to assist warehouses and support workers through hands-on training to help us all achieve a sustainable clean energy future. 80-3

Thank you for the opportunity to provide comments. We appreciate the Air District staff's hard work on this important rule and look forward to working with the agency to clean up our air and protect our workers. 80-4

Sincerely,

Stanley Greschner, Chief Policy Officer

GRID Alternatives

cc:

Wayne Nastri
Executive Officer
South Coast Air Quality Management District
wnastri@aqmd.gov

Sarah Rees
Assistant Deputy Executive Officer
Planning, Rule Development & Area Sources
srees@aqmd.gov

Ian MacMillan
Planning and Rules Manager
South Coast Air Quality Management District
imacmillan@aqmd.gov

Victor Juan
Program Supervisor
South Coast Air Quality Management District
vjuan@aqmd.gov

Port Logistics Group

288 Mayo Avenue
City of Industry, CA 91789
Phone: 909.839.4111
Fax: 909.839.4109

March 23, 2021

Mr. Michael A. Cacciotti
Board Member, SCAQMD
c/o City of South Pasadena
1414 Mission Street
South Pasadena, CA 91030
macacciotti@yahoo.com
shotay@gmail.com

Mr. Larry McCallon
Board Member, SCAQMD
c/o City of Highland
27215 Base Line
Highland, CA 92346
lmccallon@cityofhighland.org
rrketcham@verizon.net

Mr. Rex Richardson
Board Member, SCAQMD
City of Long Beach
rrichardson@aqmd.gov
mhamlett@aqmd.gov

Ms. Janice Rutherford
Board Member, SCAQMD
County of San Bernardino
385 No. Arrowhead Avenue, 5th Floor
San Bernardino, CA 92415
supervisorrutherford@sbcounty.gov
mark.taylor@bos.sbcounty.gov
suzetteswallow@bos.sbcounty.gov

Re: Opposition to Warehouse Indirect Source Rule

Dear SCAQMD Board Members,

My name is Marty Brogden and I am the CFO of a Southern California based warehouse operators (3PL) named Port Logistics Group urging you to NOT to adopt the proposed Indirect Source Rule. 81-1

Born in 1958, I was raised in the Western SGV until I left in 1978 to continue my college education in San Diego. I have witnessed first-hand the health benefits resulting from the efforts of the SCAQMD. For those of us who experienced the ill effects of the smog during the '60s and '70s and today to be able to see the San Gabriel Mountains from 50 miles away during the Summer and take a deep breath without choking is astonishing! This is due in large part to the work of the SCAQMD.

However, while I personally support the SCAQMD mission, the proposed Indirect Source Rule is imposed on 3PLs which (a) do not contractually control the vehicles that visit our warehouses, and (b) will cost hundreds of jobs at our company's 3.5 million square feet of 3PL facilities in Long Beach, City of Industry, and Chino. Our customers determine which logistics carriers deliver and pickup their products at our facilities and we have no legal or contractual right to pass on costs which would be imposed upon our company as a result of this proposed rule. 81-2

Port Logistics Group

288 Mayo Avenue
City of Industry, CA 91789
Phone: 909.839.4111
Fax: 909.839.4109

From a legal perspective, the mitigation "fee" imposed by the proposed rule is a special tax requiring voter approval. 81-3

The SCAQMD's proposed rule will impose a significant new tax on the broad Supply Chain at the worst possible time. First, due to almost 20 years of the California Air Resources Board (CARB) adopting strictest-in-nation regulations, emissions associated with warehouses have never been lower. Second, warehouses' operating costs are already at their highest due to the implementation of measures protecting essential workers from COVID exposure. Their safety has been our number one priority since the pandemic was announced. Finally, the Supply Chain & Logistics industry is supporting thousands of working-class jobs at a time where millions of Californians are unemployed and where other jobs are fleeing the State. 81-4 81-5 81-6

3PLs like our company and the broader Supply Chain in general are vital to Southern California's economy, distributing medicines, food and essential goods for approximately 18 million people. Our business specifically is comprised of fulfillment of products delivered directly to people's homes. 3PLs have played in a key beneficial role during the ongoing pandemic, enabling small businesses to remain afloat through e-commerce and allowing Southern California residents to stay safely at home (and thereby reducing harmful emissions). Taxing the sector that provides a significant number of career pathways to essential workers makes no sense. 81-7

The proposed rule would increase the costs of goods and services, including groceries, for our region's residents and families. Additionally, penalizing warehouses which already implemented solar or EV charging improvements is inappropriate. The proposed regulation should not be considered until such time as readily available trucking technology and infrastructure is in place to allow for logistics providers, not warehouse operators, to comply with the mandates. 81-8

Please oppose these costly new taxes and regulations that will kill jobs and harm our economy at a time we can least afford it. 81-9

PLEASE VOTE NO on the Warehouse Indirect Source Rule.

Thank you for your consideration.

Sincerely,

Martin K. Brogden
Chief Financial Officer
Port Logistics Group
mbrogden@portlogisticsgroup.com

Distribution Specialists

1430 SOUTH EASTMAN AVENUE LOS ANGELES, CALIFORNIA 90023

March 24, 2021

Sent Via Email to Clerk of the SCAQMD Board: cob@aqmd.gov

Chair William Burke and Governing Board Members
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

RE: South Coast Air Quality Management District Proposed Indirect Source Rule 2305
Anticipated Vote Date: May 7, 2021

Dear Ladies and Gentlemen:

Please allow this correspondence to serve as official opposition to the pending Indirect Source Rule (ISR 2305, which is proposed by the South Coast Air Quality Management District (SCAQMD) and currently scheduled for Board vote on May 7, 2021. 82-1

The SCQAMD, by its charter, already has the responsibility to regulate stationary (operating facilities) sources in our region such as refineries and manufacturing plants. However, with this proposed rule, the SCAQMD is attempting to regulate mobile sources trucks, cars which are already regulated by both the US EPA and the California Air Resources Board. 82-2

This proposed rule is outside the authority of the local air district and it is not mission driven as it has no sunset date. Furthermore, it is poorly written, fails to understand the dynamics of the goods movement sector, and includes an arbitrary menu of options and credits. Furthermore, the rule has questionable projections on any actual emission reductions it will achieve. Additionally, it will impose significant administrative requirements on warehouse Landlords/Owners and create substantial mitigation expenses on Tenants. As written, this rule is in essence a tax on the warehousing sector while indirectly regulating the trucking industry, which will create a substantial negative impact on the warehouse industry. 82-3

Please include these comments as part of the official record for Proposed Rule 2305 (Warehouse Indirect Source Rule) so that all SCAQMD Board Members may have the opportunity to review the above. Thank you for your attention to these comments. 82-4

Sincerely,

Joseph Medlin
Executive Vice President

323) 264-1011

OPERON GROUP

March 17, 2021

Ian MacMillan
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178
Sent Via Email: imacmillan@aqmd.gov /

Subject: Comments on Proposed Rule 2305 (Warehouse Indirect Source Rule)

Dear Mr. MacMillan:

Operon Group opposes the adoption of Rule 2305 (Indirect Source Rule). Warehouses are integral to the Southern California logistics industry. The logistics industry plays a crucial role in the response to the COVID-19 pandemic—not only in the distribution of medical supplies, vaccines, and equipment but also in delivering goods to a public that has become increasingly dependent on e-commerce. 83-1

The District's proposed ISR is a misguided policy during the COVID-19 pandemic. The District is pursuing a regulation targeting a sector that serves as a lifeline to our region and the nation and is deemed essential by federal and state governments. Under the current draft rule, reporting obligations begin only 60 days from rule adoption. The substantive WAIRE Points obligations will commence as soon as July 2021. 83-2

The following further comments are provided in response to the District's Proposed Rule 2305:

1. This rule would impose additional/permanent costs on warehouses of approximately $.90 per square foot. This extra cost would amount to targeting a specific essential industry with $1 billion in annual fees during the worst possible time and while responding to the pandemic's challenges on behalf of our nation and could possibly be a prop 13 violation. 83-3

2. It is not feasible to comply with the ISR due to the following:
   a) The proposed rule requires warehouses to control truck fleets and decrease truck emissions. Yet, warehouse operators are not able to accomplish this task.
   b) Warehouses have no control over how truck engines are manufactured.
   c) Warehouses do not own truck fleets, nor do they control what type of trucks shipping companies purchase.
   d) Warehouse operators do not control which trucks come to warehouses, when they arrive, where they come from, or any other variables related to truck trips. 83-4

OPERON GROUP

3. The technology is not available to accomplish items on the WAIRE menu. For example, there are no heavy-duty electric trucks available that are viable from a technology and/or economically reasonable standard. 83-5

4. Warehouses have been deemed to be essential businesses by the State for important reasons including:

a) The approximately 18 million people who live in Southern California rely on warehouses as an integral part of the goods movement system to get them the items they need to survive, like food, medical supplies, clothes etc. 83-6

5. This rule creates tremendous uncertainty in the economy as the full negative impact of this ISR is not known.

a) Uncertainty should not be created in this critical, essential business sector, especially considering the current economic downturn/unemployment crisis associated with the COVID-19 pandemic. 83-7

6. Warehouses provide a broad range of jobs for people of every level of education and skillset. Warehouses and the logistics industry offer jobs that lead to upward ability. This job creation is a socioeconomic benefit that the proposed ISR's onerous costs would threaten. 83-8

7. The proposed ISR seeks to "indirectly" regulate the trucking industry through the Warehouse industry. The District should publicly explain how it has the jurisdiction/authority to regulate a mobile source that is such an integral part of interstate commerce as the trucking industry. 83-9

Thank you for your attention to these comments. Please include these comments as part of the official record for Proposed Rule 2305 (Warehouse Indirect Source Rule) so that all SCAQMD Board Members may have the opportunity to review the above. 83-10

Respectfully,

Operon Group

Chris Kwasizur,

President

Cc: Governing Board Members

4 Upper Newport Plaza, Suite 100 | Newport Beach, CA 92660 | Off: 949.833.5400

March 29, 2021

Ian MacMillan
Victor Juan
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178
Sent Via Email: imacmillan@aqmd.gov / vjuan@aqmd.gov

Subject: Comments on Proposed Rule 2305 (Warehouse Indirect Source Rule)

Dear Mr. MacMillan:

Tech Data Corporation opposes the adoption of Rule 2305 (Indirect Source Rule). Warehouses are integral to the Southern California logistics industry. The logistics industry plays a crucial role in the response to the COVID-19 pandemic—not only in the distribution of medical supplies, vaccines, and equipment but also in delivering high tech products to a public that has become increasingly dependent on e-commerce. 84-1

The District's proposed ISR seems to be a misguided policy during the COVID-19 pandemic. The District is pursuing a regulation targeting a sector that serves as a lifeline to our region and the nation and is deemed essential by federal and state governments. Under the current draft rule, reporting obligations begin only 60 days from rule adoption. The substantive WAIRE Points obligations will commence as soon as July 2021. 84-2

The following further comments are provided in response to the District's Proposed Rule 2305:

1. This rule would impose additional/permanent costs on warehouses of approximately $.90 per square foot. This extra cost would amount to targeting a specific essential industry with $1 billion in annual fees during the worst possible time and while responding to the pandemic's challenges on behalf of our nation. 84-3

2. It is not feasible to comply with the ISR due to the following:
   a) The proposed rule requires warehouses to control truck fleets and decrease truck emissions. Yet, warehouse operators are not able to accomplish this task.
   b) Warehouses have no control over how truck engines are manufactured.
   c) Warehouses do not own truck fleets, nor do they control what type of trucks shipping companies purchase.
   d) Warehouse operators do not control which trucks come to warehouses, when they arrive, where they come from, or any other variables related to truck trips. 84-4

3. The technology is not available to accomplish items on the WAIRE menu. For example, there are no heavy-duty electric trucks available that are viable from a technology and/or economically reasonable standard. 84-5

4. Warehouses have been deemed to be essential businesses by the State for important reasons including:
The approximately 18 million people who live in Southern California rely on warehouses as an integral part of the goods movement system to get them the items they need to survive, like food, medical supplies, clothes etc. 84-6

5. This rule creates tremendous uncertainty in the economy as the full negative impact of this ISR is not known.
Uncertainty should not be created in this critical, essential business sector, especially considering the current economic downturn/unemployment crisis associated with the COVID-19 pandemic.

6. Warehouses provide a broad range of jobs for people of every level of education and skillset. Warehouses and the logistics industry offer jobs that lead to upward ability. This job creation is a socioeconomic benefit that the proposed ISR's onerous costs would threaten. 84-7

7. The proposed ISR seeks to "indirectly" regulate the trucking industry through the Warehouse industry. The District should publicly explain how it has the jurisdiction/authority to regulate a mobile source that is such an integral part of interstate commerce as the trucking industry. 84-8

Thank you for your attention to these comments. Please include these comments as part of the official record for Proposed Rule 2305 (Warehouse Indirect Source Rule) so that all SCAQMD Board Members may have the opportunity to review the above. 84-9

Respectfully,

Rob Auslander

Rob Auslander
Vice President Regulatory Compliance
Tech Data Corporation

Cc: Governing Board Members

700 South Flower Street, Suite 590
Los Angeles, CA 90017
www.bomagla.org
(213) 629- 2662

MARCH 8, 2021

VIA E-MAIL

Ian MacMillan
Victor Juan
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178
imacmillan@aqmd.gov
vjuan@aqmd.gov

Re: Comments on Proposed Rule 2305 (Warehouse Indirect Source Rule)

Dear Mr. MacMillan and Mr. Juan:

I write on behalf of the Building Owners and Managers Association Greater Los Angeles (BOMA/GLA), which represents over 135 million square feet of commercial office space throughout Los Angeles County. Our members contribute an estimated annual $3.5 billion to California's economy. 85-1

Commitment to Sustainability

Advancing sustainability in commercial buildings has been a cornerstone of BOMA/GLA's mission since the 1990s.

For over two decades, our Sustainability Committee has been on the vanguard of developing educational programs, guides, and a written content to promote building sustainability practices and give building owners and operators the know-how to move the needle in their assets.

But BOMA/GLA has not only promoted a culture around sustainability in commercial real estate – we have taken concrete action and consistently advocating for bold sustainability policies. Recent actions include supporting LA County's Sustainability Plan and continuing to work with County staff on its implementation and working in partnership with LA City government and other stakeholders to help develop the Existing Buildings Energy and Water Efficiency (EBEWE) program into what it is today.

Our commitment to sustainability is guided by an industry-wide consensus: For example, Kilroy Realty Corporation announced that it has achieved carbon neutral operations just this year. And, many other major commercial building owners representing all types of assets and investors are following suit by making aggressive carbon neutrality commitments over the next decade.

As achieving aggressive sustainability goals has become the norm across commercial real estate, we welcome well-balanced policies that continue to yield both carbon reduction and economic growth.

However, we believe Rule 2305 (Indirect Source Rule) does not accomplish this objective. Further, we believe it will cause undue economic damage to the warehouses, their tenants, and the logistics industry at large, especially during the COVID-19 economic downturn. 85-2

Opposition to Rule 2305

We believe that Rule 2305 will lead to economic distress and create additional hurdles for warehouses to achieve greater sustainability right when the market demands are pointing them in that direction in that direction. BOMA Greater Los Angeles therefore officially opposes the adoption of Rule 2305 (ISR).

A significant portion of our membership is involved in the support and development of distribution warehouses that are integral to the Southern California logistics industry.

The logistics industry is playing a key role in our response to the COVID-19 pandemic—not only in the distribution of medical supplies, vaccines, and equipment, but also in the delivery goods to a public that has become increasingly dependent on e-commerce.

We believe the District's proposed ISR is an especially misguided policy in the midst of the COVID-19 pandemic and more broadly. The District is pursuing a regulation targeted at a sector that serves as a lifeline to our region and the nation, and which is deemed essential by federal and state governments. Under the current draft rule, reporting obligations begin only 60 days from rule adoption, and the substantive WAIRE Points obligations will commence as soon as July, 2021. 85-3

Currently, BOMA/GLA has the following comments in response to the District's Proposed Rule 2305 (Warehouse Indirect Source Rule):

1. This rule would impose additional/permanent costs on warehouses of approximately $.90 per square foot. This would amount to targeting a specific essential industry with $1 billion in annual fees during the worst possible time, as it responds to the challenges of the COVID-19 pandemic on behalf of our nation. 85-4

2. It is not feasible to comply with the ISR due to the following:

    a. The proposed rule requires warehouses to control truck fleets and decrease truck emissions but warehouse operators are not able to accomplish this task.

    b. Warehouses have no control over how truck engines are manufactured. 85-5

    c. Warehouses do not own trucks fleets nor control what type of trucks shipping companies purchase.

    d. Warehouse operators do not control which trucks come to warehouses, when they arrive, where they come from or any other variables related to truck trips.

3. The technology is not fully available to accomplish items on the WAIRE menu. For example, there are no heavy-duty electric trucks available that are 100% viable from a technology and/or economic reasonable standard. 85-6

4. Warehouses have been deemed to be essential businesses by the State for important reasons including:

    a. The approximately 18 million people who live in Southern California rely on warehouses as an integral part of the goods movement system, to gets them the items they need to survive, like clothing, food, medical supplies, etc.

85-7

5. This rule creates tremendous uncertainty in the economy as the full negative impact of this ISR is not known.

    a. Uncertainty should not be created in this critical, essential business sector, especially in light of the current economic downturn/unemployment crisis associated with the COVID-19 pandemic.

85-8

6. Warehouses provide a broad range of jobs for people of every level of education and skill sets. Warehouses and the logistics industry as a whole, provide jobs that lead to upward mobility. This job creation is a socioeconomic benefit that would be threatened by the onerous costs imposed by the proposed ISR.

85-9

7. The "mitigating" measures of installing additional solar panels and EV chargers will increase pricing for the manufacturing and installation of them. This will put barriers to voluntary installation for other sites and facilities. The manufacturers would be hit by these same costs, which would increase their cost to make and distribute. This would be a major setback to buildings' ability to elect into implementing long-term sustainability infrastructure and other measures.

85-10

8. The proposed ISR clearly seeks to "indirectly" regulate the trucking industry through the Warehouse industry. The District should publicly explain how it has the jurisdiction/authority to regulate a mobile source that is such an integral part of interstate commerce as the trucking industry.

85-11

Thank you for your attention to these comments. Please include these comments as part of the official record for Proposed Rule 2305 (Warehouse Indirect Source Rule) so that all SCAQMD Board Members may have the opportunity to review the above.

85-12

Respectfully,



Aaron Taxy
Director of Government and Public Affairs
BOMA Greater Los Angeles
(213) 332-4776
ataxy@bomagla.org

cc: SCAQMD Governing Board

CITY of CYPRESS

5275 Orange Avenue, Cypress, California 90630

Phone 714-229-6700 www.cypressca.org

March 30, 2021

SOUTH COAST AQMD
CLERK OF THE BOARDS

21 APR -2 A10 :30

Chair William Burke and Governing Board Members
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765-4178

NOTICE OF OPPOSITION

Proposed Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program and Proposed Rule 316 – Fees for Rule 2305

Dear Chair Burke and Governing Board Members:

I am writing on behalf of the City of Cypress to express our opposition to Proposed Rules 2305 and 316 set for public hearing on April 2. 86-1

We were made aware of Proposed Rules 2305 and 316 by Warland Investments Company, which is one of the largest landowners in the Cypress Business Park and a crucial component of Cypress' local economy. Warland objects to the Proposed Rules for serval reasons; however, the objection of most concern to the City is the burden on warehouse owners and operators to either assume substantial costs of upgrading their facilities and equipment or significant mitigation fees. 86-2

While the City supports the intended objectives of reducing emissions in order to improve air quality, the Proposed Rules as currently written will result in substantial operational cost increases to warehouse owners and operators, and are likely to result in increased costs of goods and services for businesses and residents. 86-3 Even more critically, the Proposed Rules may drive warehouse owners and operators, as well as the jobs they provide, out of the South Coast area. 86-4 For these reasons, we respectfully request you oppose Proposed Rules 2305 and 316.

Sincerely,

Jon E. Peat
Mayor

Jon E. Peat, Mayor
Stacy Berry, Mayor Pro Tem **Anne Hertz**, Council Member
Frances Marquez, Ph.D., Council Member **Paulo M. Morales**, Council Member

April _8__, 2021

Chair William Burke and Governing Board Members
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178

Re: **OPPOSITION TO PROPOSED RULE 2305 (WAREHOUSE INDIRECT SOURCE RULE)**

Dear Mr. Burke and Governing Board Members,

Currently, there are pending changes concerning air quality regulation that are due to be voted on by you. As a business that relies on affordable warehouse space, we are deeply concerned what potential impacts Rule 2305 will have to our operating expenses. If Rule 2305 passes it will result in increased property taxes and consequently, higher overhead operating expenses creating economic hardship in an already difficult economic climate. Currently in our lease, we as the Tenant, are responsible for any resulting increases in taxes imposed through this new Rule. 87-1

We are very concerned about the potential negative impacts on the warehousing/logistics sector by the South Coast Air Quality Management District. We are reaching out to you today to encourage you to reconsider the implementation of Rule 2305. Although we are also concerned with improving the air quality in Southern California, this Rule could deeply hurt our business and effectively our employees. 87-2

In consideration of this, we believe this proposed rule is outside the authority of the local air district and it is not mission driven as it has no sunset date. Furthermore, it is poorly written, fails to understand the dynamics of the goods movement sector, and includes an arbitrary menu of options and credits. Furthermore, the rule has questionable projections on any actual emission reductions it will achieve. Additionally, it will impose significant administrative and mitigation expenses. As written, this rule is in essence a tax on the warehousing sector. 87-3 87-4 87-5 87-6 87-7

While we understand Rule 2305 is well intended, we believe it will cause significant harm to our business for the reasons mentioned above. As such, we respectfully request that you oppose Rule 2305, as the potential damages to our business, and businesses like ours, across Southern California could be economically devastating, particularly when considering the financial hardships many business owners are already experiencing due to COVID-19 related closures, delays and ordinances. 87-8

Thank you in advance for your time and consideration.

Signed:

Shaghal Ltd 2034 E 27th St Unit A&B Vernon, CA 90058

1-800-PACK-RAT | zippyshell

Moving & Storage Made Simple

April 9, 2021

Chair William Burke and Governing Board Members
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178

Re: **OPPOSITION TO PROPOSED RULE 2305 (WAREHOUSE INDIRECT SOURCE RULE)**

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Thank you in advance for your time and consideration.

Signed:

Mark Linville
Chief Financial Officer

1800packrat.com
zippyshell.com

800-722-5728
888-947-7974

1-800-PACK-RAT, LLC | Zippy Shell, Inc
11640 Northpark Drive, Suite 300 Wake Forest, NC 27587

Victor Juan

From: Clerk of Board
Sent: Wednesday, April 7, 2021 2:37 PM
To: Carole Wayman; Faye Thomas
Subject: FW: Rule 2305: We OPPOSE the Warehouse Indirect Source Rule

Follow Up Flag: Follow up
Flag Status: Flagged

From: Bob Khalsa [mailto:myvoice@oneclickpolitics.com]
Sent: Wednesday, April 7, 2021 1:23 PM
To: Clerk of Board <Front_PC@aqmd.gov>
Subject: Rule 2305: We OPPOSE the Warehouse Indirect Source Rule

Re: Rule 2305: We OPPOSE the Warehouse Indirect Source Rule

Dear Members of the AQMD Board:,

I am writing to you to express my opposition to the adoption of Rule 2305 Indirect Source Rule). 89-1

Warehouses are integral to the Southern California logistics industry. The District's proposed ISR is a misguided policy during the COVID-19 pandemic. The District is pursuing a regulation targeting a sector that serves as a lifeline to our region and the nation and is deemed essential by federal and state governments. 89-2

The following reasons highlight our primary concerns with the rule:

1. This rule will impose additional/permanent costs on warehouses that could range in the millions of dollars – which will be passed onto consumers, employees, businesses and elsewhere. The logistics industry in complex and tied to many different industries – the costs associated with this rule will have a ripple effect in the system. 89-3

2. The ISR requires warehouses to control what types of trucks make up their fleet or what types of trucks come to their warehouses – which is not feasible. The trucks the SCAQMD is asking warehouses to purchase are not in existence nor can warehouses control what trucks come to their facilities. 89-4

3. The approximately 18 million people who live in Southern California rely on warehouses as an integral part of the goods movement system to get them the items they need to survive, like food, medical supplies, clothes etc. 89-5

4. Warehouses provide a broad range of jobs for people of every level of education and skillset. Warehouses and the logistics industry offer jobs that lead to upward ability. This job creation is a socioeconomic benefit that the proposed ISR's onerous costs would threaten. 89-6

5. Proposition 26 specifically states that governing bodies can only impose a "fee" on a business if that owner will receive a direct benefit from it. Otherwise, it MUST be considered a tax. We strongly believe that the "mitigation fee" associated with this rule is a tax that should be brought before voters. 89-7

6. It is unclear how many emissions will actually be reduced as a result of this rule. We believe the district is imposing a burdensome regulation with high costs with little to show for it. This is not how regulations should be adopted. 89-8

For these reasons, and more, I OPPOSE Indirect Source Rules.

Sincerely,
Bob Khalsa
bobfoxbat@gmail.com
22916 Lyons Ave, Ste 1A Newhall, CA 91321 Constituent

Prepared by OneClickPolitics (tm) at www.oneclickpolitics.com. OneClickPolitics provides online communications tools for supporters of a cause, issue, organization or association to contact their elected officials. For more information regarding our policies and services, please contact info@oneclickpolitics.com

April 9, 2021

Chair William Burke and Governing Board Members
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178

Re: **OPPOSITION TO PROPOSED RULE 2305 (WAREHOUSE INDIRECT SOURCE RULE)**

Dear Mr. Burke and Governing Board Members,

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We are very concerned about the potential negative impacts on the warehousing/logistics sector by the South Coast Air Quality Management District. We are reaching out to you today to encourage you to reconsider the implementation of Rule 2305. Although we are also concerned with improving the air quality in Southern California, this Rule could deeply hurt our business and effectively our employees. 90-2

In consideration of this, we believe this proposed rule is outside the authority of the local air district and it is not mission driven as it has no sunset date. Furthermore, it is poorly written, fails to understand the dynamics of the goods movement sector, and includes an arbitrary menu of options and credits. Furthermore, the rule has questionable projections on any actual emission reductions it will achieve. Additionally, it will impose significant administrative and mitigation expenses. As written, this rule is in essence a tax on the warehousing sector. 90-3 90-4 90-5 90-6 90-7

While we understand Rule 2305 is well intended, we believe it will cause significant harm to our business for the reasons mentioned above. As such, we respectfully request that you oppose Rule 2305, as the potential damages to our business, and businesses like ours, across Southern California could be economically devastating, particularly when considering the financial hardships many business owners are already experiencing due to COVID-19 related closures, delays and ordinances. 90-8

Thank you in advance for your time and consideration.

Signed:

Signature

4/9/21
Date

DocuSign Envelope ID: 10DD359F-CA4C-47CE-A651-94B9B8027D71

April ___, 2021

Chair William Burke and Governing Board Members
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178

Re: **OPPOSITION TO PROPOSED RULE 2305 (WAREHOUSE INDIRECT SOURCE RULE)**

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While we understand Rule 2305 is well intended, we believe it will cause significant harm to our business for the reasons mentioned above. As such, we respectfully request that you oppose Rule 2305, as the potential damages to our business, and businesses like ours, across Southern California could be economically devastating, particularly when considering the financial hardships many business owners are already experiencing due to COVID-19 related closures, delays and ordinances. 91-4

Thank you in advance for your time and consideration.

Signed:

DocuSigned by:
Michael Bonino
8231C1314A1343C...
Signature

hree Way Logistics, Inc.

4/9/2021
Date

SVF Flow Controls

April 9, 2021

Chair William Burke and Governing Board Members
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178

Re: **OPPOSITION TO PROPOSED RULE 2305 (WAREHOUSE INDIRECT SOURCE RULE)**

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In consideration of this, we believe this proposed rule is outside the authority of the local air district and it is not mission driven as it has no sunset date. Furthermore, it is poorly written, fails to understand the dynamics of the goods movement sector, and includes an arbitrary menu of options and credits. Furthermore, the rule has questionable projections on any actual emission reductions it will achieve. Additionally, it will impose significant administrative and mitigation expenses. As written, this rule is in essence a tax on the warehousing sector. 92-3 92-4 92-5 92-6 92-7

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Thank you in advance for your time and consideration.

Signed: *Wayne Ulanski*

Regards
Wayne
Wayne Ulanski, President
SVF Flow Controls

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April 14, 2021

Mr. Victor Juan, Program Supervisor
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765

Subject: Opposition to Proposed Rule 2305 (Warehouse Indirect Source Rule)

Dear Mr. Juan:

I am writing to express WestRock's opposition to the South Coast Air Quality Management District's, SCAQMD) Proposed Rule 2305. We operate three warehouses within the district located in La Mirada, Fontana, and Montebello that would be subject to the rule. As currently written, the rule would likely increase operating costs on our three warehouses by nearly one-million dollars annually. In total, these warehouse operations exceed 865,000 square feet and serve as a vital part of WestRock's supply chain which is integral to delivering essential, sustainable paper and packaging products to our customers. 93-1

WestRock is a global manufacturer of sustainable paper and packaging products with approximately 50,000 team members across more than 300 manufacturing facilities, design centers, research labs and sales offices throughout the world. In California, we employ 1,308 people across 15 facilities with a payroll exceeding $184 million. We pay $13.3 million in taxes annually and invest over $614 million through our supply chain network. Our essential products are used to ship and package food, beverages, health care, pharmaceutical, personal hygiene care, disinfectant products and other basic household supplies. As you know, the paper packaging industry was designated by the U.S. Department of Homeland Security's Cybersecurity and Infrastructure Security Agency as an essential critical infrastructure sector as part of the administration's Covid-19 response. 93-2

WestRock appreciates SCAQMD's efforts to reduce local and regional emissions and as one of North America's largest paper recyclers, WestRock has a long-standing commitment to innovation, environmental stewardship and sustainable business practices – they serve as the fiber of our company. However, Proposed Rule 2305, fails to consider the reality of the obligations requiring us, as warehouse operators, to shoulder the responsibility of reducing trucking emissions from which we have no control. Our business contracts with several trucking companies who utilize different models and configurations. We do not own these trucks and cannot control how these trucking companies operate their business. 93-3

WestRock looks forward to further discussions on this matter and commits to working with SCAQMD to advance our shared vision and environmental goals. 93-4

Respectfully,

Jeff Chalovich
Chief Commercial Officer and President
Corrugated Packaging

Jeff.Chalovich@WestRock.com | www.westrock.com

cc: Governing Board Members

CALIFORNIA HYDROGEN BUSINESS COUNCIL

Hydrogen Means Business in California!

18847 Via Sereno
Yorba Linda, CA 92886
Phone: (310) 455-6095 | Fax: (202) 223-5537
info@californiahydrogen.org | www.californiahydrogen.org

April 15, 2021

Board of Directors
South Coast AQMD
21865 Copley Dr.
Diamond Bar, CA 91765

RE: CHBC Comments on Proposed Rule 2305 - Warehouse Indirect Source Rule

Dear Mr. Chairman and Members of the Board:

The California Hydrogen Business Council (CHBC)[1] appreciates the opportunity to comment on the SCAQMD's proposed Rule 2305 - Warehouse Indirect Source Rule (ISR).

94-1

The CHBC **supports** the proposed warehouse ISR rule and urges the Board to adopt the **most stringent alternative**. CHBC suggests a few changes to improve the effectiveness of the rule, discussed below.

The CHBC agrees with those in the environmental and EJ communities who have commented extensively about the health imperatives of a strong ISR rule. Indeed, the modern fuel cell industry was born out of the need to reduce air pollution in transportation and electricity production.

94-2

From a business standpoint, we believe that the proposed ISR sends a strong message to businesses around the world to invest in California, invest in reducing emissions in South Coast, and invest in improving zero-emission technology. And with that investment, to create jobs.

94-3

Towards those ends, the CHBC asks that the WAIRE menu be slightly modified to **remove** the one item that provides no emission reductions, nor provides infrastructure or support in any way for emission reductions - that item is indoor **air filtration**.

94-4

The CHBC believes that a SIP measure, like the ISR rule, must ensure that every element to meet emission reduction requirements do just that - reduce emissions. This is both a policy imperative and a federal requirement.

Only actual emission reductions or infrastructure that enables emissions reductions should generate credit toward compliance. SIP measures cannot provide emission reduction credit for masks or filtration. That is why the CHBC believes that allowing compliance credit in the WAIRE menu for installing air filtration is inappropriate. Every menu selection MUST reduce emissions or provide infrastructure support for emission reductions.

94-5

[1] The CHBC is comprised of over 100 companies and agencies involved in the business of hydrogen. Our mission is to advance the commercialization of hydrogen in the energy sector, including transportation, goods movement, and stationary power systems, to reduce emissions and dependence on oil**. The views expressed in these comments are those of the CHBC, and do not necessarily reflect the views of all of the individual CHBC member companies.** CHBC Members are listed here: https://www.californiahydrogen.org/aboutus/chbc-members/

The CHBC suggests other funding sources, like penalty dollars, are more appropriate for mitigation measures like air filtration at schools. 94-6

Secondly, CHBC recommends that the District provide **WAIRE points** for **onsite hydrogen generation**. For hydrogen use, part of the infrastructure piece is hydrogen supply. Indeed, in the last several years, drivers of hydrogen cell vehicles have seen what happens as production facilities go down for several reasons. The Governor's Office of Business and Economic Development (GO-Biz), for example, sees the resiliency and reliability of hydrogen supply to be of critical importance in addressing hydrogen infrastructure needs. Therefore, CHBC believes that providing WAIRE points for onsite hydrogen production is just as important as any of the other WAIRE menu infrastructure items. 94-7

Lastly, the CHBC wants to acknowledge the impressive work that went into developing this rule, and in particular, the creativity, and even brilliance by Ian MacMillan and the team that worked on proposed Rule 2305. 94-8

This rule may be the most important adopted by the District since the basin power plants were required to burn natural gas instead of fuel oil. 94-9

Implementation of the rule will certainly provide some challenges, and our industry can and will meet that challenge.

Sincerely,

William "Bill" Zobel
Executive Director
California Hydrogen Business Council

NAIOP
COMMERCIAL REAL ESTATE DEVELOPMENT ASSOCIATION
SoCAL CHAPTER

NAIOP
COMMERCIAL REAL ESTATE DEVELOPMENT ASSOCIATION
INLAND EMPIRE CHAPTER

April 15, 2021

Ian MacMillan, Assistant Deputy Executive Officer
Victor Juan, Program Supervisor
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765 Sent via Email

Re: Response to Comment Letters on Draft Rule 2305 and Draft Staff Report

Dear Mr. MacMillan and Mr. Juan:

As you are aware, the NAIOP oCal and Inland Empire Chapters on March 2, 2021, transmitted a joint comment letter to the SCAQMD regarding PR 2305 and the Draft Staff Report, and, on our behalf, Ramboll highlighted technical concerns. Although comments can be made up to the time of the actual hearing on the rule, we did submit our comments early to accommodate the SCAQMD taff request to do so. You also received letters from CalTax, and Holland & Knight which raised numerus other important issues that are vital to a full analysis of the rule. 95-1

Other than a brief, general overview presentation to the Mobile ource Committee, no responses to those comments have been received to date. We noted in the Second Draft Staff report that there were detailed responses to some prior comment letters, but not those sent in March. We appreciate that the March and subsequent comment letters regarding PR 2305 have been posted on the website, but that site also does not contain any responses to the comment letters. 95-2

We believe the serious issues raised in the NAIOP and other three letters should receive the same type of detailed response as was done in the Second Draft Staff report. That type of analysis is necessary to provide not only us, but the public and the Governing Board with the type of information needed to fully evaluate and intelligently analyze PR 2305. 95-3

Please advise us when we will receive the responses to the comments and we look forward to their receipt. 95-4

incerely,

Timothy Jemal
CEO, NAIOP SoCal

Robert Evans
Executive Director, NAIOP Inland Empire

Cc: Governing Board Members

NAIOP SoCal 2021 OFFICERS AND BOARD OF DIRECTORS

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Corporate Representative
Kim Snyder, Prologis

PAST PRESIDENT
Steve Haston, Lee & Associates - Ontario

April 16, 2021

Chair Burke and Members of the Mobile Source Committee
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: Item No. 1 – Supporting adoption and strengthening of Warehouse Indirect Source Rule (Proposed Rules 2305 and 316)

Dear Chair Burke and Members of the Mobile Source Committee:

On behalf of the undersigned coalition of community and environmental organizations, we submit these comments in support of the warehouse indirect source rule with requests to adopt a strengthened rule. The Governing Board's adoption of Proposed Rules 2305 and 316 on May 7, 2021 will be the culmination of *six years* of agency work on a warehouse rule that will achieve necessary emissions reductions in the region. Together with the Air District's staff, we have spent thousands of hours participating in the process to develop a warehouse rule that is fair, inherently flexible, legally sound, and, importantly, long overdue. The Air District is required to use its legal and regulatory authority to deliver on its promise made years ago to adopt a warehouse facility-based measure that addresses "high-level, localized concentrations of pollutants" throughout the South Coast air basin.[1] Communities in the South Coast—who continue to suffer increasingly high levels of pollution from the freight industry every day—cannot afford any further delay. 96-1

[1] Health & Saf. Code, § 40440(b)(3 .

Indeed, the warehouse industry has placed an unsustainable health burden on our neighborhoods and on current and future generations of children, pregnant mothers, and our elders and families for far too long. The Second Draft Socioeconomic Impact Assessment for the rule confirms that communities living within a half mile of a warehouse shoulder disproportionate harms, ranking in the 85th percentile of pollution burden statewide, in stark contrast to the rest of the region.[2] These communities also experience asthma and heart attack rates at much higher levels than the rest of the air basin.[3] And it is no coincidence that warehouse facilities continue to be overwhelmingly sited in low-income communities and communities of color—in fact, nearly *70 percent* of warehouse-adjacent communities in the South Coast are made up of people of color, and nearly 50 percent experience poverty.[4] The warehouse indirect source rule will provide effective and meaningful regulation of an industry that has prioritized its profits over our health time and time again. The public health benefits of the rule are significant, resulting "in 150 to 300 fewer deaths, 2,500 to 5,800 fewer asthma attacks, and 9,000 to 20,000 fewer work [days missed due to air pollution] from 2022-2031. Expected total discounted monetized public health benefits range from $1.2 to $2.7 billion over the compliance period."[5] 96-2

Industry continues its last minute and misleading opposition effort to this important, lifesaving rule. And these tactics come at a time when this industry, unlike many others, is thriving financially and expanding. The warehousing industry is now enjoying exploding profit levels as consumers increasingly rely on e-commerce during the COVID-19 pandemic.[6] Even as the pandemic has devastated our communities and continued to exacerbate the health inequalities of how poor air quality harms our communities, those with ownership stakes in the freight system are "raking in all the chips in the changing landscape brought on by the coronavirus crisis."[7] Fulfilling the promises the Air District made to advance a mandatory warehouse regulation is critical given the massive expansion of the industry. 96-3

Although industry representatives continue to push "near-zero" technologies in the rule, near-zero is often used as code for further investment in natural gas infrastructure that will perpetuate harm in frontline communities and keep the South Coast locked in the past. The final rule must prioritize zero-emissions investments, the only solution that will effectively address the air quality and health impacts caused by this industry. The final rule must also increase the proposed stringency to 0.005 WAIRE Points per WATT in order to achieve greater emissions 96-4

---

[2] South Coast Air Quality Management District, Second Draft Socioeconomic Impact Assessment for Proposed Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program and Proposed Rule 316 – Fees for Rule 2305 (Apr. 2021), at ES-2.

[3] *Id.*

[4] *Id.* at 5.

[5] *Id.* at ES-9.

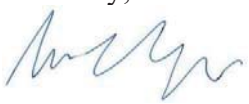
[6] *See* Justin Ho, *As imports boom, warehouses fill up, and businesses face a storage shortage*, Marketplace (Oct. 1, 2020).

[7] Greg Cornfield, *Southern California industrial real estate market: What to know for 2021*, Commercial Observer (Feb. 3, 2021).

reductions and provide immediate relief to communities living near regulated facilities. 96-4 (cont'd)

We appreciate your consideration of these comments, and the Air District staff's hard work on this critical regulation. We look forward to working together to help our region finally achieve clean air by bringing this rule over the finish line on May 7th. 96-5

Sincerely,



Michelle Ghafar
Regina Hsu
Adrian Martinez
Earthjustice

Sari Fordham
350 Riverside

Dean Toji
Environmental Justice Committee
Asian Pacific Policy & Planning Council

Mike Young
California League of Conservation Voters

Alma Marquez
Center for Community Action & Environmental Justice

Jesse Marquez
Coalition for a Safe Environment

Taylor Thomas
East Yard Communities for Environmental Justice

Sylvia Betancourt
Long Beach Alliance for Children with Asthma

Yasmine Agelidis
Los Angeles County Electric Truck & Bus Coalition

Heather Kryczka
Natural Resources Defense Council

Andrea Vidaurre
People's Collective for Environmental Justice

Susan A. Phillips
Robert Redford Conservancy for Southern California Sustainability
Pitzer College

Peter M. Warren
San Pedro & Peninsula Homeowners Coalition

Carlo De La Cruz
Sierra Club

Elliot Gonzales
Stop Fracking Long Beach

Joyce Xi
Union of Concerned Scientists

Sheheryar Kaoosji
Warehouse Worker Resource Center

cc:
Wayne Nastri
Executive Officer
South Coast Air Quality Management District
wnastri@aqmd.gov

Sarah Rees
Deputy Executive Officer
Planning, Rule Development & Area Sources
srees@aqmd.gov

Ian MacMillan
Planning and Rules Manager
South Coast Air Quality Management District
imacmillan@aqmd.gov

Victor Juan
Program Supervisor
South Coast Air Quality Management District
vjuan@aqmd.gov

From: Jacob Ruiz <jacobpruiz@gmail.com>
Sent: Thursday, April 15, 2021 7:40 PM
To: Angela Kim <akim@aqmd.gov>
Subject: Indirect Source Rule

Hello,

My name is Jacob and I am a concerned resident of Los Angeles. I can't make the public comment call tomorrow so I am emailing you today to urge the air district board to please support and consider a rule to regulate pollution from indirect sources. The warehouse indirect source rule has been pushed back and delayed for months, even though my community feels the effects of goods movement like truck traffic and warehouse operations around the clock, even through COVID 19. 97-1

This summer we had over 100 unhealthy air days for smog in the South Coast Region. The air district must be proactive in ensuring industry polluters are held accountable for their historical environmental damage to our communities. The South Coast Air Basin is home to some of the worst air pollution in the country, primarily caused by emissions from warehouses and the goods movement industry and you have the power to positively affect hundreds of thousands of lives.

Please rule on a strong ISR!

Thanks,

Jacob Ruiz

From: Shannon Labuschagne <labuschagne.shannon@gmail.com>
Sent: Friday, April 16, 2021 11:02 AM
To: Angela Kim <akim@aqmd.gov>
Subject: [EXTERNAL]Public comment

Hello,

I am emailing in my public comment. I would have given this comment in person, however, due to technical difficulties I was unable to remain on the call. Below is my comment concerning the Indirect Source Rule:

My name is Shannon and I'm a Los Angeles resident. I'm commenting today to voice my support for a strong indirect source rule and urge the board to do the same. I feel that the delay or dilution of the rule is something we cannot afford. We need an indirect source rule in its strongest form and application to help electrify warehouses, keep polluting trucks out of our communities, and address our incredibly serious air quality problems.

98-1

Since corporate factories are not people, they do not have to live through and experience the burdens of their pollutants. This burden is instead handed down to communities, disproportionally communities of colour, who have to live with the negative health impacts of factory transport pollution. Because of this, industries working in our city and in our community must be held responsible for their pollutants through regulation that improves accountability and transparency, placing a sense of urgency on industries to decrease pollution.

A strong indirect source rule will be a step in the right direction to achieving this. I urge the support and commitment of your office to this end.

Thank you,
Shannon Labuschagne

From: Lime V. [mailto:Limeaboutsomething@outlook.com]
Sent: Thursday, April 15, 2021 7:05 PM
To: Clerk of Board
Subject: [EXTERNAL]Public Comment for the Mobile Source Committee Meeting

Good Morning,

My name is Amy Vasquez and I am concerned that community voices are falling on deaf ears. Many of us have to work, children to care for, homework to complete, and yet we have all made time to be here to fight for our basic needs as humans. Please open your ears, hearts, and minds in order to provide us all your undivided attention.

Clean air is a basic human need and we have been subjected to the pollution dirty warehouses bring to our community for too long. The warehouse industry is highly unregulated and the time to end prioritizing profits over our health is now. As members of South Coast AQMD you should all be utilizing your authority to use an indirect source rule to reduce/eliminate the pollution caused by warehouses. Your support of the Warehouse ISR is critical to improving the air quality and health in the region. We all know that realistically the promise of warehouse jobs is temporary, the jobs that are currently available are dangerous, low wage, and often do not include much needed benefits. Allowing warehouses to continue to conduct business as is you are condemning us all to living conditions where the only option is poor health. 99-1

Please support a strong indirect source rule for all of us.

Thank you,

Amy Vasquez

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April 7, 2021

Chair William Burke and Governing Board Members
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178

Re: **OPPOSITION TO PROPOSED RULE 2305 (WAREHOUSE INDIRECT SOURCE RULE)**

Dear Mr. Burke and Governing Board Members,

Currently, there are pending changes concerning air quality regulation that are due to be voted on by you. As a business that relies on affordable warehouse space, we are deeply concerned what potential impacts Rule 2305 will have to our operating expenses. If Rule 2305 passes it will result in increased property taxes and consequently, higher overhead operating expenses creating economic hardship in an already difficult economic climate. Currently in our lease, we as the Tenant, are responsible for any resulting increases in taxes imposed through this new Rule. 100-1

We are very concerned about the potential negative impacts on the warehousing/logistics sector by the South Coast Air Quality Management District. We are reaching out to you today to encourage you to reconsider the implementation of Rule 2305. Although we are also concerned with improving the air quality in Southern California, this Rule could deeply hurt our business and effectively our employees. 100-2

In consideration of this, we believe this proposed rule is outside the authority of the local air district and it is not mission driven as it has no sunset date. Furthermore, it is poorly written, fails to understand the dynamics of the goods movement sector, and includes an arbitrary menu of options and credits. Furthermore, the rule has questionable projections on any actual emission reductions it will achieve. Additionally, it will impose significant administrative and mitigation expenses. As written, this rule is in essence a tax on the warehousing sector. 100-3

While we understand Rule 2305 is well intended, we believe it will cause significant harm to our business for the reasons mentioned above. As such, we respectfully request that you oppose Rule 2305, as the potential damages to our business, and businesses like ours, across Southern California could be economically devastating, particularly when considering the financial hardships many business owners are already experiencing due to COVID-19 related closures, delays and ordinances. 100-4

Thank you in advance for your time and consideration.

Signed:

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April 21, 2021

Wayne Nastri
Executive Officer
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765
wnastri@aqmd.gov

Dear Mr. Nastri:

This letter is in response to the Warehouse Indirect Source Rule (Proposed Rule 2305) and Fees for Rule 2305 (Proposed Rule 316). 101-1

Diesel pollution generated by transporting freight or cargo in the State continues to be the biggest contributor to the air toxics and criteria pollutants that affect everyone's quality of life. Communities near warehouses experience higher exposure to air pollution due to cumulative emissions from sources such as trucks, transport refrigeration units, and other freight equipment. The greater air pollution burden in these communities result in increased cases of asthma, hospitalizations, cancer, and even premature death related to heart and lung disease. Strategies for near-term emission reductions from freight facilities, such as the ones proposed in this rule, are especially needed to address the levels of ozone, and particulate matter that exceed National Ambient Air Quality Standards. Complementary mitigation strategies are needed at both the State and regional level to provide healthy air and to meet the 2023 and 2031 attainment deadlines. These strategies include the 2020 Mobile Source Strategy and Indirect Source Rules from air districts. The California Air Resources Board (CARB) supports the Draft Warehouse Indirect Source Rule (PR 2305) and Fees for Rule 2305 (PR 316) proposed by the South Coast Air Quality Management District (SCAQMD). The Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program, created by these rules, represents an important action in addressing the region's air quality issues and minimizing the public health impacts that warehouse activities have on nearby communities that are disproportionately burdened by air pollution. CARB appreciates the hard work that SCAQMD put into developing the WAIRE Program. The WAIRE Program will be vital to protecting public health. 101-2 101-3

SCAQMD has clear authority under federal and California law to enact the WAIRE Program. The federal Clean Air Act explicitly permits any state to include an indirect source review program in its State Implementation Plan (SIP), 42 U.S.C. § 7410(a)(5)(A), and simply emphasizes that the United States Environmental Protection Agency (U.S. EPA) may not require a state to submit an indirect source review plan, even on new and modified facilities, see 42 U.S.C. § 7410(a)(5)(C). The indirect source review program is not limited to new or modified sources; rather it includes them, see 42 U.S.C. § 7410(a)(5)(D). Indirect source is broadly defined as any "facility, building, structure, installation, real property, road, or highway which attracts, or may attract, mobile sources of pollution," and regulation of such 101-4

sources is appropriate to meet key public health standards. *See* 42 U.S.C. § 7410(a)(5)(C)&(D). Indeed, a commitment to create such programs is a key part of the Air Quality Management Plan SCAQMD is using to attain federal air standards. This commitment needs to be put in place to comply with federal law. 101-5

As a State law matter, moreover, Air Districts have sweeping authority and obligations to regulate "air pollution from all sources" other than vehicles, and "shall adopt and enforce rules and regulations to achieve and maintain" air quality standards. Health & Safety Code § 40000 & 40001. The federal Clean Air Act operates as a floor, not a ceiling, on State authority, meaning that this sweeping State law authority fills in any gaps that might exist under federal law. *See* 42 U.S.C. § 7416. The federal Clean Air Act neither preempts nor limits State authority to impose an indirect source review program on new, modified, or existing sources. Finally, California law explicitly permits Air Districts, including SCAQMD, to impose indirect source requirements such as the requirements that the district proposes here (Health & Safety Code §§ 40717.5, 40716). This includes fee authority (Health & Safety Code §§ 40522.5, 42311). 101-6

The WAIRE Program offers multiple pathways to accelerate the deployment of clean technologies, including the purchase of zero-emission heavy-duty vehicles and heavy-duty vehicles that will be significantly cleaner than existing heavy-duty vehicles. CARB's Advanced Clean Trucks and Low Oxides of Nitrogen (NOx) Omnibus regulations will require new 2024 and subsequent model heavy-duty vehicles that are sold in California to demonstrate compliance with increasingly stringent emission standards. The WAIRE Program encourages the purchase and use of such vehicles in the South Coast air basin, which would result in lower emissions in the basin, without increasing the number of new vehicles that must be offered for sale under CARB's regulations. 101-7

CARB supports the immediate adoption of the WAIRE Program and sees it as an important step to protect people throughout the region with an emphasis on nearby communities. Given the rapid advancement in clean technologies, we believe there are opportunities to strengthen the rule in the future. Although the proposed WAIRE Program requirements include many options to accelerate the deployment of cleaner technologies throughout the region, the proposed rules should be further strengthened in the future in order to maximize near-term emissions reductions through the deployment of zero-emission vehicles and build out supporting zero-emission infrastructure. A major strength of the rule is that it allows for a diverse set of actions that warehouse owners/operators can take to meet their compliance obligation. However, a more focused emphasis on deployment of zero-emission technologies is crucial in meeting public health commitments to communities in your region. Below we identify some opportunities for strengthening the rule in the future and anticipate further options will become available given the rapid emergence of commercial zero emission solutions: 101-8

- Placing an increased emphasis on utilization of zero-emission technologies over combustion alternatives is necessary to achieve air quality, toxic, and climate goals. 101-9
- Raising the stringency, to ensure facility compliance obligations are commensurate with the negative public health impacts these facilities have on nearby communities. 101-10

- Deploying zero-emission vehicles, equipment, and supporting fueling/charging infrastructure should be prioritized over other options that would not directly reduce emissions produced at facilities. 101-11
- Decreasing the threshold for facility size would require smaller facilities to comply with this rule, which would help reduce the cumulative impacts and exposure. 101-12

Integrating an implementation review to account for the accelerated commercialization of zero-emission technologies and increased infrastructure deployment over time. As CARB and SCAQMD continue their longstanding partnership in protecting communities throughout the South Coast Air Basin, we encourage you to remain steadfast in working to achieve the goal of clean air for all. Developing an indirect source rule like this is very challenging, and I applaud the SCAQMD for developing an ambitious program that guarantees public health improvements that will be felt by local communities. CARB stands by to support you in this endeavor, and look forward to the implementation of the WAIRE Program. 101-13

Sincerely,



Richard W. Corey, Executive Officer

cc: Sarah L. Rees, Ph.D., Assistant Deputy Executive Officer, South Coast Air Quality Management District
srees@aqmd.gov

Ian MacMillan, Planning and Rules Manager, South Coast Air Quality Management District
imacmillan@aqmd.gov

Victor Juan, Program Supervisor, South Coast Air Quality Management District
vjuan@aqmd.gov

April 9, 2021

Chair William Burke and Governing Board Members
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178

Re: OPPOSITION TO PROPOSED RULE 2305 (WAREHOUSE INDIRECT SOURCE RULE)

Dear Mr. Burke and Governing Board Members,

Currently, there are pending changes concerning air quality regulation that are due to be voted on by you. As a business that relies on affordable warehouse space, we are deeply concerned what potential impacts Rule 2305 will have to our operating expenses. If Rule 2305 passes it will result in increased property taxes and consequently, higher overhead operating expenses creating economic hardship in an already difficult economic climate. Currently in our lease, we as the Tenant, are responsible for any resulting increases in taxes imposed through this new Rule. 102-1

We are very concerned about the potential negative impacts on the warehousing/logistics sector by the South Coast Air Quality Management District. We are reaching out to you today to encourage you to reconsider the implementation of Rule 2305. Although we are also concerned with improving the air quality in Southern California, this Rule could deeply hurt our business and effectively our employees. 102-2

In consideration of this, we believe this proposed rule is outside the authority of the local air district and it is not mission driven as it has no sunset date. Furthermore, it is poorly written, fails to understand the dynamics of the goods movement sector, and includes an arbitrary menu of options and credits. Furthermore, the rule has questionable projections on any actual emission reductions it will achieve. Additionally, it will impose significant administrative and mitigation expenses. As written, this rule is in essence a tax on the warehousing sector. 102-3

While we understand Rule 2305 is well intended, we believe it will cause significant harm to our business for the reasons mentioned above. As such, we respectfully request that you oppose Rule 2305, as the potential damages to our business, and businesses like ours, across Southern California could be economically devastating, particularly when considering the financial hardships many business owners are already experiencing due to COVID-19 related closures, delays and ordinances. 102-4

Thank you in advance for your time and consideration.

Sincerely,

Mark Ahlers
Engineering Manager
Paige Electric Co. L.P.
16110 Manning Way
Cerritos, CA 90703

April 9, 2021

Chair William Burke and Governing Board Members
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178

Re: **OPPOSITION TO PROPOSED RULE 2305 (WAREHOUSE INDIRECT SOURCE RULE)**

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Thank you in advance for your time and consideration.

Sincerely,

Bob Niedbalski

Bob Niedbalski
Executive Vice President
Paige Electric Co. L.P.
16110 Manning Way
Cerritos, CA 90703

April 9, 2021

Chair William Burke and Governing Board Members
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178

Re: **OPPOSITION TO PROPOSED RULE 2305 (WAREHOUSE INDIRECT SOURCE RULE)**

Dear Mr. Burke and Governing Board Members,

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Thank you in advance for your time and consideration.

Signed:

Signature

APRIL 9, 2021
Date

11620 Wilshire Blvd., Ste. 1000, Los Angeles, CA 90025

April 21, 2021

Mr. Ian MacMillan
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178

Re: Comments on Proposed Rule 2305

Dear Mr. MacMillan:

On behalf of over 56,000 members of the Southwest Regional Council of Carpenters, I write to respectfully request the board postpone, indefinitely, any adoption of Rule 2305 Indirect Source Rule or ISR in light of the current economic and public health crisis. The current language and timeline of Rule 2305 would add uncertainty to the market, and we respectfully request that more analysis be given to its economic impact, particularly on construction. The construction and maintenance of warehouse facilities provide vital, good paying careers to more than 3,000 local union Carpenters. These careers provide great wages, health benefits, and retirement security and allow our members to work closer to home, be impactful members of the community and provide for their families. This rule will directly affect the economic security of thousands of households and create even further uncertainty during this already uncertain time. 105-1

While we strongly support a just transition to a clean energy economy, a policy change this broad and at this time would be destabilizing for the industry. The COVID-19 pandemic is a once-in-a-century event that has upended Southern California's economy and construction sector. The impacts of the pandemic have particular relevance to the warehouse industry as the growth in e-commerce has led to a surge in warehouse demand. This surge has been key in keeping Southern Californians working in this sector at a time when other areas of our country were not as fortunate. 105-2

We ask that the SCAQMD postpone this item indefinitely so that there can be further research done into the effects of such rule and its impact on the economy. A greater understanding of how this rule will have a ripple-effect on our region, especially the construction industry, is something that I would ask each board member to prioritize before considering passing Rule 2305. Thank you again for your consideration of this important issue. 105-3

Sincerely,

Daniel R. Langford

Daniel Langford
Executive Secretary-Treasurer
Southwest Regional Council of Carpenters

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Fax (317) 687-2414

GREGORY M. FEARY
MANAGING PARTNER
gfeary@scopelitis.com
Direct Dial: (317) 492-9223

SHANNON M. COHEN
scohen@scopelitis.com

PRASAD SHARMA
psharma@scopelitis.com

April 22, 2021

VIA EMAIL

Mr. Ryan Banuelos (rbanuelos@aqmd.gov)
Planning/CEQA
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Mr. Victor Juan (vjuan@aqmd.gov)
Planning, Rule Development and Area Sources
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

RE: Comments on Proposed Rule 2305 – Warehouse Indirect Source Rule – Warehouse Action and Investments to Reduce Emissions Program (WAIRE)

Dear Mr. Banuelos and Mr. Juan:

We appreciate the opportunity to submit comments on the South Coast Air Quality Management District's ("SCAQMD") Proposed Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investment to Reduce Emissions (WAIRE) Program (the "Proposed Rule"). Scopelitis, Garvin, Light, Hanson & Feary is the

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nation's leading transportation-focused law firm, and our clients include motor carriers, brokers, and warehouse operators that operate in interstate and intrastate commerce in California and nationwide and which regularly pick up from, and deliver to, warehouses in the SCAQMD. While we share many of the same concerns about the Proposed Rule expressed by the California Trucking Association, we specifically write to underscore the concern the Proposed Rule would be preempted under 49 U.S.C. § 14501.

Summary of the Rule As It Pertains to Trucking

106-1

Although the Proposed Rule applies directly to operators and owners of warehouses, SCAQMD has found that trucks delivering goods to and from warehouses contribute "[t]he majority of emissions associated with warehouses."[1] The Proposed Rule's purpose is to reduce local and regional NOx and PM emissions, and the Proposed Rule is founded on the premise that "[t]rucks delivering or picking up goods from a warehouse are a proxy for total activity and emissions related to a warehouse."[2] The premise is inextricably embedded in the calculation of a warehouse's WAIRE Points Compliance Obligation, which is determined, in part, by the number of truck trips to a facility in a given year.[3] Finally, the first two actions or investments listed in the Proposed Rule's menu for earning WAIRE points are: 1) the acquisition of zero emissions ("ZE")/near zero emissions ("NZE") trucks in a warehouse operator's fleet; and 2) the number of ZE/NZE truck visits.[4]

The Proposed Rule Would Likely Be Preempted Under 49 U.S.C. § 14501

As part of its deregulation of the trucking industry, Congress enacted a provision in the Federal Aviation Administration Authorization Act of 1994 ("FAAAA") to "pre-

[1] Victor Juan *et al*., Second Draft Staff Report ("Report"), Proposed Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program and Proposed Rule 316 – Fees for Rule 2305, April 2021, at 6. The Report also notes that up to 40% of warehouse operators may also be motor carriers, operate a fleet of trucks. *Id*. at 44, n. 64.

[2] *Id*. at 35.

[3] Proposed Rule, § (d).

[4] *Id*. at Table 3.

empt state trucking regulation."[5] Modeled on deregulatory legislation enacted for the aviation industry, Congress provided that "[A] State … may not enact or enforce a law, regulation or other provision … related to a price, route, or service of any motor carrier … with respect to the transportation of property."[6] As with the Maine law impacting delivery services in *Rowe*, the Proposed Rule would likely be preempted. 106-1

The Court has held that under the FAAAA: 1) a state law is preempted if it has a connection with or reference to motor carrier prices, routes, or services; 2) preemption can occur even if the state law's effect is only indirect; 3) it makes no difference whether the state law is consistent or inconsistent with federal laws; and 4) preemption occurs, at least, where a state law has a significant impact on Congress's deregulatory and preemption-related objectives.[7] The Proposed Rule meets this criteria.

In *Rowe*, the Court struck down a Maine law that required tobacco retailers to use delivery services that followed particular delivery procedures. While the Court "concede[d] that the regulation here is less 'direct' than it might be, for it tells *shippers* what to choose rather than *carriers* what to do," the Court still found that the law created a connection with motor carrier services, because those services made up a substantial portion of all delivery services.[8] The Proposed Rule similarly recognizes truck deliveries are a substantial portion of the emissions to be curtailed and the first two options for earning WAIRE points either (i) regulates warehouse operators in their capacity as fleet operators (i.e., motor carriers) or (ii) tells warehouse operators to choose motor carriers that utilize ZE/NZE vehicles.[9] In either instance, the result is the regulation dictating that motor carriers provide their services using equipment that "differ[s] significantly from [otherwise lawful equipment] that, in the absence of

[5] *Rowe v. New Hampshire Motor Transport Ass'n*, 552 U.S. 364, 368 (2008).

[6] 49 U.S.C. § 14501(c)(1).

[7] *Rowe*, 552 U.S. at 370-71 (citing *Morales v. Trans World Airlines, Inc.*, 504 U.S. 374 (1992) (internal quotation marks omitted)).

[8] *Id*. at 371-72.

[9] In neither instance is the Proposed Rule a generally applicable law, because it does not affect motor carriers "solely in their capacity as members of the general public." *Id*. at 375.

the regulation, the market might dictate."[10] Given Congress's overarching goal in passing the deregulatory provision was to "ensure transportation rates, routes, and services that reflect 'maximum reliance on competitive market forces,' thereby stimulating 'efficiency, innovation, and low prices,' as well as 'variety' and 'quality,'" the Proposed Rule would significantly frustrate Congress's objectives.[11] 106-1

What the Court's jurisprudence makes clear is that state law cannot require warehouses to do what the state cannot directly do itself. The Report anticipates that warehouse operators will contract with motor carriers to take into account the Proposed Rule by requiring ZE or NZE truck visits, resulting in a de facto requirement for motor carriers to use ZE or NZE trucks in lieu of trucks that are otherwise legally operable.[12] In addition to requiring the use of equipment that market forces do not currently support, the elevated cost of ZE and NZE trucks will undoubtedly cause motor carriers to increase prices in order to recoup the required additional investment. And although the Report recognizes that Class 8 trucks transporting goods to and from warehouses covered by the Proposed Rule can operate nationally,[13] there is no discussion about how a requirement for motor carriers to use ZE or NZE trucks will impact the motor carrier's national routes and networks in light of charging station scarcity and battery range restrictions. It is far too speculative to assume that interstate trucks will not be range-bound and/or subject to frequent service disruptions in order to re-charge trucks – precisely the type of state law impact on motor carrier routes and services that the FAAAA was intended to protect against. 106-2

SCAQMD cites the California Health and Safety Code as the statutory authority for the Proposed Rule. While we have no reason to doubt the Proposed Rule is being considered to further important public health and safety goals, there is no public health exception to FAAAA preemption.[14] If the Court could find no such exception 106-3

[10] *Id*. at 372.

[11] *Id*. at 370 (quoting *Morales*, 504 U.S. at 378).

[12] Report, at 45.

[13] *Id*. at 43.

[14] *Id*. at 375 ("The Act says nothing about a public health exception.")

for a law aimed to protect against sales of cigarettes to minors, it seems inconceivable the Court would find an exception here. 106-3

Conclusion

Thank you for the opportunity to express our concerns that the Proposed Rule, by indirectly regulating motor carriers, is likely preempted under federal law.

Very truly yours,

/s/ Gregory M. Feary
/s/ Shannon M. Cohen
/s/ Prasad Sharma

DCG Fulfillment

04/28/2021

Ian MacMillan
Victor Juan
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178
Sent Via Email: imacmillan@aqmd.gov / vjuan@aqmd.gov

Subject: Comments on Proposed Rule 2305 (Warehouse Indirect Source Rule)

Dear Mr. MacMillan:

DCG Fulfillment opposes the adoption of Rule 2305 (Indirect Source Rule). Warehouses such as ours are integral to the Southern California logistics industry. The logistics industry played a crucial role in the response to the COVID-19 pandemic—not only in the distribution of medical supplies, vaccines, and equipment but also in delivering goods to a public that has become increasingly dependent on e-commerce. We remained open during the pandemic ensuring the supply chain was not broken and provided an income to all our Employees despite the challenges and dramatically increased costs to our company to keep them safe during the pandemic. This financial burden has compounded the challenges companies such as ours are facing having worked to support our employees to the "living wage" of $15 per hour. This of course is a burden many of our competitors do not have to face as they reside in states outside of California. We love our state being life-long Employers in California and are not looking to be financially pushed out as our families all live here. However, we are not sure where these extra funds will be able to come from as we already work with very thin margins in our industry. 107-1

The District's proposed ISR seems to be a misguided policy during the COVID-19 pandemic. The District is pursuing a regulation targeting a sector that serves as a lifeline to our region and the nation and is deemed essential by federal and state governments. Under the current draft rule, reporting obligations begin only 60 days from rule adoption. The substantive WAIRE Points obligations will commence as soon as July 2021.

The following further comments are provided in response to the District's Proposed Rule 2305:

1. This rule would impose additional/permanent costs on warehouses of approximately $.90 per square foot. This extra cost would amount to targeting a specific essential industry with $1 billion in annual fees during the worst possible time and while responding to the pandemic's challenges on behalf of our nation. 107-2

2. It is not feasible to comply with the ISR due to the following:
   a) The proposed rule requires warehouses to control truck fleets and decrease truck emissions. Yet, we as warehouse operators are not able to accomplish this task.
   b) Our Warehouse has no control over how truck engines are manufactured.
   c) Our Warehouse does not own truck fleets, nor do we control what type of trucks shipping companies purchase.
   d) Our Warehouse does not control which trucks come to warehouses, when they arrive, where they come from, or any other variables related to truck trips.

107-3

3. The technology is not available to accomplish items on the WAIRE menu For example, there are no heavy-duty electric trucks available that are viable from a technology and/or economically reasonable standard.

107-4

4. Warehouses have been deemed to be essential businesses by the State for important reasons including:
   a) The approximately 18 million people who live in Southern California rely on warehouses as an integral part of the goods movement system to get them the items they need to survive, like food, medical supplies, clothes etc.

107-5

5. This rule creates tremendous uncertainty in the economy as the full negative impact of this ISR is not known.
   a) Uncertainty should not be created in this critical, essential business sector, especially considering the current economic downturn/unemployment crisis associated with the COVID-19 pandemic.

107-6

6 Warehouses provide a broad range of jobs for people of every level of education and skillset. Warehouses and the logistics industry offer jobs that lead to upward ability. This job creation is a socioeconomic benefit that the proposed ISR's onerous costs would threaten.

107-7

7. The proposed ISR seeks to "indirectly" regulate the trucking industry through the Warehouse industry. The District should publicly explain how it has the jurisdiction/authority to regulate a mobile source that is such an integral part of interstate commerce as the trucking industry.

107-8

Thank you for your attention to these comments. Please include these comments as part of the official record for Proposed Rule 2305 (Warehouse Indirect Source Rule) so that all SCAQMD Board Members may have the opportunity to review the above.

107-9

Respectfully,

Jim Jennison
Owner and CEO
DCG Fulfillment

Cc: Governing Board Members

April 23, 2021

Mr. Ian MacMillan
Mr. Victor Juan
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765-4178

Sent Via Email: imacmillan@aqmd.gov / vjuan@aqmd.gov

Subject: Comments on Proposed Rule 2305 Warehouse Indirect Source Rule

Dear Messrs. MacMillan and Juan,

Pactiv Evergreen has serious concerns regarding the adoption of Rule 2305 (Indirect Source Rule . This proposed rule would be extremely costly for our company to implement at our warehouse in San Bernardino. We do not own our trucking fleet, and the mitigation measures offered in the proposed rule are beyond our control and would not reduce the company's fee exposure. 108-1

Pactiv Evergreen is the largest manufacturer and distributor of food and beverage packaging in North America with a diversified mix of customers, including restaurants, foodservice distributors, supermarkets, food and beverage producers, food packers and processors. We have seven manufacturing and warehousing facilities throughout California with over 1,100 employees. **Our San Bernardino distribution center (DC is large enough to fall under this proposed rule.** This DC is used to distribute essential foodservice items across California, Nevada, Arizona, Utah, Oregon and Washington.

Pactiv Evergreen believes the District's proposed ISR is targeting a sector that has been deemed essential by federal and state governments and serves as a lifeline to the region and the nation. Under the current draft rule, reporting obligations begin only 60 days from rule adoption. The substantive WAIRE Points obligations will commence as soon as July 2021. 108-2

The threat of these potentially enormous fees and/or cost of mitigation measures will force us to consider other options, including potentially moving to a new location outside of the South Coast authority. 108-3

Additionally:

- Based on a calculation of ~$.90 per square foot, the District's Proposed Rule 2305 would impose additional annual costs on our warehouse of over three-quarters of a million dollars during the worst possible time and while responding to the pandemic's challenges on behalf of our nation. Beyond just our warehouse, we understand that this extra cost would equate to an estimated $1 billion each year for the all warehouses in the South Coast area. 108-4
- The proposed rule requires our warehouse to control truck fleets and decrease truck emissions. However, we do not own our truck fleet nor can we regulate what type of trucks our shipping companies purchase. We certainly do not have the power to mandate how truck engines are manufactured. Plus, we understand that "green" trucks are in short supply. 108-5

- The technology is not available to accomplish items on the WAIRE menu. There are no heavy-duty electric trucks that are viable from a technology and/or economically reasonable standard to service our DC. 108-6
- Warehouses are deemed essential businesses by the State for important reasons including distribution of essential goods across the region. 108-7
- This rule creates tremendous uncertainty for the company as the full negative impact of this ISR is not known. And, uncertainty should not be created in this critical, essential business sector, especially considering the current economic downturn/unemployment crisis associated with the COVID-19 pandemic. 108-8

Finally, it appears that the proposed ISR seeks to "indirectly" regulate our trucking service providers through the fees that would be collected from our warehouse/distribution center. We would like to know what authority the District has to regulate a mobile source that is such an integral part of interstate commerce as the trucking industry. 108-9

Thank you for your attention to these comments. Please include these comments as part of the official record for Proposed Rule 2305 (Warehouse Indirect Source Rule so that all SCAQMD Board Members may have the opportunity to review the above. 108-10

Respectfully,



Michael J. King
CEO

Cc: Governing Board Members

Averil M. Edwards
Managing Counsel – Environmental, Health Safety

April 23, 2021

Via Email

South Coast Air Quality Management District
Clerk of the Boards: cob@aqmd.gov
Mr. Victor Juan: vjuan@aqmd.gov

Re: United Airlines Comments on SCAQMD's Proposed Rules 2305 and 316 Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program & Associated Fees

Dear Mr. Juan:

United Airlines, Inc. United) appreciates the opportunity to submit comments regarding the South Coast Air Quality Management District (SCAQMD) Proposed Rule 2305, a warehouse indirect source rule. United previously submitted comments on March 2, 2021, to an earlier version of Proposed Rule 2305 dated January 15, 2021. In addition to its previously submitted comments, United would like to provide the following additional feedback to SCAQMD regarding Proposed Rule 2305. Airlines for America A4A) will also be submitting comments to SCAQMD on behalf of its members. United supports and incorporates by reference the A4A comments. 109-1

As indicated in our initial March 2 comment letter, United operates a cargo warehouse building at Los Angeles International Airport LAX), pursuant to a lease agreement with Los Angeles World Airports (LAWA). United's LAX warehouse building has 100,000 square feet of indoor floor space. It is currently used for cargo warehousing and other aviation activities by United Cargo and other United operational groups, and therefore would be subject to the Proposed Rule as currently drafted. The following sets forth the reasons why United does not believe that SCAQMD has the legal authority to promulgate this rule as it applies to airlines and existing warehouses.

1. The Clean Air Act's indirect source provision does not authorize the SCAQMD's regulation of existing warehouses and distribution centers.

The SCAQMD lacks the legal authority to adopt an indirect source rule for existing air cargo warehouses located at airports. The SCAQMD's Draft Staff Report prepared for the proposed rule relies upon CAA section 110(a)(5)(A)(i) as providing the authority for states to include indirect source review programs as part of their state implementation plans. However, CAA section 110(a) 5)(D) defines an "indirect source review program as "the facility-by-facility review of indirect sources of air pollution, including such measures as are necessary to assure, or assist in assuring, that a *new or modified* indirect source will not attract mobile sources of air pollution, the emissions from which would cause or contribute to air pollution concentrations." Emphasis added. 109-2

The CAA limits the scope of an indirect source emission control measure to only those directed at new or modified indirect sources. Proposed Rule 2305 violates the acceptable scope of an indirect source review program under the plain language of the CAA by imposing obligations on existing, as opposed to new or modified warehouses. The Draft Staff Report asserts that "the authority for air districts to set emission reduction targets from indirect sources was confirmed by the [Ninth Circuit] in *NAHB v. San Joaquin Valley UAPCD* (9th Cir. 2020) 627 F.3d 730." The SCAQMD's reliance on *NAHB* is misplaced. The rule at issue in *NAHB* involved the regulation of emissions from nonroad vehicles at facilities *undergoing construction*. Such facilities are inherently either new or modified as a result of the construction activity. The court in *NAHB* did not consider whether a purported indirect source review program seeking to regulate existing facilities that had not undergone any construction activity was permissible under the CAA. As such, the SCAQMD cannot use the NAHB case as precedence for allowing Proposed Rules 2305 and 316. 109-3

2. The regulation of aviation activities under Proposed Rules 2305 and 316 is preempted under the Airline Deregulation Act ADA) and other federal statutes.

As stated in our previous comment letter, the Federal Aviation Act and the ADA preempt the Proposed Rule's regulation of air cargo warehouse operations. Not only are air cargo activities conducted at United's LAX warehouse, but also aircraft maintenance training and cabin cleaning provisioning. These uses underscore that warehouses operated by airlines are subject to the ADA, which preempts state requirements related to prices, routes, or services of an air carrier. 49 U.S.C. § 41713(b)(1). SCAQMD is impermissibly seeking to restrict United's air transportation services by requiring United to either change its operations to comply or pay a mitigation fee. 109-4

3. Proposed Rules 2305 316 are unnecessarily duplicative of, and potentially contradictory to, existing and forthcoming regulations requiring a transition to zero-emission (ZE) trucks.

In June 2020, the Office of Administrative Law approved the California Air Resources Board's (CARB) Advanced Clean Trucks ACT) regulation. The ACT regulation imposes zero emission vehicle sales requirements on truck manufacturers and has a one-time reporting requirement for large entities and fleets. The stated purpose of imposing the reporting requirement is to obtain details about individual fleet operations in order to drive future measures that would "ensure that fleets purchase available ZE trucks and place them in service where suitable to meet their needs."[1] In addition, by 2035, truck manufacturers truck sales will be required to be 55% ZE for Class 2b-3 and 75% ZE for Class 4-8. 109-5

Proposed Rule 2305's WAIRE menu allows warehouse owners and operators to earn WAIRE compliance points by implementing very similar actions to those that will eventually be necessitated by the ACT regulation. Where warehouses and truck fleets are operated by the same entity, the rule could have the benefit of accelerating the transition to ZE trucks, but this will not be the case for entities like United. Due to a lack of feasible emissions reduction options for earning WAIRE compliance points through their operations, operators like United ***who do not own***

[1] CARB, Advanced Clean Trucks Fact Sheet, June 25, 2020.

or operate the fleets traveling to and from their facilities will only be able to pay mitigation fees to comply. According to the Draft Staff Report, those fees will be used to establish a mitigation program to provide funding to truck operators towards the purchase and installation of ZE charging or hydrogen fueling infrastructure. This will essentially lead to warehouse operators funding the transition towards ZE trucks by fleet owners/operators who would already be subject to future CARB ZE truck requirements. For entities like United, the rule does not provide any measurable reduction in emissions and just shifts the burden and associated costs from the responsible entity to another that has no control over the activities with resulting air emissions. 109-5 (cont'd)

Finally, the United States Environmental Protection Agency has stated that the indirect source rule at issue in the *NAHB* case "does not qualify for emission reduction credit for purpose of an attainment or progress demonstration" [ie, SIP revision] due to enforceability concerns e.g., provisions allowing developers to pay a fee instead of implementing on-site pollution mitigation measure). *See* 86 Fed. Reg. 11484 (Feb. 25, 2021). Yet, SCAQMD references in its Preliminary Draft Staff Report the need to attain federal air quality standards as one of the primary drivers for these regulations. The fact that Proposed Rules 2305 and 316 will not qualify for emissions reduction credit in any attainment plan further demonstrates it would be inadvisable for the District to adopt these regulations given its questionable legal authority. 109-6

* * *

Thank you for your consideration of these comments. Please contact me at averil.edwards@united.com with any questions. 109-7

Regards,

Averil Edwards

Averil Edwards

EDF
ENVIRONMENTAL DEFENSE FUND
Finding the ways that work

SOUTH COAST AQMD
CLERK OF THE BOARDS
21 APR 22 P5:06

April 22, 2021

Chair Burke and members of the mobile source committee
South Coast Air Quality Management District
2186 Copley Drive
Diamond Bar, CA 91765

Re: Supporting adoption and strengthening of Warehouse Indirect Source Rule (Proposed Rules 2305 and 316)

Dear Chair Burke and members of the mobile source committee:

Environmental Defense Fund (EDF) writes you today to support the warehouse indirect source rule. As you are aware, the air quality in the South Coast Air District is amongst the worst in the country. One of the key contributors of this air pollution is from the use of diesel trucks and other heavy duty equipment operating at or near warehouses, or trucks that are delivering goods to and from these facilities. 110-1

Warehouses are an important focus for pollution reduction efforts in part because they tend to act as "hot spots" for local air pollution. The Second Draft Socioeconomic Impact Assessment for the rule confirms that communities living within a half mile of a warehouse shoulder disproportionate harms, ranking in the 85th percentile of pollution burden statewide, in stark contrast to the rest of the region. EDF's own analysis confirms the disproportionate nature of warehouse pollution on low income communities and communities of color. Simply put, warehouses attract vehicle traffic in a more concentrated manner, and emissions in neighborhoods with warehouses are significantly higher than in other neighborhoods. The communities around these warehouses are nearly 70 percent people of color and nearly 50 percent experience poverty, contributing to the fact that warehouses and disadvantaged communities tend to be co-located. 110-2

As proposed, the Warehouse Indirect source rule (ISR) creates the opportunity to drive the deployment of clean energy technology, including zero emissions medium and heavy duty vehicles and renewable energy generation equipment across Southern California. The ISR incents companies who own and utilize these facilities to pursue as many cost efficient emissions reductions opportunities as possible to convert their operations to zero emissions. 110-3

123 Mission Street
San Francisco, CA 94105
T 415 293 6050
F 415 293 6051
edf.org
New York, NY / Austin, TX / Bentonville, AR / Boston, MA / Boulder, CO / Raleigh, NC
Sacramento, CA / San Francisco, CA / Washington, DC / Beijing, China / La Paz, Mexico
Totally chlorine free 100% post-consumer recycled paper

Recent studies by EDF and partners evaluate the market readiness of zero emissions vehicles and find nearly 125 models of vehicles either announced or in production[1] and document the significant cost benefits associated with pairing electric truck deployments with on-site energy generation and storage.[2] 110-4

Of course, the proposed indirect source rules are not a silver bullet – there will need to be several additional policy reforms and market transformations required, both local and statewide in nature. The Board should pursue this rule however because it can play a critical role in making people's lives better from improved air quality. 110-5

We thank you for your leadership on this issue and offer our support on the proposed rulemaking package.

Sincerely,

Michael Colvin
Director, Regulatory and Legislative Affairs,
California Energy Program
Environmental Defense Fund

Timothy O'Connor
Senior Director, Energy Program
Environmental Defense Fund

[1] EDF, ICCT, Propulsion Québec, "RACE TO ZERO: How manufacturers are positioned for zero emission commercial trucks and buses in North America" October 2020, available at: https://www.edf.org/sites/default/files/documents/Race%20to%20Zero-ICCT_EDF_PQ-FINAL.pdf

[2] GNA, "California Heavy-Duty Fleet Electrification Summary Report" March 2021, available at: http://blogs.edf.org/energyexchange/files/2021/03/EDF-GNA-Final-March-2021.pdf

QUIDEL

SOUTH COAST AQMD
CLERK OF THE BOARDS

21 APR 22 P4:50

April 8, 2021

Chair William Burke and Governing Board Members
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178

Re: **OPPOSITION TO PROPOSED RULE 2305 (WAREHOUSE INDIRECT SOURCE RULE)**

Dear Mr. Burke and Governing Board Members,

Currently, there are pending changes concerning air quality regulation that are due to be voted on by you. As a business that relies on affordable warehouse space, we are deeply concerned what potential impacts Rule 2305 will have to our operating expenses. If Rule 2305 passes it will result in increased property taxes and consequently, higher overhead operating expenses creating economic hardship in an already difficult economic climate. Currently in our lease, we as the Tenant, are responsible for any resulting increases in taxes imposed through this new Rule. 111-1

We are very concerned about the potential negative impacts on the warehousing/logistics sector by the South Coast Air Quality Management District. We are reaching out to you today to encourage you to reconsider the implementation of Rule 2305. Although we are also concerned with improving the air quality in Southern California, this Rule could deeply hurt our business and effectively our employees. 111-2

In consideration of this, we believe this proposed rule is outside the authority of the local air district and it is not mission driven as it has no sunset date. Furthermore, it is poorly written, fails to understand the dynamics of the goods movement sector, and includes an arbitrary menu of options and credits. Furthermore, the rule has questionable projections on any actual emission reductions it will achieve. Additionally, it will impose significant administrative and mitigation expenses. As written, this rule is in essence a tax on the warehousing sector. 111-3

While we understand Rule 2305 is well intended, we believe it will cause significant harm to our business for the reasons mentioned above. As such, we respectfully request that you oppose Rule 2305, as the potential damages to our business, and businesses like ours, across Southern California could be economically devastating, particularly when considering the financial hardships many business owners are already experiencing due to COVID-19 related closures, delays and ordinances. 111-4

Thank you in advance for your time and consideration.

Signed:

Randall J. Steward
Chief Financial Officer

Since 1982

April 16, 2021

Chair William Burke and Governing Board Members
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178

Re: Concerns related to Rule 2305 (Warehouse Indirect Source Rule)

Dear Mr. Burke and Governing Board Members,

We trust all is well. It has come to our attention that there are pending rules and regulations being considered by your office, specifically, Rule 2305, Warehouse Indirect Source Rule. 112-1

As we agree with improving the air quality in Southern California, we have been informed that this rule would affect affordable warehouse space in the area by increasing property taxes. Consequently, resulting in higher overhead operating expenses which would create economic hardship in an already difficult economic climate. Currently in our lease, we as the Tenant, are responsible for any increases in taxes. 112-2

As a business that relies on affordable warehouse space, we are reaching out to you today to share our concerns and financial concerns.

While we understand Rule 2305 is well intended, we respectfully request that you consider the potential affects to our business, and businesses like ours, particularly when considering the financial hardships many business owners are already experiencing due to COVID-19 related closures, delays, and ordinances. 112-3

Thank you in advance for your time and consideration.

Sincerely,

Sadaf Foods
2828-2840 South Alameda Street

2828 S. Alameda St., Los Angeles, California 90058
Tel: (323) 234-6666- Fax (323) 234-2447
e-mail: info@Sadaf.com
www.sadaffoods.com

Cummins Logistics

6289 E. Slauson Ave.

Commerce, CA 90040

SOUTH COAST AQMD
CLERK OF THE BOARDS
21 APR 20 P3:33

April 20,2021

Chair William Burke and Governing Board Members

South Coast Air Quality Management District

21865 Copley Dr.

Diamond Bar, CA 91765-4178

Re: OPPOSITION TO PROPOSED RULE 2305 (WAREHOUSE INDIRECT SOURCE RULE)

Dear Mr. Burke and Governing Board Members:

Currently, there are pending changes concerning air quality regulation that are due to be voted on by you. As a business that relies on affordable warehouse space, we are deeply concerned what potential impacts Rule 2305 will have to our operating expenses. If Rule 2305 passes it will result in increased property taxes and consequently, higher overhead operating expenses creating economic hardship in an already difficult economic climate. Currently on our lease, we as the tenant, are responsible for any resulting increases in taxes imposed through this new Rule. 113-1

We are very concerned about the potential negative impacts on the warehousing/logistics sector by the South Coast Air Quality Management District. We are reaching out to you today to encourage you to reconsider the implementation of Rule 2305. Although we are also concerned with improving the air quality in Southern California, this Rule could deeply hurt our business and effectively our employees. 113-2

In consideration of this, we believe this proposed rule is outside the authority of the local air district and is not mission driven as it has no sunset date. Furthermore, it is poorly written, fails to understand the dynamics of the goods movement sector, and includes an arbitrary menu of options and credits. Furthermore, the rule has questionable projections on any actual emission 113-3

reductions it will achieve. Additionally, it will impose significant administrative and mitigation expenses. As written, this rule is in essence a tax on the warehousing sector.

113-3 (cont'd)

While we understand Rule 2305 is well intended, we believe it will cause significant harm to our business for the reasons mentioned above. As such, we respectfully request that you oppose Rule 2305, as the potential damages to our business, and businesses like ours, across Southern California could be economically devastating, particularly when considering the financial hardships many business owners are already experiencing due to COVID-19 related closures, delays and ordinances.

113-4

Thank you in advance for your time and consideration in this matter.

Signed:

David A. Cummins

4/20/21

David A. Cummins **Date**

April 19, 2021

Chair William Burke and Governing Board Members
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178

Re: **OPPOSITION TO PROPOSED RULE 2305 (WAREHOUSE INDIRECT SOURCE RULE)**

Dear Mr. Burke and Governing Board Members,

Currently, there are pending changes concerning air quality regulation that are due to be voted on by you. As a business that relies on affordable warehouse space, we are deeply concerned what potential impacts Rule 2305 will have to our operating expenses. If Rule 2305 passes it will result in increased property taxes and consequently, higher overhead operating expenses creating economic hardship in an already difficult economic climate. Currently in our lease, we as the Tenant, are responsible for any resulting increases in taxes imposed through this new Rule. 114-1

We are very concerned about the potential negative impacts on the warehousing/logistics sector by the South Coast Air Quality Management District. We are reaching out to you today to encourage you to reconsider the implementation of Rule 2305. Although we are also concerned with improving the air quality in Southern California, this Rule could deeply hurt our business and effectively our employees. 114-2

In consideration of this, we believe this proposed rule is outside the authority of the local air district and it is not mission driven as it has no sunset date. Furthermore, it is poorly written, fails to understand the dynamics of the goods movement sector, and includes an arbitrary menu of options and credits. Furthermore, the rule has questionable projections on any actual emission reductions it will achieve. Additionally, it will impose significant administrative and mitigation expenses. As written, this rule is in essence a tax on the warehousing sector. 114-3

While we understand Rule 2305 is well intended, we believe it will cause significant harm to our business for the reasons mentioned above. As such, we respectfully request that you oppose Rule 2305, as the potential damages to our business, and businesses like ours, across Southern California could be economically devastating, particularly when considering the financial hardships many business owners are already experiencing due to COVID-19 related closures, delays and ordinances. 114-4

Thank you in advance for your time and consideration.

Signed:

Ryan Howard
Senior Director, Real Estate & Facilities
HD Supply. Inc.

Carole Wayman

From: Clerk of Board
Sent: Wednesday, April 21, 2021 2:31 PM
To: Carole Wayman; Faye Thomas
Subject: FW: Rule 2305: We OPPOSE the Warehouse Indirect Source Rule

Follow Up Flag: Follow up
Flag Status: Flagged

From: Ryan Ole Hass [mailto:myvoice@oneclickpolitics.com]
Sent: Wednesday, April 21, 2021 2:19 PM
To: Clerk of Board <Front_PC@aqmd.gov>
Subject: Rule 2305: We OPPOSE the Warehouse Indirect Source Rule

Re: Rule 2305: We OPPOSE the Warehouse Indirect Source Rule

Dear Members of the AQMD Board:,

I am writing to you to express my opposition to the adoption of Rule 2305 (Indirect Source Rule).

Warehouses are integral to the Southern California logistics industry. The District's proposed ISR is a misguided policy during the COVID-19 pandemic. The District is pursuing a regulation targeting a sector that serves as a lifeline to our region and the nation and is deemed essential by federal and state governments. 115-1

The following reasons highlight our primary concerns with the rule:

1. This rule will impose additional/permanent costs on warehouses that could range in the millions of dollars – which will be passed onto consumers, employees, businesses and elsewhere. The logistics industry in complex and tied to many different industries – the costs associated with this rule will have a ripple effect in the system. 115-2

2. The ISR requires warehouses to control what types of trucks make up their fleet or what types of trucks come to their warehouses – which is not feasible. The trucks the SCAQMD is asking warehouses to purchase are not in existence nor can warehouses control what trucks come to their facilities. 115-3

3. The approximately 18 million people who live in Southern California rely on warehouses as an integral part of the goods movement system to get them the items they need to survive, like food, medical supplies, clothes etc. 115-4

4. Warehouses provide a broad range of jobs for people of every level of education and skillset. Warehouses and the logistics industry offer jobs that lead to upward ability. This job creation is a socioeconomic benefit that the proposed ISR's onerous costs would threaten. 115-5

5. Proposition 26 specifically states that governing bodies can only impose a "fee" on a business if that owner will receive a direct benefit from it. Otherwise, it MUST be considered a tax. We strongly believe that the "mitigation fee" associated with this rule is a tax that should be brought before voters. 115-6

6. It is unclear how many emissions will actually be reduced as a result of this rule. We believe the district is imposing a burdensome regulation with high costs with little to show for it. This is not how regulations should be adopted. 115-7

For these reasons, and more, we OPPOSE Indirect Source Rules. 115-8

Sincerely,
Ryan Ole Hass
ryanolehass.re@gmail.com
757 Ocean Ave, Unit 306 Santa Monica, CA 90402-2655 Constituent

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Carole Wayman

From: Clerk of Board
Sent: Wednesday, April 1, 2021 9:27 M
To: Carole Wayman; Faye Thomas
Subject: FW: Rule 2305: We OPPOSE the Warehouse Indirect Source Rule

Follow Up Flag: Follow up
Flag Status: Flagged

From: Gregg Pawlik [mailto:myvoice@oneclickpolitics.com]
Sent: Wednesday, April 21, 2021 9:20 AM
To: Clerk of Board <Front_PC@aqmd.gov>
Subject: Rule 2305: We OPPOSE the Warehouse Indirect Source Rule

Re: Rule 2305: We OPPOSE the Warehouse Indirect Source Rule

Dear Members of the AQMD Board:,

I am writing to you to express my opposition to the adoption of Rule 2305 (Indirect Source Rule).

Warehouses are integral to the Southern California logistics industry. The District's proposed ISR is a misguided policy during the COVID-19 pandemic. The District is pursuing a regulation targeting a sector that serves as a lifeline to our region and the nation and is deemed essential by federal and state governments. 116-1

The following reasons highlight our primary concerns with the rule:

This rule will impose additional/permanent costs on warehouses that could range in the millions of dollars which will be passed onto consumers, employees, businesses and elsewhere. The logistics industry in complex and tied to many different industries the costs associated with this rule will have a ripple effect in the system. 116-2

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3. The approximately 18 million people who live in Southern California rely on warehouses as an integral part of the goods movement system to get them the items they need to survive, like food, medical supplies, clothes etc. 116-4

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6. It is unclear how many emissions will actually be reduced as a result of this rule. We believe the district is imposing a burdensome regulation with high costs with little to show for it. This is not how regulations should be adopted. 116-7

For these reasons, and more, we OPPOSE Indirect Source Rules.

Sincerely,
Gregg Pawlik
gpawlik@coldwellbanker.com
Coldwell Banker Company 15101 W Sunset Blvd. Pacific Palisades, CA 90272 Constituent

Prepared by OneClickPolitics (tm) at www.oneclickpolitics.com. OneClickPolitics provides online communications tools for supporters of a cause, issue, organization or association to contact their elected officials. For more information regarding our policies and services, please contact info@oneclickpolitics.com

From: Mike Kelso <mikek@trimodal.com>
Sent: Wednesday, April 7, 2021, 1:47 PM
To: Paul Stroik
Cc: Victor Juan; Greg Owen
Subject: ZE Truck Cost

Mr. Stroik,

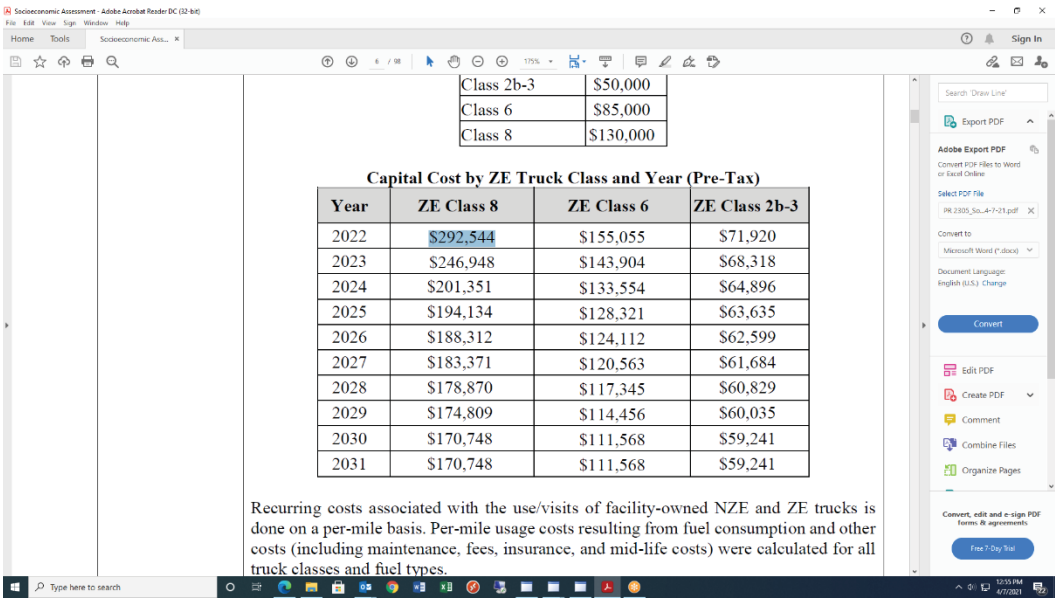
My comments are that the estimated cost for ZE truck is grossly understated. We have a quote that our cost will be in excess of $500,000 per Class 8 tractor. This quote is from a major OEM. We have applied for VW funding and plan to move forward with some EV tractors if we are awarded funding. But the cost will be much higher than presented in this report. 117-1

Our opinion is that it may take two new ZE tractors to do the workload of one diesel tractor. What if any consideration was taken to account for this possibility in the socioeconomic assessment? 117-2

Additionally as an operator in the jurisdiction we do not agree with the conclusions that little to no cargo diversion will occur. Many of our customers are already pursuing alternative ports of entry and this is before this estimated 30% increase in operating rents happens. 117-3

Regards,

Mike



Class 2b-3	$50,000
Class 6	$85,000
Class 8	$130,000

Capital Cost by ZE Truck Class and Year (Pre-Tax)

Year	ZE Class 8	ZE Class 6	ZE Class 2b-3
2022	$292,544	$155,055	$71,920
2023	$246,948	$143,904	$68,318
2024	$201,351	$133,554	$64,896
2025	$194,134	$128,321	$63,635
2026	$188,312	$124,112	$62,599
2027	$183,371	$120,563	$61,684
2028	$178,870	$117,345	$60,829
2029	$174,809	$114,456	$60,035
2030	$170,748	$111,568	$59,241
2031	$170,748	$111,568	$59,241

Recurring costs associated with the use/visits of facility-owned NZE and ZE trucks is done on a per-mile basis. Per-mile usage costs resulting from fuel consumption and other costs (including maintenance, fees, insurance, and mid-life costs) were calculated for all truck classes and fuel types.

Community Development Department
Planning Division
14177 Frederick Street
P. O. Box 88005
Moreno Valley CA 92552-0805
Telephone: 951.413-3206
FAX: 951.413-3210

March 16, 2021

Paul Stroik, Economist
Planning, Rule Development and Area Sources
South Coast Air Quality Management District
21865 Copley Dr.
Diamond Bar, CA 91765

Subject: Comments on the Draft Socioeconomic Impact Assessment for Proposed Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program and Proposed Rule 316 – Fees for Rule 2305

Dear Mr. Stroik:

In reviewing the Socioeconomic Impact Assessment, staff is concerned that the complexity of the modeling presented in the draft Socioeconomic Impact Assessment makes it difficult to determine the estimated cost of implementation of Proposed Rule 2305. The cost of implementation is of particular concern considering the number of warehouse projects within Moreno Valley that would be subject to the Rule. Of the estimated 470 potentially affected facilities in Riverside County, Moreno Valley has 48 warehouses on the "Potentially Subject to PR 2305" list (or approximately 10% of Riverside County's total facilities). PR 2305 will raise the cost of operating a warehouse in the SCAQMD region, which would impact economic and job growth in the Inland Empire and region. 118-1

The costs to administer and comply with both PR 2305 and PR 316 are also difficult to determine from the 19 different scenarios which were provided to show the range of potential compliance outcomes. For these scenario analyses, all 2,902 potentially affected facilities in the SCAQMD Region were modeled using their square footage and the applicable average trip generation rates to determine a compliance obligation. While average annual cost of PR 2305 has been provided by square footage, it is still difficult to determine the impact of the rule. The administrative costs (PR 316) are additional to the compliance actions in the scenarios and provided in the draft Socioeconomic Impact Assessment. The costs to meet compliance obligations of Rules 2305 and 316 appear to be underestimated, especially for the time allocated for reporting and financially impact a facility further. 118-2

Thank you for the opportunity to comment and we look forward to reviewing the forthcoming documents. If you have any questions or would like to discuss further, please feel free to contact Chris Ormsby, Senior Planner at (951) 413-3229, or by email at chriso@moval.org.

Sincerely,

Manuel A. Mancha
Community Development Director

c: Patty Nevins, Planning Official
Chris Ormsby, Senior Planner

From: Went, Cora M. <cwent@caltech.edu>
Sent: Friday, April 16, 2021 8:59 AM
To: Angela Kim <akim@aqmd.gov>
Subject: [SPAM]Indirect Source Rule

Hello,

My name is Cora Went and I am a Physics PhD student at Caltech and a member of the Sunrise Movement Los Angeles. I cannot make public comment at the Mobile Sources Committee meeting today, so I am emailing to urge the air district board to adopt a rule to regulate pollution from indirect sources.

119-1

The South Coast Air Basin is home to some of the worst air pollution in the country, primarily caused by emissions from warehouses and the goods movement industry. The air district needs strong and enforceable requirements to get the industry to curb their dangerous emissions and finally clean up pollution in all communities.

Please protect the health and safety of our communities by adopting a strong warehouse indirect source rule.

Sincerely,
Cora Went

--

Cora Went
Graduate Student, Physics
California Institute of Technology
Pronouns: She/Her/Hers
415.328.4093 | Website

April 23, 2021

Board Members
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765

Re: Warehouse Indirect Source Rule (Proposed Rule 2305)

Dear Board Members,

We write to you in strong support of the approach taken by the Warehouse Indirect Source Rule, but we urge you to strengthen the rule. The Board should take advantage of the current economic landscape — record profits for warehouses, Southern California's dominant position in the national warehouse market, and an increasing structural shift in market power to warehouse companies — to pass the strongest-possible regulations of this deadly industry.

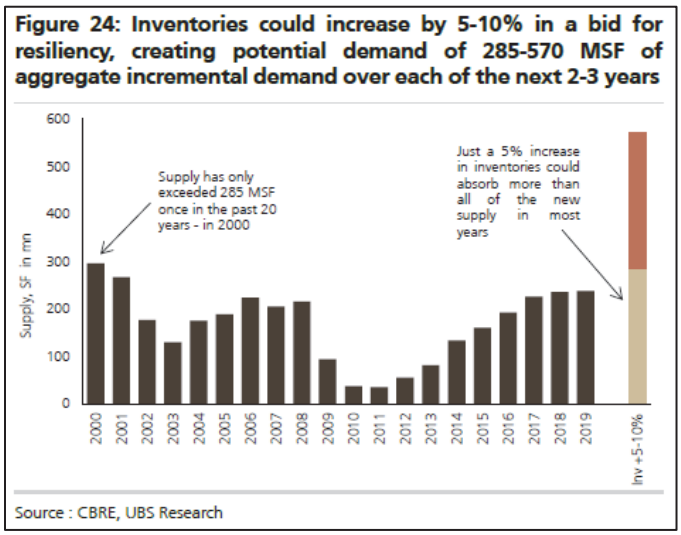
120-1

For far too long, poor communities and communities of color have subsidized the international supply chain with their own health. This is true not only in the Inland Empire, where (according to a recent headline), "new ecommerce warehouses crowd out rural communities,"[1] but also in the Southeast L.A. County Gateway Cities, in the San Fernando and San Gabriel Valleys, and elsewhere. Each warehouse facility may see thousands of trucks and vans each day, generating tons of harmful emissions.[2] Frontline communities pay with their health, and the entire region suffers from poor air quality.[3] The industry can afford the modest investment under the ISR. Further, the ISR must be strengthened to stay relevant.

120-2

<u>The U.S. warehouse industry is posting record results</u>
According to a recent analysis from *Logistics Management*, the warehouse industry "is not only withstanding the widespread economic impact of COVID-19, it's thriving. In fact: it's red hot."[4] At the start of the pandemic, warehouse was already "the darling of the real estate market," and a record 224 million square feet came online in 2020.[5] Still, it's not enough.

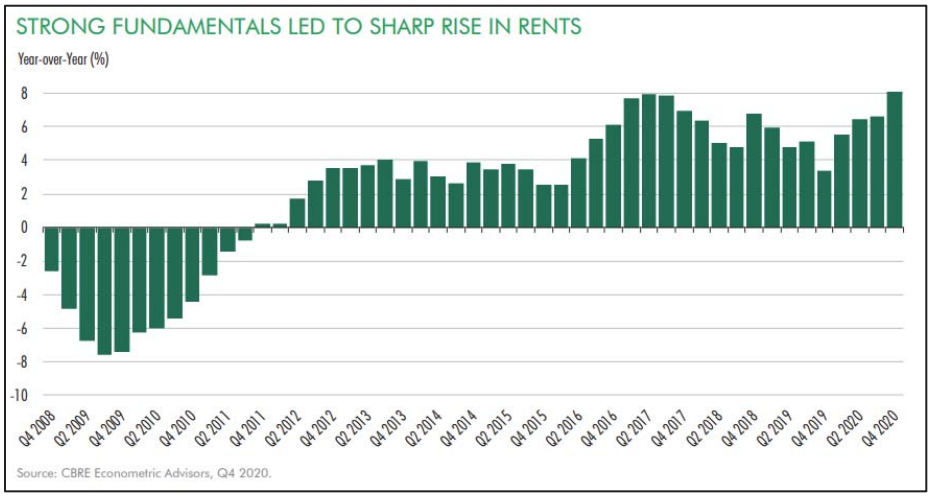
- E-commerce requires more warehouse space than traditional brick and mortar stores; one industry player estimates that for every shift of just one percentage point from brick and mortar to online retail, an additional 46 million square feet of warehouse space are needed.[6] In 2020 alone, the five-percentage-point shift suggests an additional 230 million square feet are needed.



120-2 (cont'd)

- Further additional demand is expected as retailers who "were caught short-handed during the initial demand shock" increase inventory levels across the board. According to a Wells Fargo analysis, this factor could "drive 285–570 million square feet of incremental demand."[7]

Strong demand for industrial real estate has led to a decade's worth of consistent — and increasing — rent growth.[8] Increased demand is expected to lead to a significant *further* increase in rents in 2021. Wells Fargo "anticipate[s] an acceleration" to "high-single-digit rent growth in primary industrial markets."[9]



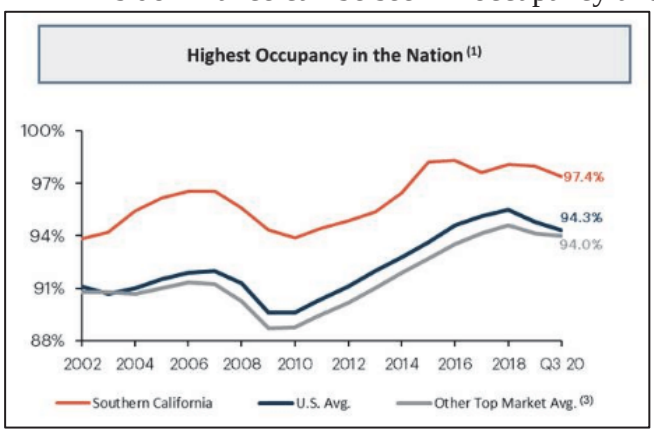
<u>Southern California warehouses are further outperforming</u>

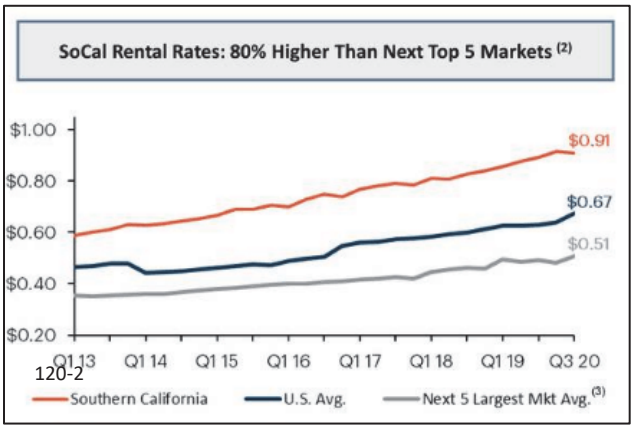
A 2021 headline in trade publication *Freight Waves* concluded, simply: "'Insatiable demand' drives Southern California warehouse boom."[10] According to the latest figures from CBRE, L.A. has the lowest vacancy rate (1.4 percent) in the nation.[11] (The Inland Empire is third with 1.9 percent.) The UCLA Anderson School Forecast reported in February 2021 that "industrial space sentiment has come roaring back."[12]

An analyst from CBRE explains Southern California's dominance:

> The industrial market had great fundamentals prior to Covid and now has better fundamentals in part due to Covid. In Southern California… we operate in a uniquely well-positioned geographical region with a deep business infrastructure in place, a huge densely populated area that has gigantic purchasing power, the most dominant ports in the U.S. to meet the demands of the customer and a very large inventory of industrial buildings to meet the needs of the companies storing and selling product. This is why retailers and business generally want to and need to be here.[13]

This dominance can be seen in occupancy and





120-2

120-2 (cont'd)

rental rates[14]:

Indeed, even as analysts expect additional supply to come online in 2021, many believe Southern California "won't feel the reprieve as much" as the rest of the country because of such high demand.[15]

In February 2021, one industry CEO spoke bluntly about Southern California:

> There is nothing short of astounding what we see in terms of rents. We typically forecast our rents each quarter. The team seems to be doing it now weekly. I mean it's unbelievable. There's such demand for space and rents are growing so quickly… [Y]ou're talking about rents that literally changed $0.05 or $0.10 within the past month.[16]

This region is in fact so dominant that the industry is "unfazed" by the prospect of some marginal costs associated with the Indirect Source Rule, according to recent reporting.[17] "You keep expecting regulation to take a toll on business," the CBRE analyst observed about the ISR, "but when you look at the numbers and metrics," it doesn't.

<u>Industry leaders already invest in innovation</u>

An examination of market leader Prologis — "the bellwether of industrial real estate" according to a recent Wells Fargo report — provides insight into the fiscal health and stability of the industry.[18] Not only is the company currently showing record leasing activity, but a UBS analysis notes the company's "strong fundamentals for years to come."[19] Another analyst noted the company's consistent "outsized financial results," suggesting in the piece's headline that Prologis's biggest responsibility is to "Collect rent checks as Amazon.com's landlord."[20] Prologis has noted that the Southern California market "outperformed in 2020, [and] we expect them to outperform in 2021."[21]

The company touts to shareholders that it is successful because it "invest[s] in innovation."[22] Indeed, in 2019 Prologis identified "Change through innovation and operational excellence" as one of the three pillars "to guide [Prologis] through our next phase of growth."[23] Many of the options provided by the ISR seem not only consistent with — but anticipated by — Prologis's existing approach.

> Change Through Innovation & Operational Excellence is about embracing new challenges and using our global footprint and expertise to offer innovative solutions to our customers. As an example, we leveraged our scale to establish a dedicated manufacturing line of LED light fixtures that we can install through our Prologis Essentials LED program, which resulted in procurement cost savings of $15 million in 2019. Also, as our customers come to us for our expertise in sustainable real estate solutions, we are always looking for ways to help them tap into the environmental and economic benefits of renewable energy.

120-2 (cont'd)

Rexford Industrial — another profitable Southern California market leader — similarly locates its success in "creat[ing] value through renovation and repositioning." The company points to investments in sustainability as benefitting the triple bottom line: citing a $1.6 million investment at one facility, the company claimed a nearly 300 percent return.[24]

<u>To be relevant, the rule must be more stringent</u>

While we applaud the staff approach to the ISR, we believe some of the key thresholds are too weak, and will not sufficiently protect communities:

- **Square footage**: Warehouses are getting both smaller and closer to where people live. Amazon.com recently announced plans to open 1,500 "small delivery hubs in cities and suburbs."[25] This means that just as residents will see increased exposure rates to dangerous emissions, these newer facilities are less likely to be covered by the indirect source rule. We believe that 100,000 square feet is insufficient as a threshold. We urge you to set the threshold at 50,000 square feet at some point in the future after the rule is adopted. 120-3
- **Stringency value**: The lowest stringency value studied by the Air District (0.0001) would only reduce, at a maximum, 1.5 tons per day of nitrogen oxide and 0.01 tons per day of diesel particulate matter, and the full stringency would not even apply to many warehouses for years (if at all).[26] The Air District should adopt a more stringent rule. 120-4

Thank you for your leadership. We appreciate your time and attention as you finalize and move forward with this critical rule. 120-5

Sincerely,

Lauren Jacobs, Executive Director
Partnership for Working Families

Roxana Tynan, Executive Director

Los Angeles Alliance for a New Economy

Ely Flores, Executive Director
Orange County Communities Organized for Responsible Development

Sheheryar Kaoosji, Executive Director
Warehouse Workers Resource Center

Cc:
Wayne Nastri, Executive Officer
Sarah Rees, Deputy Executive Officer
Ian MacMillan, Planning and Rules Manager, Mobile Sources/ISR
Victor Juan, Program Supervisor, Mobile Sources/ISR

[1] Orlando Mayorquin, "New Ecommerce Warehouses Crowd Out Rural Communities in the Inland Empire," *Times of San Diego*, February 14, 2021.
[2] South Coast Air Quality Management District, Preliminary Draft Staff Report – Proposed Rule 2305, January 2021.
[3] Fact sheet from Warehouse Workers Resource Center, CCEJN, Sierra Club, East Yard Communities for Environmental Justice, and Earthjustice, "Warehouse Indirect Source Rule: A big step toward clean air, zero emissions, & green jobs," February 2021.
[4] Karen Thuermer, "Record-breaking demand for warehouse and DC development," *Logistics Management*, February 2021. See also: J.P. Morgan, December 21, 2020 ("The industrial REIT sector has been a significant outperformer in 2020"), Wells Fargo, December 10, 2020 ("Industrial REITs poised to deliver again in '21).
[5] Hannah Madans, "Betting on industrial," *Los Angeles Business Journal*, April 13, 2020. 224 million square feet from UCLA Anderson Forecast and Allen Matkins Commercial Real Estate Survey, Winter 2021.
[6] Prologis, cited in Wells Fargo Securities, December 10, 2020.
[7] Wells Fargo Securities, December 10, 2020. Nearby chart from UBS Global Research, January 20, 2021.
[8] Nearby chart from CBRE, U.S. Industrial & Logistics Figures, Q4 2020.
[9] Wells Fargo Securities, December 10, 2020. Scotiabank projects 5%–6% rent growth in 2021.
[10] Linda Baker, "'Insatiable demand' drives Southern California warehouse boom," *Freight Waves*, January 24, 2021.
[11] CBRE, U.S. Industrial & Logistics Figures, Q4 2020.
[12] UCLA Anderson Forecast and Allen Matkins Commercial Real Estate Survey, Winter 2021.
[13] Annlee Ellingson, "Southland industrial real estate weathering pandemic thanks to e-commerce surge," *Los Angeles Business Journal*, September 24, 2020.
[14] Charts from Rexford Industrial Realty, taken from Seeking Alpha, February 7, 2021.
[15] A.B. Brown, "Prologis expects US warehouse rental rates to rise 5% in 2021," *Supply Chain Dive*, February 2, 2021; see also Emma Cosgrove, "Warehouse rents could slow their climb in 2021 as construction boosts supply," *Supply Chain Dive*, January 12, 2021.
[16] Rexford Co-CEO Howard Schwimmer on Q4 2020 earnings call, February 12, 2021.
[17] Linda Baker, "'Insatiable demand,'" *Freight Waves*, January 24, 2021.
[18] Wells Fargo Securities, "Industrial REITs: Q4 '20 Earnings Preview," January 22, 2021.
[19] UBS, "Prologis Inc. 4Q20 Earnings Update," January 26, 2021.
[20] Robert Baillieul, "Collect rent checks as Amazon.com's landlord," *Income Investors*, August 24, 2020.
[21] Comments from Prologis VP Christopher Caton on Prologis Q4 2020 earnings call, January 26, 2021.

[22] Comments from Prologis COO Gary Anderson at the Morgan Stanley Life After Covid Conference, November 12, 2020.
[23] 2019 Prologis ESG Impact Report.
[24] 2019 Rexford ESG report.
[25] Spencer Soper, "Amazon Plans to Put 1,000 Warehouses in Suburban Neighborhoods," *Bloomberg*, September 16, 2020.
[26] South Coast Air Quality Management District, Warehouse ISR Working Group Presentation, December 17, 2020.

LEE & ASSOCIATES
COMMERCIAL REAL ESTATE SERVICES

April 27, 2021 Via Email: imacmillan@aqmd.gov / vjuan@aqmd.gov

Ian MacMillan
Victor Juan
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 Copley Drive
Diamond Bar, California 91765-4178

Subject: Comments on Proposed Rule 2305 (Warehouse Indirect Source Rule)

Dear Gentlemen:

I oppose the adoption of Rule 2305 (Indirect Source Rule). Warehouses are integral to the Southern California logistics industry. The logistics industry plays a crucial role in the response to the COVID-19 pandemic—not only in the distribution of medical supplies, vaccines, and equipment but also in delivering goods to a public that has become increasingly dependent on e-commerce. 121-1

The District's proposed ISR seems to be a misguided policy during the COVID-19 pandemic. The District is pursuing a regulation targeting a sector that serves as a lifeline to our region and the nation and is deemed essential by federal and state governments. Under the current draft rule, reporting obligations begin only 60 days from rule adoption. The substantive WAIRE Points obligations will commence as soon as July 2021.

The following further comments are provided in response to the District's Proposed Rule 2305:

1. This rule would impose additional/permanent costs on warehouses of approximately $.90 per square foot. This extra cost would amount to targeting a specific essential industry with $1 billion in annual fees during the worst possible time and while responding to the pandemic's challenges on behalf of our nation. 121-2

2. It is not feasible to comply with the ISR due to the following:
   a) The proposed rule requires warehouses to control truck fleets and decrease truck emissions. Yet, warehouse operators are not able to accomplish this task.
   b) Warehouses have no control over how truck engines are manufactured.
   c) Warehouses do not own truck fleets, nor do they control what type of trucks shipping companies purchase.
   d) Warehouse operators do not control which trucks come to warehouses, when they arrive, where they come from, or any other variables related to truck trips. 121-3

3. The technology is not available to accomplish items on the WAIRE menu. For example, there are no heavy-duty electric trucks available that are viable from a technology and/or economically reasonable standard. 121-4

4. Warehouses have been deemed to be essential businesses by the State for important reasons including:
   a) The approximately 18 million people who live in Southern California rely on 121-5

warehouses as an integral part of the goods movement system to get them the items they need to survive, like food, medical supplies, clothes etc.

121-5 (cont'd)

5. This rule creates tremendous uncertainty in the economy as the full negative impact of this ISR is not known.

a) Uncertainty should not be created in this critical, essential business sector, especially considering the current economic downturn/unemployment crisis associated with the COVID-19 pandemic.

121-6

6. Warehouses provide a broad range of jobs for people of every level of education and skillset. Warehouses and the logistics industry offer jobs that lead to upward ability. This job creation is a socioeconomic benefit that the proposed ISR's onerous costs would threaten.

121-7

7. The proposed ISR seeks to "indirectly" regulate the trucking industry through the Warehouse industry. The District should publicly explain how it has the jurisdiction/authority to regulate a mobile source that is such an integral part of interstate commerce as the trucking industry.

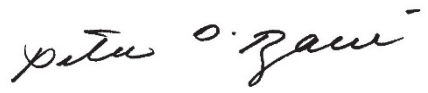
121-8

Thank you for your attention to these comments. Please include these comments as part of the official record for Proposed Rule 2305 (Warehouse Indirect Source Rule) so that all SCAQMD Board Members may have the opportunity to review the above.

121-9

Respectfully,

LEE & ASSOCIATES COMMERCIAL REAL ESTATE SERVICES, INC. – CITY OF INDUSTRY
CORPORATE ID 01125429



Peter D. Bacci, SIOR
Executive Vice President & Principal
License ID 00946253
Direct: 323.767.2022
Email: pbacci@lee-associates.com

Cc: Governing Board Members

NOTE: Logistics Property Co has provided 10 identical letters from 10 different signatories. The first letter in the series has been bracketed.



Logistics Property Company, LLC
One North Wacker Drive, Suite 1925
Chicago, IL 60606

April 28, 2021

Ian MacMillan
Victor Juan
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178
Email: imacmillan@aqmd.gov / vjuan@aqmd.gov

Subject: Comments on Proposed Rule 2305 (Warehouse Indirect Source Rule)

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122-3

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Thank you for your attention to these comments. Please include these comments as part of the official record for Proposed Rule 2305 (Warehouse Indirect Source Rule) so that all SCAQMD Board Members may have the opportunity to review the above. 122-9

Respectfully,

Logistics Property Company, LLC



By:_____
James G. Martell, CEO

Logistics Property Company, LLC
One North Wacker Drive, Suite 1925
Chicago, IL 60606

April 28, 2021

Ian MacMillan
Victor Juan
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178
Email: imacmillan@aqmd.gov / vjuan@aqmd.gov

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Respectfully,

Logistics Property Company, LLC

By: _____
Jeanne Sok. Office Manager

Logistics Property Company, LLC
One North Wacker Drive, Suite 1925
Chicago, IL 60606

April 28, 2021

Ian MacMillan
Victor Juan
South Coast Air Quality Management District
21865 Copley Drive
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Email: imacmillan@aqmd.gov / vjuan@aqmd.gov

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Respectfully,

Logistics Property Company, LLC

By:_____
Cameron T. Pybus
Vice President, Project Management

Logistics Property Company, LLC
One North Wacker Drive, Suite 1925
Chicago, IL 60606

April 28, 2021

Ian MacMillan
Victor Juan
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178
Email: imacmillan@aqmd.gov / vjuan@aqmd.gov

Subject: Comments on Proposed Rule 2305 (Warehouse Indirect Source Rule)

Dear Mr. MacMillan:

Logistics Property Company, LLC, opposes the adoption of Rule 2305 (Indirect Source Rule). Warehouses are integral to the Southern California logistics industry. The logistics industry plays a crucial role in the response to the COVID-19 pandemic—not only in the distribution of medical supplies, vaccines, and equipment but also in delivering goods to a public that has become increasingly dependent on e-commerce.

The District's proposed ISR seems to be a misguided policy during the COVID-19 pandemic. The District is pursuing a regulation targeting a sector that serves as a lifeline to our region and the nation and is deemed essential by federal and state governments. Under the current draft rule, reporting obligations begin only 60 days from rule adoption. The substantive WAIRE Points obligations will commence as soon as July 2021.

The following further comments are provided in response to the District's Proposed Rule 2305:

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a) The approximately 18 million people who live in Southern California rely on warehouses as an integral part of the goods movement system to get them the items they need to survive, like food, medical supplies, clothes etc.

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Thank you for your attention to these comments. Please include these comments as part of the official record for Proposed Rule 2305 (Warehouse Indirect Source Rule) so that all SCAQMD Board Members may have the opportunity to review the above.

Respectfully,

Logistics Property Company, LLC

By: Maria Peralta

Maria Peralta
Construction Accountant & Office Manager

Logistics Property Company, LLC
One North Wacker Drive, Suite 1925
Chicago, IL 60606

April 28, 2021

Ian MacMillan
Victor Juan
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Respectfully,

Logistics Property Company, LLC

By: Grace Hidalgo
Grace Hidalgo, Administrative Assistant

Logistics Property Company, LLC
One North Wacker Drive, Suite 1925
Chicago, IL 60606

April 28, 2021

Ian MacMillan
Victor Juan
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21865 Copley Drive
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Logistics Property Company, LLC

By: _____
Mark Glagola, SVP – Northeast Region

Logistics Property Company, LLC
One North Wacker Drive, Suite 1925
Chicago, IL 60606

April 28, 2021

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By:_____
Vince Pergande
Vice President, Project Management

Logistics Property Company, LLC
One North Wacker Drive, Suite 1925
Chicago, IL 60606

April 28, 2021

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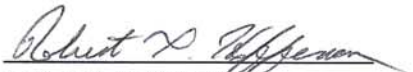
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Logistics Property Company, LLC

By: 
Name: Robert T. Heffernan
Title: SVP and Associate General Counsel - Corporate

Logistics Property Company, LLC
One North Wacker Drive, Suite 1925
Chicago, IL 60606

April 29, 2021

Ian MacMillan
Victor Juan
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178
Email: imacmillan@aqmd.gov / vjuan@aqmd.gov

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By: _____

William J. Pelton, Executive Vice President and
General Counsel

Logistics Property Company, LLC
One North Wacker Drive, Suite 1925
Chicago, IL 60606

April 28, 2021

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Logistics Property Company, LLC

By: Irma Sahagun

Irma Sahagun, Senior Project Accountant

great buy products
2034 E. 27th Street Unit C Vernon, CA 90058
Tel: 747.999.5780 Fax: 747-999-5632

April 9, 2021

Chair William Burke and Governing Board Members
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178

Re: **OPPOSITION TO PROPOSED RULE 2305 (WAREHOUSE INDIRECT SOURCE RULE)**

Dear Mr. Burke and Governing Board Members,

Currently, there are pending changes concerning air quality regulation that are due to be voted on by you. As a business that relies on affordable warehouse space, we are deeply concerned what potential impacts Rule 2305 will have to our operating expenses. If Rule 2305 passes it will result in increased property taxes and consequently, higher overhead operating expenses creating economic hardship in an already difficult economic climate. Currently in our lease, we as the Tenant, are responsible for any resulting increases in taxes imposed through this new Rule. 123-1

We are very concerned about the potential negative impacts on the warehousing/logistics sector by the South Coast Air Quality Management District. We are reaching out to you today to encourage you to reconsider the implementation of Rule 2305. Although we are also concerned with improving the air quality in Southern California, this Rule could deeply hurt our business and effectively our employees. 123-2

In consideration of this, we believe this proposed rule is outside the authority of the local air district and it is not mission driven as it has no sunset date. Furthermore, it is poorly written, fails to understand the dynamics of the goods movement sector, and includes an arbitrary menu of options and credits. Furthermore, the rule has questionable projections on any actual emission reductions it will achieve. Additionally, it will impose significant administrative and mitigation expenses. As written, this rule is in essence a tax on the warehousing sector. 123-3

While we understand Rule 2305 is well intended, we believe it will cause significant harm to our business for the reasons mentioned above. As such, we respectfully request that you oppose Rule 2305, as the potential damages to our business, and businesses like ours, across Southern California could be economically devastating, particularly when considering the financial hardships many business owners are already experiencing due to COVID-19 related closures, delays and ordinances. 123-4

Thank you in advance for your time and consideration.

Signed:

John Pourmoradi, President

Rexford Industrial

April 14, 2021

Chair William Burke and Governing Board Members
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178

Re: *OPPOSITION* TO PROPOSED RULE 2305 (WAREHOUSE INDIRECT SOURCE RULE)

Dear Mr. Burke and Governing Board Members,

Currently there are pending changes concerning air quality regulation that are due to be voted on by you. As one of the largest owners of industrial real estate throughout Southern California, encompassing approximately 32 million square feet, with 1,400 tenants in our portfolio, we are deeply concerned with the impact Rule 2305 will have to our tenants. If Rule 2305 passes it will result in increased property taxes and consequently higher operating expenses for our tenants across our properties. At all of our properties, the tenants are responsible for property taxes, *not landlord.* 124-1

Although we can certainly appreciate the important goal of improving air quality in Southern California, as we ourselves are committed to green leasing initiatives, we do not believe this rule is the proper means to achieve such goals. Mobile sources (trucks, cars) are already regulated by both the United States Environmental Protection Agency and the California Air Resources Board. 124-2

Unfortunately, this rule would cause economic harm to the majority of our tenants, whose primary business is the transportation and distribution of goods. Due to Rule 2305, tenants/businesses will end up paying the fee (tax) because it will not be feasible or possible for them to comply with the proposed standards. With proposed fees of up to ($0.09) per square feet, this would cost potentially millions of dollars across our portfolio to our tenants. 124-3

While we understand Rule 2305 is well intended, we believe it will cause more harm than good for the reasons outlined above. As such, we respectfully request that you oppose Rule 2305. Otherwise, the potential damage to businesses across Southern California could be economically devastating. 124-4

Thank you for your time, consideration, and service.

David Lanzer
General Counsel
REXFORD INDUSTRIAL REALTY, L.P.

4675 MacArthur Court, Suite 800
Newport Beach, California 92660 USA
949.437.1000 fax: 949.612.1894

www.CleanEnergyFuels.com

Todd R. Campbell
Vice President Public Policy & Regulatory Affairs

April 27, 2021

Incoming Chair Ben J. Benoit
Governing Board
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

RE: Proposed Rule 2305 – Warehouse Indirect Source Rule (ISR)

Incoming Chair Benoit and Members of the Board,

Clean Energy supports the original intent of the Warehouse Indirect Source Rule: to "reduce local and regional NOx and PM emissions". The proposed WAIRE (compliance) menu, however, does not solely factor in emission reductions but also includes project costs. Ironically, the inclusion of such costs penalizes cost-effective solutions and appears to do more for the California Air Resources Board's (CARB) long-term ZEV transition goals than the South Coast AQMD's goal to immediately improve air quality throughout the South Coast air basin. 125-1

Penalizing cost-effective strategies in the WAIRE menu is bad for the South Coast as it will have a material impact on the rule's ability to reduce emissions. Given that CARB is focused on statewide policy through its Advanced Clean Truck rule to achieve long-term emission (2045+), shouldn't the AQMD's PR 2305 target emissions reductions required to meet the region's 2023 and 2031 federal NOx attainment deadlines? 125-2

Clean Energy thereby requests that the Governing Board make a motion to remove the cost component from the WAIRE methodology used to determine WAIRE (compliance) points for each strategy. This change would guarantee that points are only awarded for much needed NOx and PM emissions reductions. Basing points on reductions alone is a simple, transparent and straightforward approach that provides greater flexibility for warehouse owners and operators, better air quality outcomes for the community, and avoids unnecessary market manipulation. 125-3

Thank you for your time and consideration. If you should have any questions, please contact me directly at your convenience. 125-4

Most sincerely,

Todd R. Campbell

Cc: Mr. Wayne Nastri
Mr. Victor Juan

From: William Vogel <will@vogelcre.com>
Sent: Monday, April 19, 2021 3:36 PM
To: Ryan Banuelos <RBanuelos@aqmd.gov>
Cc: Victor Juan <vjuan@aqmd.gov>
Subject: Proposed Rule 2305

To Whom It May Concern;

We were just made aware of this proposed rule to the SCQAMD and vehemently oppose everything that is in it. As an owner of warehouses in the district we cannot fathom a possible need for a warehouse owner to report anything to the SCQAMD. We do not operate the warehouses nor do we operate the trucks that come to and from our warehouses. As a vacant warehouse we have 0% emissions and at all other times our tenants are solely responsible for the operation of the buildings including utilities consumed thereby. 126-1

As an operator of a warehouse of more than 100 SF (which is a number that is growing at a rapid pace) you don't have to be the biggest fish in the ocean anymore. This will be putting undue stress on our mom & pop operators who are already struggling to get by thanks to the Governor shutting down more than half of the state for almost one whole year. If you want the whole trucking industry to adopt fuel efficient trucks, focus on the trucking operators and not the building owners or the companies that warehouse in them. 126-2

Adopting electric trucks will only help to quicken the states already degrading electrical infrastructure that can be blamed for rolling blackouts during times of high demand, especially at night which is when everyone plugs in, as well as the public fiascos such as the massive fires up north and throughout SoCal for almost a decade. Half of our buildings aren't even supplied with enough power to allow for plugins and that can't be fixed by us as the utility never buried enough line in the city streets in order to serve that type of demand. 126-3

We already have tenants leaving the state in droves and I expect this will hurry that up over the next couple of years. If you want to keep the state's tax income rolling through the doors, start worrying about helping businesses grow and prosper and providing power to folks year round without blackouts or polluting fires. At this rate, there won't be anyone left here to breathe the air you purport to care about keeping clean. 126-4

William D. Vogel II
President
Vogel Properties, Inc.

300 Paseo Tesoro
Walnut, CA 91789

Office: (909) 598-7065
Mobile: (714) 932-2750

MASTER RESPONSES

1. Response to comment that PR 2305 and PR 316 will have permanent costs of $0.90 per square foot and $1 billion per year.

The potential costs raised in some comment letters are inaccurate and significantly overstate the potential cost of PR 2305 and PR 316. The Final Staff Report and Socioeconomic Impact Assessment (SIA) analyzed the compliance costs of implementing PR 2305 and PR 316. The analysis modeled 19 scenarios using WAIRE Menu actions and the mitigation fee and found a range of potential costs of -$0.02/sf/yr to $0.83/sf/yr (Final Staff Report Table 20, SIA Table 27).[1] 13 of the 19 scenarios modeled were found to have costs less than $0.23/sf/yr, or less than $190 million per year. All estimates included the cost of implementing actions in the WAIRE Menu as well as reporting and recordkeeping costs associated with PR 2305 and PR 316.

The lowest-cost scenario (Scenario 10, visits from Class 6 zero emission trucks) resulted in a 10-year average net savings of $12.6 million per year. Cost savings occurs in this scenario because the total cost of ownership of these trucks during the 10-year period analyzed is calculated to be cheaper than conventional diesel. Higher up-front capital costs for ZE technology is offset by lower fuel and maintenance costs. This dynamic is anticipated to become more prominent through time with ZE trucks, but the exact timing for when this cost savings will occur will vary by truck class and duty cycle. In the analysis conducted for PR 2305, the only ZE trucks with an overall cost savings are Class 6. As a conservative measure, some savings have not been folded into the analysis, such as any incentive funding or revenue from the Low Carbon Fuel Standard program.

The highest cost scenario (Scenario 7, 'inefficient' mitigation fee) over a 10-year period averaged $670.2 million per year, equal to $0.83/sq. ft. The 'inefficient' mitigation fee assumes that even though all warehouse operators only pay the mitigation fee to comply with the rule, they do not attempt to earn any WAIRE Points from visits from NZE and ZE trucks incentivized by those mitigation fees in the WAIRE Mitigation Program. This level of funding in the WAIRE Mitigation Program would result in a substantial turnover of trucks, and much higher public health benefits with emission reductions up to about 20 tons per day. However, because warehouse operators are expected to find ways to reduce their costs, it is expected that they would earn points for incentivized trucks. A more realistic scenario showing the interaction between a mitigation fee-only scenario and the WAIRE Mitigation Program was modeled. The same style of compliance approach whereby every warehouse operator pays a mitigation fee, but they earn WAIRE Points for NZE trucks incentivized by those fees (Scenario 7a, a 'high-efficiency' mitigation fee scenario) results in costs as low as $0.14/sf/yr, equal to $114 million annually.

Other higher cost scenarios were also analyzed, and some warehouse operators are anticipated to pursue those higher cost options (e.g., due to corporate sustainability goals). Some examples include installing and using a hydrogen station and fuel cell trucks (Scenario 12, $1.04/sq. ft.) or installing solar panels (Scenario 11, $1.21/sq. ft.). For the hydrogen station and fuel cell truck scenario, the costs are high relative to the level of implementation required for PR 2305, primarily due to the high capital costs for the trucks and station. However, some use cases that include greater levels of implementation may result in a hydrogen scenario becoming more cost effective than other technologies. For the solar panel scenario, cost savings are anticipated over the life of the panel system, but those may not be incurred during the 10-year period analyzed.

[1] $/sf/yr = dollars per square foot of warehouse per year

Similar to the hydrogen scenario, some use cases may result in greater cost savings than shown here (e.g., through financing approaches designed to reduce up-front costs). By its design, PR 2305 does not mandate these higher-cost compliance options be used. Absent that mandate, we presumed that warehouse operators would choose the compliance option that works with their business model and is the lowest cost. Therefore the 'inefficient' mitigation fee option was selected as the cheapest high-cost option that any warehouse operator would be required to implement under PR 2305.

It is important to put these regulatory costs in context with other costs warehouse operators face. The worst-case 'inefficient' mitigation fee scenario cost of $0.83/sf/yr is expected to be no more than about 3% of total operating costs for a typical warehouse operator. The 'high-efficiency' mitigation fee scenario results in costs about 0.5% of typical operating costs, which is similar to many other scenarios analyzed. This industry also sustains regular operating cost increases in the South Coast AQMD region, with rents rising about $0.47/sf/yr on average since 2010 (about 1.7% of operating costs, and an increase of about 63% from 2012-2019), yet surrounding regions rental increases have averaged only about $0.06/sf/yr. Simultaneously, warehouse vacancy rates in the South Coast AQMD region remain consistently low at around 4%,[2] and goods movement activity in the region is at an all-time high, with the ports of Los Angeles and Long Beach consistently setting records for cargo volume.[3]

Industry experts have also pointed to the continued strength of the warehousing industry. For example, Fran Inman (Senior Vice President at Majestic Realty, a warehouse owner, California Transportation Commissioner, and Executive Committee Member with NAIOP SoCal, a trade association for industrial property owners) recently stated in response to a question about the state of the warehousing industry in March 2021 "Consumer demand will stay strong…we have seen very little vacancy [in warehousing space], and that has held true since 2008 …the sweet spot now relates to e-commerce … and to do e-commerce we need more space."[4]

Similarly, the Winter 2021 Commercial Real Estate Outlook report from Allen Matkins (a law firm specializing in commercial real estate) and the UCLA Anderson Forecast showed that a survey of industrial property developers believe that "the expectation was for lease rate increases to exceed the rate of inflation and for the already low vacancy rates to be even lower by 2023… [and] for a new wave of warehouse building over the coming three years."[5] Finally, in January 2021 Kurt Strasmann (Executive Managing Director for Orange County and Inland Empire Operations for CBRE, a commercial and industrial real estate company) stated, "You keep expecting regulation to take a toll on business, but when you look at the numbers and metrics, they keep going and going. Thus far I have not seen [regulation] affect demand."[6]

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[2] IEc Task 2 "Technical Memorandum on Real Estate Markets Neighboring the South Coast AQMD Region"

[3] https://www.maritime-executive.com/article/port-of-long-beach-sets-110-year-record-in-february, https://www.dailybreeze.com/2021/03/16/port-of-la-continues-breaking-cargo-records-in-historic-7-month-surge/, https://www.freightwaves.com/news/62-ships-at-anchor-in-san-pedro-bay-on-wednesday

[4] https://www.portoflosangeles.org/references/2021-news-releases/news_031621_feb_teus at 12:10

[5] https://connect.allenmatkins.com/hubfs/Anderson%20Forecast/Winter%202021/AMCRES_Winter_2021.pdf?hsCtaTracking=9cbedffc-5a28-4951-a7e1-255393bef5e5%7Ccecf4503-3ced-43f9-9cd2-36f68c0ac76e

[6] https://www.freightwaves.com/news/insatiable-demand-drives-southern-california-warehouse-boom

2. Response to comment that it is not feasible to comply with PR 2305 because:

2a. The proposed rule requires warehouses to control truck fleets and decrease truck emissions. Yet, warehouse operators are not able to accomplish this task.

To comply with PR 2305, warehouse operators can choose to implement up to 32 different WAIRE menu actions, a Custom WAIRE Plan, pay the optional mitigation fee, or any combination of the three. Options are available that allow warehouses to comply with the regulation without controlling truck fleets or decreasing truck emissions. This includes installing or using solar panels, installing or using charging stations (including for cars, such as for their employees), installing filtration systems in nearby sensitive land uses like daycares or residences, implementing a Custom WAIRE Plan that avoids working with truck fleets, or paying a mitigation fee.

The PR 2305 Final Staff Report (Appendix C) documents that approximately 40% of warehouse operators are expected to own a truck fleet, and interviews with many warehouse operators have revealed that many warehouse operators also arrange for trucking services for at least some of the goods going to or leaving their warehouse. Therefore, there are many warehouses that could exercise control over a trucking fleet to reduce emissions. Furthermore, in instances where warehouse operators choose WAIRE Menu items that address trucks, these options do not require 100% control of trucking operations. As an example, an operator of a 250,000 sf warehouse would typically have about 41 Class 8 truck visits per day and 15 Class 2b-7 truck visits per day. If that warehouse operator averages about five Class 8 NZE truck visits per day, they would earn enough WAIRE Points to satisfy their compliance obligation at the highest proposed stringency. This is about 12% of all Class 8 truck visits, and less than 10% of all truck visits.

2b. Warehouses have no control over how truck engines are manufactured.

This comment misinterprets the proposed rule requirements for warehouse owners and operators. PR 2305 does not require warehouse operators or owners to control how truck engines are manufactured, nor does it place any requirements on truck or truck engine manufacturers. PR 2305 allows warehouse operators to satisfy their compliance obligation through options that rely on NZE or ZE truck acquisitions or visits. These NZE and ZE standards that apply to truck manufacturers are already defined by the California Air Resources Board in their Optional Low NOx Regulation, and Zero Emissions Powertrain Certification Regulation.[7] If a warehouse operator uses one of these truck options, they would rely on these existing standards for trucks that are commercially available.

2c. Warehouses do not own truck fleets, nor do they control what type of trucks shipping companies purchase. Warehouse operators do not control which trucks come to warehouses, when they arrive, where they come from, or any other variables related to truck trips.

The Final Staff Report (Appendix C) documents that approximately 40% of warehouse operators are expected to own a truck fleet, and interviews with many warehouse operators have revealed that many warehouse operators also arrange for trucking services for at least some of the goods going to or leaving their warehouse. In instances where warehouse operators choose WAIRE Menu items that address trucks, these options do not require 100% control of trucking operations. As an example, an operator of a 250,000 sf warehouse would

[7] Both regulations are codified in California Code of Regulations Title 13, section 1956.8.

typically have about 41 Class 8 truck visits per day and 15 Class 2b-7 truck visits per day. If that warehouse operator averages about five NZE Class 8 truck visits per day, they would earn enough WAIRE Points to satisfy their compliance obligation at the highest proposed stringency. This is about 12% of all Class 8 truck visits, and less than 10% of all truck visits.

In conversations with staff during rule development, warehouse operators have also described business practices whereby environmental requirements have been placed on trucking companies delivering goods to their warehouse. For example, in periods when fuel prices have been high, warehouse operators have included contractual requirements that trucking companies are required to use EPA SmartWay fleets in order to pass on any fuel surcharges.[8, 9] Another more recent example includes a warehouse operator who, as part of their corporate sustainability goals, works with both a trucking company and a truck rental company to ensure zero-emission trucks are used at their warehouse, even though neither the warehouse operator nor trucking company owns the trucks, and the operator does not employ the truck drivers.[10] Additional business models that have emerged elsewhere include in Shenzhen, China, where the fleet of electric logistics vehicles increased from about zero to over 80,000 in just five years.[11] One of the key enabling mechanisms included the "emergence of leasing companies that bundle the provisions of vehicles, charging, maintenance, and at times, even drivers for a flat monthly or annual fee."[12] For warehouse operators that do not own fleets or contract directly with any trucking companies, if they want to take actions to earn WAIRE Points from truck visits, they may have the ability to work with the goods owner (on whose behalf they are operating the warehouse) who is responsible for arranging for trucking services for their goods.

Finally, there are several complementary policies underway that support the widespread introduction of NZE and ZE trucks in the region. These complementary policies will assist warehouse operators in developing the market for NZE and ZE trucks if they choose to use these compliance options. Example policies include the following: CARB's Advanced Clean Trucks regulation mandating increasing sales of ZE trucks beginning in 2024, the San Pedro Bay ports' updated Clean Truck Program which will charge drayage operators without NZE or ZE trucks $10 per TEU, and various existing incentive programs including Carl Moyer, Prop. 1B, Volkswagen Environmental Mitigation Trust, and AB 617.[13]

2d. The technology is not available to accomplish items on the WAIRE menu. For example, there are no heavy-duty electric trucks available that are 100% viable from a technology and/or economically reasonable standard.

Technology is available to accomplish items on the WAIRE Menu. The comment uses an incorrect standard to conclude that technology is not available by assuming PR 2305 compliance can only be accomplished with electric trucks that are "100% viable from a

[8] The EPA SmartWay program is a voluntary system that "provides a comprehensive and well-recognized system for tracking, documenting and sharing information about fuel use and freight emissions across supply chains." It includes a certification component for fleets to show that they meet emissions and fuel savings benchmarks. https://www.epa.gov/smartway/learn-about-smartway

[9] https://www.fleetowner.com/trucks-at-work/article/21697638/mandatory-pass-through-part-two,

[10] https://www.businesswire.com/news/home/20210330005403/en/Fluid-Truck-Orders-40-Additional-Zero-Emission-Trucks-from-Lightning-eMotors, https://www.freightwaves.com/news/ikeas-nyc-last-mile-delivery-fleet-to-be-fully-electric-by-may

[11] https://www.greenbiz.com/article/what-us-can-learn-china-about-how-leasing-affects-ev-transition

[12] A New EV Horizon: Insights From Shenzhen's Path to Global Leadership in Electric Logistics Vehicles, 2019. https://rmi.org/insight/a-new-ev-horizon

[13] http://www.aqmd.gov/home/programs/business/business-detail?title=vehicle-engine-upgrades

technology and/or economically reasonable standard". First, the statement is conclusory and provides no support for what is 'economically reasonable' or '100% viable'. The Socioeconomic Impact Assessment and Final Staff Report evaluated the potential costs of the rule and determined the expected cost-effectiveness of PR 2305 and PR 316 are in line with recently adopted CARB mobile source measures (Pages 77-78 and Table 24 of the Final Staff Report). Second, the comment focuses only on electric trucks, and ignores other menu options that are currently available. For example, commercially available options that are available today include acquiring or using NZE trucks, or NZE or ZE yard trucks, and installing and using solar panels, filtration systems, and charging stations.

Further, nearly all NZE and ZE trucks on the WAIRE Menu are commercially available today or are expected to be so during the first compliance year. [14] For example, South Coast AQMD has already funded over 1,200 NZE trucks that are operating in commercial service today. NZE engines are currently available in two sizes – 11.9 liter and 8.9 liter. Major truck manufacturers offer these engines in different truck classes, including Class 8 long haul and/or drayage truck operations.[15] The ZE truck market is starting to grow quickly, with many models entering the commercial market today and many major manufacturers announcing plans for future commercialization of battery-electric and hydrogen fuel cell electric trucks. Some notable manufacturer announcements are listed in the Final Staff Report (Appendix B). There are expected to be 62 models of medium duty (e.g., Class 4-7) ZE trucks commercially available during 2021,[16] and ZE Class 8 trucks are expected to be introduced in late 2021 and 2022.[17] Additionally, ZE yard trucks are commercially available today and have been operating at warehouses since 2015[18]. Manufacturers that have begun offering battery-electric ZE yard trucks for sale commercially including OrangeEV, Kalmar Ottawa, and BYD.

3. Response to comment that PR 2305 won't result in emission reductions and won't result in meeting air quality standards. As stated during South Coast AQMD's Scientific, Technical, and Modeling Peer Review Advisory Group Meeting on January 27, 2021, the small quantities of NOx reductions generated by this rule will not be sufficient to decrease ozone concentrations in the basin.

The purpose of PR 2305 is to reduce local and regional emissions of NOx and PM associated with warehouses to assist in meeting state air quality standards "by the earliest practicable date" (Health and Safety Code 40913) and federal requirements to attain the 1997, 2008, and 2015 ozone standards (with attainment required in 2023, 2031, and 2037, respectively) and the 2012 fine particulate matter standard in 2025. The analysis in the Final Staff Report (Tables 15 and 16), implementing PR 2305 is estimated to result in approximately 1.5 – 3.0 tons per day of

[14] https://www.epa.gov/sites/production/files/2021-01/documents/420f21002.pdf, https://ww3.arb.ca.gov/msprog/onroad/cert/cert.php#6, https://www.ngvamerica.org/vehicles/availability/?vehicle_type=heavy-duty-truck-oems

[15] https://apnews.com/article/business-technology-lifestyle-alternative-and-sustainable-energy-oil-and-gas-refining-9cd69b79f02ad8626e6522ae858efa27, https://kentico.portoflosangeles.org/getmedia/0c341695-2dec-430a-b2d9-f828d4b2df1a/final-drayage-truck-feasibility-assessment-w-addendum

[16] https://globaldrivetozero.org/tools/zero-emission-technology-inventory/

[17] Examples: https://www.volvotrucks.us/news-and-stories/press-releases/2020/december/volvo-trucks-introduces-the-volvo-vnr-electric-model-in-the-us-canada/, https://freightliner.com/trucks/ecascadia/

[18] Example: https://orangeev.com/orange-ev-announces-initial-sales-of-its-t-series-zero-emission-electric-terminal-truck-an-industry-leading-first/

NOx emission reductions beyond CARB regulations (CARB's Advanced Clean Trucks, Low NOx Omnibus, and Heavy Duty I/M rules), which is about a 10-15% reduction. Diesel PM reductions are also expected to be about 10-15% beyond CARB regulations.

While the PR 2305 will result in emission reductions, it will not on its own result in the attainment of any air quality standard. Nonetheless, PR 2305 is part of a larger comprehensive strategy described in the 2016 Air Quality Management Plan (AQMP) that is designed to meet both federal and state air quality standards. The 2016 AQMP found a NOx-focused emission reduction strategy is the only mechanism to achieve national ambient air quality standards for ozone.[19] This approach requires NOx emissions reductions of about 108 tons per day to meet the 1997 ozone standard and about 88 tons per day to meet the 2008 ozone standard using 'further deployment measures' that were undefined and relied on flexibility provided by Clean Air Act section 182(e)(5) when the 2016 AQMP was adopted.[20] PR 2305 can assist in fulfilling some of these 'further deployment' emission reductions. In addition to reducing emissions, PR 2305 facilitates emission reductions for other regulations that are part of the comprehensive strategy, including by laying the groundwork for future emission reduction technologies such as facilitating development of zero-emission charging and fueling infrastructure for ZE trucks.

Finally, PR 2305 also helps ensure that statewide measures result in emissions reductions in the South Coast AQMD. The Final Staff Report (beginning on pg. 15) describes how statewide mandates for ZE light duty passenger car sales has not resulted in equal benefits throughout the state, and the three counties with the worst air quality (all in the South Coast AQMD region) do not have higher levels of ZE adoption, even with statewide mandates. PR 2305 can help facilitate ZE truck adoption in the South Coast AQMD region, in conjunction with CARB's statewide mandate for ZE truck sales in its Advanced Clean Trucks regulation.

The comment regarding what was presented during the Scientific, Technical, and Modeling Peer Review (STMPR) Advisory Group Meeting fundamentally misconstrues the results of the analysis in two ways. First, the presentation discussed recent regional air quality modeling conducted by South Coast AQMD staff, including the effects from emissions changes due to COVID-19. As discussed during the STMPR meeting, due to complex chemistry affecting ozone concentrations (with key parameters including meteorology, NOx emissions, Volatile Organic Compound [VOC] emissions, and the ratio of NOx to VOC), there are instances when reductions in NOx could cause increases in ozone. This well-understood scientific phenomenon is called the weekend effect because higher ozone has historically occurred on the weekends when NOx emissions are lower, relative to weekdays. After taking this phenomenon into account, the 2016 AQMP concluded that the only way to achieve the federal ozone standards throughout the South Coast AQMD region is to reduce NOx emissions.

Additionally, the comment assumes PR 2305 would be the only emission reductions that would occur. Since PR 2305 is part of a broader strategy to reduce emissions as outlined in the 2016 AQMP, ozone reductions and subsequent attainment of air quality standards are attributable to each measure. Therefore, the STMPR presentation is consistent with the conclusions of the 2016 AQMP, and the overall strategy to reduce NOx emissions to achieve federal and state ozone standards. After considering the scientific evidence, both CARB and U.S. EPA have

[19] http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf

[20] Table 3 here: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/appendix-iv-b.pdf

approved this approach with their approvals of the 2016 AQMP, and these NOx reductions are now a legally required element of meeting the requirements of the Clean Air Act.

4. Response to comment that warehouses are an essential industry that delivers goods, especially during the pandemic.

Warehousing is a key component of the broader goods movement industry and is an important part of the regional and national economy. During the ongoing COVID-19 pandemic, the warehouse industry has continued to assist in delivering goods to consumers and has experienced periods of record cargo volume. This trend is expected to continue as the economy is anticipated to rebound in the coming year after a slump to the broader economy brought on by the pandemic during 2020.[21] The proposed phase-in schedule for PR 2305 will not impose any requirements for any warehouse operators to begin earning WAIRE Points until after January 1, 2022, long after vaccines became available for the entire adult population in the country on April 19, 2021.[22] The proposed three-year phase-in to introduce warehouses into the PR 2305 WAIRE Points system further separates the regulation in time with the COVID-19 pandemic. Therefore, the warehousing industry that would be regulated by PR 2305 is not expected to be adversely impacted by COVID-19, especially in comparison to the impacts experienced during the height of the pandemic in late 2020. Further, cargo volumes have surged at the ports of Los Angeles and Long Beach during the pandemic,[23] and a resulting high level of truck travel and emissions associated with warehousing has continued.[24] It is therefore clear that warehousing and the goods movement industry in Southern California is thriving, and is expected to perform strongly into the future. Indeed, the growth experienced by this sector underscores the need to curb the rising emissions associated with it.

5. Response to comment that the proposed rule would create uncertainty in the economy. The economic impacts of PR 2305 and PR 316 is not known.

This comment does not acknowledge the extensive analysis conducted of the potential costs and economic impacts of PR 2305 and PR 316 that are included in the Socioeconomic Impact Assessment (SIA), the third party study of potential warehouse relocations in response to the proposed rule, or the third party peer reviews of these economic studies.[25] These studies fully analyze the range of potential

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[21] U.S. gross domestic product is anticipated to grow 6.5% in 2021. https://www.federalreserve.gov/monetarypolicy/fomcprojtabl20210317.htm, https://www.gov.ca.gov/2021/04/06/governor-newsom-outlines-the-states-next-step-in-the-covid-19-pandemic-recovery-moving-beyond-the-blueprint/

[22] https://www.whitehouse.gov/briefing-room/press-briefings/2021/04/19/press-briefing-by-press-secretary-jen-psaki-april-19-2021/

[23] https://www.supplychaindive.com/news/california-port-congestion-los-angeles-long-beach-data/594715/

[24] As an example, data from the CalTrans PeMS website (https://pems.dot.ca.gov/) shows that monthly truck vehicle miles travelled (VMT) on the SR-91 East freeway (a key linkage between the ports of Los Angeles and Long Beach and warehouses in the Inland Empire region) increased substantially after the lowest point of the pandemic in April 2020. Truck VMT in April 2020 was 8.8 billion miles, and by October 2020 was 11.8 billion miles, an increase of about 34%. Truck VMT has stayed at high levels since that time with 11.8 billion miles again travelled in March 2021. This current level of truck VMT is higher than any level reached in the 12 months prior to the onset of the pandemic.

[25] Assessment of Warehouse Relocations Associated with the South Coast Air Quality Management District Warehouse Indirect Source Rule, IEc, Dec. 23, 2020. (http://www.aqmd.gov/docs/default-source/planning/fbmsm-docs/iec_pr-2305-warehouse-relocation-report-(12-23-20).pdf), Peer Review of PR 2305

economic impacts, and conversely the monetized public health benefits of the proposed rules. These public health benefits are estimated to be about three times higher than the potential costs of the regulation for most scenarios analyzed (SIA, Table 42). Further, the costs potentially imposed by these proposed rules are not anticipated to cause warehouses to relocate outside of the region. This is supported by extensive modeling analysis in the study conducted by Industrial Economics, Inc., as well as consistent behavior in how warehousing has responded to increased costs in the past.

The warehouse industry has grown steadily in the South Coast AQMD region in the past several decades (Final Staff Report, page 45-46). Costs to this industry have steadily increased as well, demonstrated by persistent annual increases in rent of 5% or more paid by warehouse operators. These rents have increased faster in the South Coast AQMD region compared to outlying regions (Final Staff Report, Figure 12). Even with these increasing costs, warehouse owners and operators have found it advantageous to continue operating preferentially in the South Coast AQMD region, with net absorption increasing in our region faster than in adjacent regions (Final Staff Report, Figure 11).

6. Response to comment that PR 2305 and PR 316 would threaten jobs provided by warehouses.

The Socioeconomic Impact Assessment (peer reviewed by a third party) included an analysis of six different compliance scenarios to determine the potential range of impacts to jobs if PR 2305 and PR 316 are approved. This analysis concluded the level of job impacts varied depending on which compliance scenario warehouse operators choose, but in all cases future anticipated job levels are higher than current job levels. One scenario was found to result in an increase in the number of jobs by about 240 per year (if all warehouse operators earned WAIRE Points through ZE Class 6 truck visits). All other scenarios resulted in some reduced future job growth – jobs foregone – which is not a loss of existing jobs. An example of a sector that could see job gains includes electricians or others who would install charging infrastructure or solar panels.[26] The range of overall jobs foregone was as low as 410 jobs per year and as high as 11,141 jobs per year across all industry sectors in the worst-case scenario, about 0.1% of all jobs in the region. This worst-case scenario is not expected to occur as described in Master Response to Comments 1, since the level of incentive funding that would be available if every warehouse operator only complied with mitigation fees would yield substantial turnover of the truck fleet. If warehouse operators earn WAIRE Points for all the trucks incentivized by their mitigation fees, their remaining compliance obligation will be substantially reduced, and their subsequent costs will be substantially reduced. This more likely scenario would result in about 1,901 jobs forgone per year, less than 0.02% of all jobs in the region.

This economic impact of jobs foregone, as well as other economic impacts (e.g., reduced economic output) was compared with the anticipated monetized public health benefit due to emission reductions from PR 2305. The monetized public health benefit was found to be about

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Draft Socioeconomic Impact Assessment (Appendix I of SIA), Peer Review of Industrial Economics, Inc. (IEc) Socioeconomic Analysis of Warehouse Relocations, IEc Response to Comments (Appendix II of SIA),

[26] Several studies have pointed to the shifting of job sectors and resulting economic benefits as the state transitions to zero emissions transportation. To the extent that PR 2305 helps facilitate that transition, some of the economic and jobs benefits described in these studies will also be expected to occur. Example studies include: https://laborcenter.berkeley.edu/wp-content/uploads/2020/09/Putting-California-on-the-High-Road.pdf, https://laincubator.org/wp-content/uploads/LACI-GREEN-JOBS-REPORT.pdf, https://laedc.org/wp-content/uploads/2020/03/EV_Report_Digital_FINAL_Single_Page.pdf

three times higher than the costs of the rule in most scenarios analyzed. Some public health benefits for jobs were also identified, such as about 1,000 to 2,500 fewer lost work days.

7. Response to comment that South Coast AQMD should publicly explain its authority to adopt the proposed indirect source rule.

A discussion of South Coast AQMD's indirect source authority is included in Chapter 1 of the Final Staff Report (pages 18-20), and in the draft findings made pursuant to Health and Safety Code 40727 on page 80 of the Final Staff Report. Additional discussion of South Coast AQMD's legal authority is included in responses to comments 39, 40, and 44 (Caltax, NAIOP, CTA responses).

8. Response to comment that PR 2305 is duplicative with CARB regulations and is therefore a waste of resources. CARB has mobile source authority and is the more appropriate entity to develop regulations.

PR 2305 is not a duplicative measure, as it is part of a more comprehensive strategy for reducing emissions in the region and in the state.[27] U.S. EPA and CARB have primary authority in regulating mobile sources by setting new engine standards and in use standards, but South Coast AQMD was expressly given indirect source authority by the legislature (see Master Response to Comments 7 for further discussion of legal authority). PR 2305 is also designed to facilitate the early implementation of other regulations, for example by allowing installation of charging and fueling infrastructure to advance ZE technology toward meeting the state's goals. PR 2305 complements the state's strategy to reduce emissions from trucks that includes CARB's Advanced Clean Truck (ACT) rule, Low NOx Omnibus rule, Heavy Duty I/M rule, and other proposed regulations. As demonstrated in the 2016 AQMP, and in CARB's recent draft Mobile Source Strategy,[28] those three rules from CARB will not provide sufficient emission reductions from the trucking sector to meet air quality standards in 2023, 2031, or 2037. An additional regulation called the Advanced Clean Fleet (ACF) rule is also being proposed by CARB, however its final approval is not anticipated until late 2022. Further, even though the current concepts proposed by CARB for ACF are still in development, their preliminary indications are that significant emission reductions are not expected from that rule until the 2030s, too late to meet federal air quality standards in 2023 and 2031.

In order to account for these recent regulatory actions by CARB, the Final Staff Report includes a comprehensive analysis that quantitatively accounts for any emission reductions that would be achieved from the ACT, Low NOx Omnibus, and Heavy Duty I/M rules. Emission calculations using CARB's EMFAC2017 and the META Tool that was developed as part of their Mobile Source Strategy development were used to discount any potential overlapping emission reductions from PR 2305. [29] The result of this analysis that was conducted specifically

[27] Note that CARB in its comments (see Letter 101) supports the adoption of PR 2305 as "an important action in addressing the region's air quality issues and minimizing the public health impacts that warehouse activities have on nearby communities that are disproportionately burdened by air pollution."

[28] https://ww2.arb.ca.gov/resources/documents/2020-mobile-source-strategy. Additional discussion of the draft Mobile Source Strategy can be found in Chapter 1 of the Final Staff Report under the State Goals section (page 10) and in Chapter 3 under the Rule Stringency discussion (page 52).

[29] EMFAC 2017 is the most recent EPA-approved emissions inventory tool for use in California, but it does not include ACT, Low NOx Omnibus, or Heavy Duty I/M rules. The quantitative methods to estimate emission reductions from those rules are included in the Meta Tool.

to evaluate potential duplicative measures found that PR 2305 would reduce NOx emissions beyond all existing CARB regulations by about 1.5 – 3.0 tons per day (Final Staff Report, Table 15). Any analysis of future regulations (e.g., ACF) was not possible as it is too speculative to determine what emission reductions may be achieved but additional emissions reductions are expected from PR 2305.

9. Response to comment that California has the cleanest supply chain in the US. Emissions from trucks have been reduced by 95% in the past, and emission reductions will continue without PR 2305.

The statement that California already has the cleanest supply chain is incorrect. Although there are many policies in the state to advance near zero or zero emission technologies, these technologies have not been widely adopted to date. Even with these policies in place, our region still ranks as the worst in the nation for ozone, and one of the worst for fine particulate matter.[30] Furthermore, a recent study found that California is ranked 40th out of 50 states in the penetration of 2010 engine standards into its truck fleets.[31] Finally, the goods movement sector makes up about 52% of the NOx emissions in the South Coast Air Basin.[32] Total NOx emissions must be reduced by 45% and 55% as of the attainment date in order to meet federal ozone deadlines in 2023 and 2031, respectively.

Notwithstanding these facts about the supply chain and its air quality impacts, truck emissions have shown welcome historical decreases in both Diesel Particulate Matter and NOx, and additional reductions are expected in the future. However, as demonstrated in the 2016 AQMP and CARB's draft Mobile Source Strategy, even with these historic and anticipated reductions from existing regulations, substantially greater emission reductions are needed to achieve state and federal air quality standards. PR 2305 is designed to reduce emissions associated with warehouses beyond CARB regulations, while also facilitating additional local emission reductions by including options for ZE charging and fueling infrastructure.

10. Response to comment that PR 2305 appears to be more of a funding mechanism with the mitigation fee than anything that addresses environmental concerns.

PR 2305 provides many different options for compliance, including a mitigation fee. The purpose of the rule is to reduce emissions and facilitate emission reductions, which can be done by implementing measures on the WAIRE menu, implementing a Custom WAIRE plan, or paying an optional mitigation fee. The mitigation fee will be used to incentivize acquisition of NZE and ZE trucks and ZE charging infrastructure. Thus, the mitigation fee also addresses environmental concerns because it will be used to reduce pollution. Without the mitigation fee option, warehouse operators would have less flexibility in how they could comply with the rule. During development of the rule, industry repeatedly cited the need for maximum flexibility in compliance options. Warehouse operators could choose this option by itself, or in combination with any other options to satisfy their WAIRE Points Compliance Obligation (WPCO). This could prove helpful in that some of the other options would be more difficult to satisfy their WPCO without needing to over-comply with the rule. Because the mitigation fee can be

[30] https://www.lung.org/research/sota/key-findings/most-polluted-places
[31] https://www.dieselforum.org/California
[32] https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal_goods-movement.pdf?1606001690

tailored precisely from 0.1 WAIRE Points on up to any level, warehouse operators can use it to fill in any remaining WAIRE Points in a simple way without using the WAIRE Menu.

The mitigation fee of $1,000 per WAIRE Point has also been set at a level that is designed to achieve approximately the same level of compliance as other options in the WAIRE Menu in any one year. However, because the warehouse operator is not investing directly in their own operations when complying with PR 2305 through paying a mitigation fee, the costs in later years may be higher than other compliance options that allows early investments to be used. This can be seen in Figures 15 through 18 in the Final Staff Report where the cost of Scenario 7 is similar to other options in early years, then often exceeds the costs of other compliance options in later years.

As with any regulation, the regulated entities (i.e., warehouse operators) are expected to pursue the cheapest and/or easiest method of compliance possible. With many options yielding lower costs when looking over multiple years, many (if not most) warehouse operators would be expected to choose other options besides the mitigation fee as the primary compliance method. For warehouse operators that do choose the mitigation fee, the funding would go directly towards incentivizing NZE and ZE trucks and ZE charging and fueling infrastructure. Scenario 7a shows what would occur if all warehouse operators account for these incentivized trucks, and the mitigation fee would then become a much cheaper option (Final Staff Report, Figure 14), similar to other lower cost options. In addition, the Final Staff Report provides a description of the WAIRE Mitigation Program that would use the mitigation fees paid by warehouse operators. Finally, the Board Resolution accompanying PR 2305 will include a framework for components of the WAIRE Mitigation Program, though some details will be developed in the future during solicitations for projects. All solicitations and awarding of funds will be brought before the Governing Board for approval and will include a public process.

Responses to Comment Letter #1 CCAEJ - 2/14/2019

Response to 1-1

Thank you for your participation in the rule development process and your comments in support of a warehouse ISR.

Response to 1-2

Staff analyzed various strategies including from facility caps, fleet certifications, best management practices, and a mitigation fee., Staff ultimately deciding on a menu-based points approach that promoted the incorporation of cleaner NZE and ZE technologies to get the needed regional NOx and local DPM community benefit while preserving flexibility to accommodate a variety of warehouse business models. Facility caps were found to be an infeasible approach due to the difficulty in tracking the distances that every truck visiting a warehouse travels. Trucking companies consider this proprietary information as they will travel to warehouse competitors. Further, goods in a truck may be destined for multiple warehouses, and assigning mileage to specific warehouses is impractical. Finally, even if those difficult challenges could be addressed, the administrative burden on facilities and South Coast AQMD to calculate emissions for every facility is significant given the ~3,000 warehouses covered by the rule, and the hundreds of thousands of trucks that operate in the region every day. The proposed menu-based system approach was determined to be the most feasible to administer that also met the project objectives.

Response to 1-3

Thank you for your participation in the rule development process and your comments in support of a warehouse ISR.

Responses to Comment Letter #2 Clean Energy Fuels- 8/23/2019

Response to 2-1

Thank you for your participation in the rule development process and your comments in support of a warehouse ISR.

Response to 2-2

PR 2305 provides options for the purchase and usage of NZE and ZE trucks by warehouse operators, and provides WAIRE Points incentives to motivate the use of NZE and ZE trucks. NZE options are expected to have the lowest cost of compliance in the near term, in particular for NZE Class 8 trucks. This incentive within the rule is expected to generate interest from warehouse operators, however they are free to choose whichever option makes the most sense for their operations. The goal of including NZE and ZE trucks is to get regional and local NOx and PM emission reductions from the mobile sources that are attracted to warehouses. The proposed WAIRE Menu included in PR 2305 includes both NZE and ZE truck acquisition and usage.

Response to 2-3

South Coast AQMD staff agree with the comments that the diesel trucks are a significant NOx emission source, and potentially exceed the current NOx emission standard for heavy duty trucks. CARB has adopted several regulations adopted such as the Low NOx Omnibus and the Heavy Duty I&M regulations that will reduce the NOx emissions but also work to ensure prolonged engine performance and emission standard compliance. South Coast AQMD does not have the authority to set emission standards for new engines or in-use performance standards. However, South Coast AQMD does have indirect source authority to provide WAIRE Points incentives for warehouse operators to acquire or get visits from NZE and ZE trucks to help satisfy their compliance obligation under PR 2305WPCO. In providing NZE and ZE truck options on the WAIRE Menu, South Coast AQMD can get needed short term regional and local NOx and PM emission reductions toward the immediate emission reductions by upcoming 2023 and 2031 attainment deadlines, as well as facilitate early action on the implementation of other truck related rules and regulations that also result in emission reductions. Staff agrees that when an NZE truck is fueled with RNG, there can be GHG benefits in addition to the NOx and PM emission reductions as compared with diesel fueled trucks. As stated in the most recent Proposed Final Integrated Energy Policy Report from the California Energy Commission, renewable natural gas made up about 77% of the pipeline gas supply for vehicles in 2019.[33] NZE truck options present some of the lowest costs in the near term with the proposed rule, and are therefore expected to generate interest from warehouse operators as a compliance option.

Response to 2-4

The comment points out that a near-term ZE shift is unlikely due to cost, infrastructure, and logistical issues. is not yet readily available, and that installing this infrastructure will require more effort. This is also supported in a recent report from the California Energy Commissions that states that up to 157,000 chargers are needed for medium duty and heavy duty vehicles by 2030 in order to meet state goals, yet very few have been built to date.[34] PR 2305 provides a mechanism to encourage installation of this infrastructure at warehouses – a key destination for medium and heavy duty trucks. While NZE trucks are allowed in PR 2305 (and are an attractive compliance option), NZE fueling infrastructure has not been included. This is in part due to a

[33] https://efiling.energy.ca.gov/getdocument.aspx?tn=236905, pg. 134. Accessed 2-28-21

[34] https://efiling.energy.ca.gov/getdocument.aspx?tn=236237, Accessed 2-28-31

desire to work towards state ZE goals, and also because previous statements from the natural gas industry, and implied statements from this comment letter, have stated identified that government support is not needed for the fueling infrastructure for widespread deployment of natural gas fueled NZE trucks other than policy and funding support for the trucks themselves.[35] These previous comments have also stated that the natural gas industry is ready to quickly scale up fueling infrastructure to meet the demands of the trucking industry in southern California, and has a track record of previous successful rapid station developments by constructing 70 stations within one year.

There are currently about 66 CNG and LNG stations in the South Coast AQMD that can serve heavy duty trucks. The ports of Los Angeles and Long Beach estimated that up to 14 new stations could be needed to support up to 18,000 Class 8 NZE trucks serving the ports, however their analysis did not consider the use of any of the existing stations throughout the region.[36] At a stringency of 0.0025 WAIRE Points per WATT, the level of deployment of NZE Class 8 trucks in PR 2305 is no more than about 16,000 trucks over a ten year period in the extreme unlikelihood that all warehouse operators only chose NZE Class 8 trucks as a compliance option. Therefore, no more than 14 new stations are expected to be needed to support NZE trucks under PR 2305, and potentially could be much lower if the existing natural gas "station infrastructure is overbuilt for the current natural gas truck market in California".[37] As a result of these factors – the high need for zero emissions charging/fueling infrastructure, the expressed willingness of the natural gas industry to build out fueling stations on its own, and the limited amount of natural gas fueling infrastructure needed to support any NZE trucks that might be introduced due to PR 2305 – natural gas fueling options are not included as a compliance option within PR 2305. Nonetheless, a CEQA alternative has been included that evaluates additional NZE compliance options within PR 2305, and the Governing Board will consider these alternatives as part of its overall consideration of PR 2305. Further, the Final Staff Report and the accompanying WAIRE Implementation Guidelines now explicitly allow NZE yard trucks to earn WAIRE Points through a Custom WAIRE Plan, and example calculations that warehouse operators could use are included.

Response to 2-5

See Response 2-4 above. The proposed approach in PR 2305 is expected to ultimately result in about 2.5 to 4 tons per day of NOx reduction, including providing near term emission reductions. Whether or not the Governing Board approves PR 2305, South Coast AQMD will continue to advocate with other agencies to adopt policies that promote cost-effective and near term emission reductions (as noted by the commenter in 2-6).

Response to 2-6

See Response 2-4 above. Further, while renewable natural gas (RNG) does have climate benefits relative to conventional diesel fuel, the primary focus of PR 2305 is the reduction of criteria pollutants to reduce regional and local air pollution, and to reduce localized exposure to air pollution sources related to warehouses. Although reducing greenhouse gases is an important goal, it is not one of the project objectives of PR 2305. PR 2305 is expected to result in increased

[35] https://cngvc.org/wp/wp-content/uploads/2017/04/ACT-Now-Plan-Final.pdf, pg. 14, Accessed 2-28-21 https://cleanairactionplan.org/documents/2018-draft-drayage-feasibility-assessment-public-comments.pdf, letters at pg. 14 and 47 Accessed 2-28-21

[36] https://cleanairactionplan.org/documents/final-drayage-truck-feasibility-assessment.pdf/, Accessed 2-28-21

[37] https://cleanairactionplan.org/documents/2018-draft-drayage-feasibility-assessment-public-comments.pdf, pg. 17 Accessed 2-28-21

use of NZE Class 8 trucks fueled by RNG. Thank you for your participation in the rule development process and your comments in support of a warehouse ISR.

Response to Comment Letter #3 - Clean Energy November 26th 2019

Response to Comment 3-1

Thank you for your participation in the rule development process and your comments in support of a warehouse ISR.

Response to Comment 3-2

Staff agrees with the comment regarding consistency in the size applicability definition, which was also addressed during the November 13, 2019 working group meeting. Revisions were made to the rule language and other documents related to PR 2305 that now have the consistent language of "with greater than or equal to 100,000 square feet".

Response to Comment 3-3

The proposed three-year phase-in for PR 2305 takes into account many factors. Key considerations included the number of new facilities entering into a regulatory program, the need for emission reductions, and the potential impact on industry. In order to ensure that South Coast AQMD staff can appropriately administer a new program with approximately 3,300 facilities (a more than 10% increase compared to the current permitted universe of about 28,000 facilities), 1,000 facilities will enter each year for three years to allow compliance staff the necessary time to create the program, including a new online reporting portal, field inspection program, auditing program, and making data available to the public. Staff is aware of the urgency in meeting the 2023 and 2031 federal ozone standards. PR 2305 on its own cannot achieve the emission reductions needed for South Coast AQMD to meet these deadlines. However, it is part of a comprehensive strategy described in the 2016 Air Quality Management Plan, and can make meaningful progress towards those goals. The proposed phase-in will allow for a successful roll out of a new program on an industry of warehouse operators that is largely unregulated by air quality agencies.

Response to Comment 3-4

Early action multipliers are not included in the proposed regulation, however PR 2305 does have early action provisions including one that allows that allows extra WAIRE Points earned in one year to be banked for up to three future years to satisfy future compliance obligations, and another that allows both warehouse operators and owners to earn WAIRE Points ahead of their warehouse size phase-in schedule. The banking clock on these pre-phase-in WAIRE Points does not begin until the warehouse operator's first compliance period, providing an additional early action benefit.

Finally, the WAIRE Menu includes options that go above and beyond current regulations in order to earn WAIRE Points. Warehouse operators may also decide to take early action ahead of the implementation schedule of U.S. EPA or CARB rules and regulation in order to earn WAIRE Points.

Response to Comment 3-5

Staff agrees with the comment that the default WATT calculation serves as a last resort if something beyond the warehouse operator's control resulted in the loss of truck trip count data. Many studies have shown that the correlation between number of truck trips and the size of a warehouse is poor.[38] Therefore, PR 2305 requires actual truck trip count data to obtain the most accurate WPCO for the warehouse operator. Staff's intent is to obtain the most accurate and

[38] http://library.ite.org/pub/a3e6679a-e3a8-bf38-7f29-2961becdd498

representative data set on the actual truck trips counts, but to also have a mechanism to determine a facility's WPCO should something happen to their truck trip counts that was beyond its control, in other words, a *force majeure*.

Response to Comment 3-6
The WAIRE Menu options were compared based on their costs and their potential emission reductions. The mitigation fee of $1,000 per WAIRE Point is similar to the cost of many of these WAIRE Menu options for any one individual warehouse operator in any given year (see page 33 of the Final Staff Report). Although in any one year the cost may be similar, the warehouse operator has not made the investment into the facility and therefore may not be entitled to earn points in future years attributed to usage of items on the WAIRE Menu. because the investments are not made by a facility are not retained with a mitigation fee. As a result, the long term costs of the mitigation fee approach are likely higher. Further, many options in the WAIRE Menu are lower cost than the mitigation fee. Therefore, the mitigation fee approach is not expected to be the dominant mechanism of compliance, though there are no restrictions if warehouse operators choose to use that option.

Response to Comment 3-7
Staff agrees with the concern about the definition of warehousing space. Staff revised Revisions were made to the definition of "warehousing activities" to better address what could be discounted from the warehouse square footage and what square footage could be used for potential warehousing activities even on a temporary or seasonal basis. However, because South Coast AQMD does not have clear knowledge of all of the facilities subject to PR 2305, what may look like a warehouse from databases and limited information visible from an adjacent street, the indoor activity may not be related to warehousing at all. As the PR 2305 compliance options are tailored to warehousing activities, the applicability of the rule is designed to match this activity.

Additionally, the warehouse owner and warehouse operators would be required to submit information on the square footage of the building in the Warehouse Operations Notification, and the amount of square footage leased for actual warehousing activities that could be verified on the lease agreements. During facility audits, should a concern on the square footage arise, a South Coast AQMD inspector may require further documentation from the warehouse operator to confirm the square footage reported on the Warehouse Operations Notification, the Initial Site Information Report, or on the Annual WAIRE Report. In addition, in order to ensure that the suggested abuse does not occur, PR 316 has been included to provide funding for compliance staff to conduct on-site field inspections. As with other compliance activities conducted by South Coast AQMD, site inspections are typically unannounced in order to see how a facility operates during normal activities.

Response to Comment 3-8
The support for the definition of NZE trucks is noted.

Response to Comment 3-9
The WAIRE Menu includes both NZE and ZE on-road truck acquisition and use, but the WAIRE Menu only includes ZE yard trucks. There are key policy distinctions for why ZE yard trucks are the only option considered. First, in the on-road sector ZE trucks are not at the same stage of commercial development as NZE yard trucks, which have been operating in commercial service for several years, especially for Class 8 trucks. However, ZE yard trucks are commercially available today and have been operating at warehouses since 2015. Additionally, because ZE

yard trucks are located at an individual facility, they are well-suited to serve as an early beachhead for the longer term development of ZE vehicle solutions.[39] By focusing PR 2305 on ZE yard trucks, warehouse operators are introduced to ZE technology to see how it works in their operations.

Finally, because yard trucks primarily stay at the warehouse facility, their emissions can have a disproportionate impact on communities surrounding warehouses compared to on-road trucks with emission miles away from a facility. Many yard trucks idle as part of their operation at warehouse facilities, and the switch to ZE yard trucks would benefit public health of the communities surrounding the warehouse to being less by not being burdened by idling emissions. Although NZE engines have lower emissions than their conventional diesel counterparts, they do still have tailpipe emissions. Notwithstanding these issues, a CEQA alternative has been included that evaluates additional NZE compliance options (including for yard trucks) within PR 2305. Further, the Final Staff Report and the accompanying WAIRE Implementation Guidelines now explicitly allow NZE yard trucks to earn WAIRE Points through a Custom WAIRE Plan, and example calculations that warehouse operators could use are included.

Response to Comment 3-10

The installation of ZE charging and fueling infrastructure facilitates the implementation of CARB regulations and supports the Governor's Executive Order N-79-20 as it relates to the ZE truck sales and fleet operation goals. Installing ZE charging or fueling infrastructure would help promote the usage of ZE trucks visiting the warehouse or for ZE trucks the warehouse operator owns or plans to acquire. Staff agrees with the comment that there is no emission benefit from the installation ZE charging or fueling infrastructure itself, but this option is included in the WAIRE Menu as it facilitates the usage of ZE technology. WAIRE Points can be earned separately for use of the ZE charging/fueling stations, similar to how WAIRE Points are earned separately for the acquisition of NZE trucks and use of NZE trucks. The splitting of WAIRE Points for both acquisition and usage of equipment and vehicles also allows greater flexibility for incentive funding to be used to offset compliance costs of PR 2305. For example, incentive programs that offset the purchase of a vehicle commonly are typically not allowed to be used for regulatory compliance, such as mandates to purchase vehicles. However, because PR 2305 allows vehicles to be used at a location to earn WAIRE Points, the incentive program restrictions do not apply, and trucks purchased with incentive funding can still earn WAIRE Points for their use. This same approach applies to ZE charging/fueling infrastructure.

Response to Comment 3-11

See Response to Comments 2-4. Further, carbon intensity values have not been considered as part of any WAIRE Menu item. Although reducing greenhouse gases is an important goal, it is not one of the project objectives of PR 2305. PR 2305 is expected to result in increased use of NZE Class 8 trucks fueled by RNG. This is due to the expected increase in use of NZE trucks due to their cost effectiveness relative to other options, and because 77% of natural gas used for transportation fuels in CA is renewable. Nonetheless, a CEQA alternative has been included that evaluates additional NZE compliance options within PR 2305. Further, the Final Staff Report and the accompanying WAIRE Implementation Guidelines now explicitly allow NZE yard trucks to earn WAIRE Points through a Custom WAIRE Plan, and example calculations that warehouse operators could use are included.

Response to Comment 3-12

[39] https://globaldrivetozero.org/public/The_Beachhead_Model.pdf

The WAIRE Menu was revised and now only includes the installation of solar panel systems. While solar panels do not directly reduce emissions at a warehouse site, they do reduce emissions associated with a warehouse by reducing power produced from local natural-gas fueled power plants. Solar panel systems can provide electricity for warehouses to use for their operations, which could include EV or TRU charging that might otherwise have relied on electricity generated from local power plants that resulted in regional NOx emissions. Solar panel system installations also offer additional flexibility for warehouse operators, and this technology is also a common consideration for warehouse operators to meet their corporate sustainability goals.

Response to Comment 3-13

The WAIRE Menu was revised and now only includes the installation of MERV 16 or better air filter systems or the replacement of MERV 16 air filters at sensitive sites for the communities surrounding warehouses. Air filter systems benefits the public health of neighboring communities as it reduces exposure to particulate matter, a common pollutant associated with warehousing activity. The support for measures that better inform the community on the health risks and impacts from air pollution is noted.

Response to Comment 3-14

Thank you for your participation in the rule development process and your comments in support of a warehouse ISR.

Response to Comment Letter – 4_CCAEJ – Draft Rule -12/6/19

Response to Comment 4-1

Thank you for your participation in the rule development process and your comments in support of a warehouse ISR.

Response to Comment 4-2

Staff recognizes the concerns expressed with a credit trading system and the structure of PR 2305 now requires all subject warehouse operators to take actions themselves that will reduce pollution and exposures in the communities near their warehouses, consistent with the authority granted to South Coast AQMD. Warehousing is also expected to continue growing in the region, and PR 2305 will apply to new warehouses as they are built.

Response to Comment 4-3

Staff agrees with the clarification of the minimum warehouse size applicable to PR 2305, as being warehouse facilities "with greater than or equal to 100,000 square feet of indoor floor space" rather than the 1st draft rule language stating "with greater than 100,00 square feet of indoor floor space". The clarification statement incorporating the inclusive "greater than or equal to 100,000 square feet" will be revised and used from this point forward.

Response to Comment 4-4

PR 2305 does not include multiple buildings in the definitions of a warehouse and warehouse facility [PR 2305 (c)(31) and(c)(32)]. PR 2305 (b) states that the rule is applicable to "…owners and operators of warehouses located in the South Coast Air Quality Management District (South Coast AQMD) jurisdiction with greater than or equal to 100,000 square feet of indoor floor space in a single building." Staff analyzed many different properties, and noted that complexes with multiple buildings may use auxiliary buildings for manufacturing, or maintenance and repair, but it is the large warehousing building that may dictate the level of mobile source emissions from on-road trucks and cargo handling equipment, therefore the rule applicability of greater than or equal to 100,000 square feet is applied to a single building. PR 2305 is applicable to about 3,300 warehouses, and there are perhaps another 30,000 warehouses that are below the applicability limits in PR 2305.[40] However, given the need to ensure the successful implementation of a new regulatory program of this scale, those warehouses with the biggest emission impact (i.e. the largest facilities with the most truck traffic) are the focus of the proposed rule. If PR 2305 is approved and successfully implemented, staff will follow the direction of the Board before proposing additional approaches to regulate these smaller facilities.

[40] https://scag.ca.gov/sites/main/files/file-attachments/final_report_03_30_18.pdf, Accessed 2-28-21

Response to Comment 4-5

Staff understands that key information regarding stringency, the annual variable, and points were still under development in the version of the draft PR 2305 as of the date of your comment letter date 12/6/19. The most recent version of the PR 2305 states the recommended stringency to equal 0.0025 WAIRE Points per WATT. The annual variable listed in the WPCO equation corresponds to the three-year phase-in of the stringency as listed in PR 2305, Table 2.

Impacts of air pollution on communities surrounding warehouses are considered in the structure of the WAIRE Points themselves. WAIRE Points for each WAIRE Menu item were determined by calculating the NOx emission reductions (which affects regional air pollution) as well as Diesel PM emission reductions (which affects regional and local air pollution), and the cost. Further, all warehouse operators must take actions themselves that reduce emissions or facilitate emission and exposure reductions in the communities near their warehouses. This approach will necessarily benefit disadvantaged communities as about 85% of warehouses are in communities that are in at least the worst 70th percentile as determined with the CalEnviroScreen tool (see Figure 4 of the Final Staff Report for a map). Because of the high overlap between the vast majority of warehouses and communities with pollution burdens, the most practical approach to reduce these impacts is to ensure that all warehouse operators must take actions to benefit their local communities.

Finally, in order to ensure that any limited transferring of WAIRE Points that may occur under the rule does not disproportionally effect local communities, any WAIRE Points transferred from a different location are discounted by the number of WAIRE Points associated with local benefits from Diesel PM reductions.

Response to Comment 4-6

PR 2305 specifies how warehouse operators will determine their final WPCO each year. As written in PR 2305, WPCO = WATTs x Stringency x Annual Variable, where WATTS is calculated as specified in PR 2305 subparagraph (d)(1)(B) or (d)(1)(C), as applicable, The recommended stringency is 0.0025 WAIRE Points per WATT, and the annual variable is specified in Table 2 of PR 2305. The WAIRE Program Implementation Guidelines goes into further detail in methods of collecting and maintaining records of actual truck trip counts, as it is a key component of the WPCO calculation.

Response to Comment 4-7

While the rule itself addresses specific impacts to sensitive receptors as mentioned by the commenter, there is only one requirement within the rule specific to these kinds of land uses – the installation of air filters and filtrations systems. In the WAIRE Menu, sensitive site locations such as schools, hospitals, community centers, and residences are described explicitly as locations to install filter systems or replace filters (see PR 2305, Table 3).

Response to Comment 4-8

PR 2305 lists the optional mitigation fee to be $1,000 per WAIRE Point [see PR 2305 section (d)(5)]. The mitigation fee provides additional flexibility to warehouse operators. The mitigation fee cost of $1000 per WAIRE Point is designed to be within the range of cost of the WAIRE Menu actions and investments for warehouse operator in any one year, though some options such as getting NZE/ZE truck visits would be cheaper and options such as installing a fueling station may be more expensive. Through time, the mitigation fee is expected to be a more expensive option if warehouse operators don't take additional actions as early investments within the rule result in later cost savings, and lower emissions. The mitigation fee is proposed to be consistent across all warehouses similar to how the stringency of the rule is consistent across all warehouses. This approach will necessarily benefit disadvantaged communities as about 85% of warehouses are in communities that are in at least the worst 70th percentile as determined with the CalEnviroScreen tool (see Figure 4 of the Final Staff Report for a map). Because of the high overlap between the vast majority of warehouses and communities with pollution burdens, the most practical approach to reduce these impacts is to ensure that all warehouse operators must take actions to benefit their local communities.

Response to Comment 4-9

The WAIRE Mitigation Program will fund NZE and ZE trucks and ZE charging and fueling infrastructure in the communities around the warehouses that paid the fee as described at the end of Chapter 2 of the Final Staff Report Specific language detailing requirements for spending mitigation funds will be included in the Board Resolution when it considers PR 2305 and PR 316. Any future spending of mitigation funds from the WAIRE Mitigation Program will also include additional public process and a Board vote should PR 2305 and PR 316 be approved.

Response to Comment 4-10

PR 2305 is designed to provide flexibility given the wide variety of business models employed by warehouses subject to the rule. Near zero options for on-road trucks are commercially available today, including for Class 8 trucks, whereas zero emission truck options are not yet widely commercially available. Additionally, NZE trucks can be significantly more cost-effective, both for the warehouse operator in terms of compliance (see Table 22 of the Final Staff Report) and in terms of cost per ton of emissions reduced (see Table 27 of the Final Staff Report). Further, PR 2305 is not designed to address all concerns associated with warehousing (e.g., traffic, aesthetics, economic and worker considerations, climate change impacts, etc.) as its focus is on reducing emissions that impact federal and state air quality standards and air pollution exposures in local communities. Nevertheless, the options for NZE and ZE technologies in PR 2305 are expected to have a positive impact on reducing greenhouse gas emissions compared to conventional diesel technologies. For example, as stated in the most recent Proposed Final Integrated Energy Policy Report from the California Energy Commission, renewable natural gas made up about 77% of the pipeline gas supply for vehicles in 2019.[41] According to CARB, the carbon intensity of renewable natural gas fuels is considerably lower than diesel fuels, with many sources showing negative carbon intensity values.[42] Finally, NZE technologies also completely eliminate the emissions of Diesel PM, the toxic air contaminant with the highest impact on environmental justice communities as shown in South Coast AQMD's MATES study.[43]

[41] https://efiling.energy.ca.gov/getdocument.aspx?tn=236905, pg. 134. Accessed 2-28-21
[42] https://ww3.arb.ca.gov/fuels/lcfs/dashboard/dashboard.htm, Accessed 3-1-21
[43] http://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-iv

Response to Comment 4-11

ZE trucks are being commercialized rapidly today, and this is expected to continue over the next several years. However, charging/fueling infrastructure for these trucks has not been fully developed, some truck types will have longer wait times for zero emission technology to be commercialized (e.g., Class 8 trucks), and NZE technologies are significantly more cost effective than their ZE counterparts today. PR 2305 however does provide more options for ZE technologies, and these compliance options are anticipated to grow in popularity through time as these technologies enter the commercial market at greater scale and begin to reduce in price. The ZE technology options in PR 2305 are also designed to allow warehouses to take advantage of these options in ways that match their operations, by allowing WAIRE Points to be earned for charging infrastructure and ZE trucks and yard trucks. However, some warehouse operators have already invested in NZE technology that reduces NOx at least 90% compared to conventional diesel trucks and completely eliminates toxic Diesel PM, and may have needs that will not allow ZE trucks to work in their operations until the technology further matures. Nevertheless, the acquisition of ZE trucks and usage of Class 8 ZE trucks earns more points than the equivalent NZE acquisition or usage.

Response to Comment 4-12

The purpose of PR 2305 is to reduce regional and local NOx and PM and facilitate other related rules and regulations, reductions for greenhouse gases would be a collateral benefit. The facilitative purpose of PR 2305 will help with implementation of measures such as the installation of much needed charging and fueling infrastructure and promote demand for ZE trucks which are two components needed by other regulations from CARB and the Governor's Executive Order N-79-20 which direct state agencies toward ZE transportation goals. The targets set by the state have focused on dates far in the future, such as 2035 and 2045. However, air quality needs are immediate (e.g., attainment dates are as close as 2023, public health is impacted today from poor air quality), and near-zero technology options have the ability to provide cost-effective solutions today.

Response to Comment 4-13

The approval of CEQA documents is within the purview of local lead agencies like cities and counties. South Coast AQMD does not have land use authority and cannot dictate how those lead agencies make land use decisions or CEQA decisions. However, PR 2305 does provide a level playing field for all new and existing warehouses subject to the rule, and is expected to meaningfully reduce emissions from this sector. One outcome that may result if PR 2305 is passed is that lead agencies may be able to use the framework that the rule establishes to require new warehouses to over comply with PR 2305. This dynamic has worked in some instances with the application of LEED for new construction, with some lead agencies[44] or the legislature[45] requiring higher levels of compliance with that program for land use projects, and a similar dynamic could occur with the WAIRE Program if PR 2305 is approved.

Response to Comment 4-14

[44] Examples: https://planning.lacity.org/code_studies/GreenLa/Brochure.pdf, https://www.cityoforange.org/DocumentCenter/View/531/Local-CEQA-Guidelines-PDF, http://file.lacounty.gov/SDSInter/bos/supdocs/97129.pdf

[45] Examples: AB 734 (2018), AB 987 (2018), SB 742 (2013)

At this time, PR 2305 is expected to go before the South Coast AQMD Governing Board's for its consideration on May 7, 2021.

Response to Comment 4-15

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention.

Response to Comment Letter – 5_CCAir– Draft Rule -12/6/19

Response to Comment 5-1

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention.

Response to Comment 5-2

Staff understands that information regarding stringency, the annual variable, and WAIRE Points were still under development in the version of the draft Proposed Rule 2305 (PR 2305) available when the comment was made. The current draft of PR 2305 includes the details for how warehouse owners and operators will determine their final WPCO each year. As written in PR 2305, WPCO = Weighted Annual Truck Trips (WATTs) x Stringency x (Annual Variable), where WATTs is calculated as specified in PR 2305 subparagraph (d)(1)(B) or (d)(1)(C), as applicable, the recommended stringency is 0.0025 WAIRE Points per WATT, and the annual variable corresponds to a three-year stringency phase-in specified in PR 2305, Table 2.

Response to Comment 5-3

The current version of PR 2305 provides updated initial requirement dates (see "Table 1 – Initial Requirement Date") as shown below:

Phase	Warehouse Size (square feet)	Initial Reporting Date	Initial Compliance Period
1	≥ 250,000	January 31, 2023	January 1, 2022 to December 31, 2022
2	≥ 150,000-<250,000	January 31, 2024	January 1, 2023 to December 31, 2023
3	≥ 100,000-<150,000	January 31, 2025	January 1, 2024 to December 31, 2024

Staff considered the universe of approximately 3,320 warehouse facilities with greater than or equal to 100,000 square feet of indoor floor space when it was decided to have a three-year phase-in of facilities. Staff determined that a The purposeful phase-in with approximately 1,000 facilities entering each year for three years would help manage the workload associated with was determined as PR 2305 address a previously unregulated industry, with a proposed new online reporting system, along with a proposed new compliance team conducting facility audits. Additionally, given that the current inventory of permitted facilities regulated by South Coast AQMD is approximately 28,000 facilities, and a slow phase-in is required to insure a smooth rollout of a nearly 10% increase in facilities with the existing staff. The order of the phase-in from larger to smaller facilities is based on focusing on facilities expected to have the highest truck traffic on average. Staff is aware of the urgency in meeting air quality goals; the relatively short phase-in schedule proposed is intended to ensure PR 2305's success.

Response to Comment 5-4

PR 2305 has been revised since the date this comment letter was submitted. PR 2305 Section (f)(1) is now Section (d)(5), and specifies a mitigation fee of $1,000 per WAIRE Point.

Response to Comment 5-5

The current version of PR 2305 provided at the time this comment letter was written has since been revised. PR 2305 Section (f)(2) and its language has been removed from PR 2305 as the mitigation fee is not intended as a penalty. The mitigation fee of $1,000 per WAIRE Point was analyzed to be within a similar range of cost as implementing the other WAIRE Menu options in any one year for a warehouse operator. Through time, the mitigation fee is expected to be a far more expensive option if warehouse operators don't take additional actions. This is because as early investments within the rule result in later cost savings through points attributable to usage, and lower emissions. The mitigation fee is proposed to be consistent across all warehouses similar to how the stringency of the rule is consistent across all warehouses.

Response to Comment 5-6

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention. The additional detail requested has been provided in later drafts of the rule, as well as the Final Staff Report.

Response to Comment Letter – 6_SoCalGas– Draft Rule -12/6/19

Response to Comment 6-1

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention.

Response to Comment 6-2

Staff intends to pursue State Implementation Plan (SIP) creditable emission reductions for PR 2305 for some of the actions taken from the WAIRE Menu, but PR 2305 is also a facilitative measure designed to enhance other rules and regulations which may also claim SIP credit. For example, CARB has its Advanced Clean Trucks (ACT) regulation which is largely a manufacturers' sales mandate, and the WAIRE Program can facilitate implementation of the ACT rule by warehouse operators choosing to purchase more ZE trucks earlier to earn WAIRE Points and by allowing facilities to earn points through truck usage. This could serve to additionally create more demand for ZE trucks. The WAIRE Program also includes the installation of ZE charging or fueling infrastructure which would be needed to support newly purchased ZE trucks. WAIRE Point values have a direct connection to SIP creditable emission reductions via NOx and Diesel PM emission reductions, which are how PR 2305 will assist in meeting state and federal ambient air quality standards. Additional information regarding South Coast AQMD's approach to obtaining SIP credit for PR 2305 can be found in Appendix D of PR 2305's Final Staff Report

Response to Comment 6-3

Early action weighting is not included in the proposed regulation, however PR 2305 does have early action provisions. These include a provision that allows that allows extra WAIRE Points earned in one year to be banked for up to three future years, and another that allows both warehouse operators and owners to earn WAIRE Points ahead of their warehouse size phase-in schedule. The banking clock on these pre-phase-in WAIRE Points does not begin until the warehouse operator's first compliance period, providing an additional early action benefit.

Finally, the WAIRE Menu includes options that go above and beyond current regulations in order to earn WAIRE Points. Warehouse operators may also decide to take early action ahead of the implementation schedule of U.S. EPA or CARB rules and regulation in order to earn WAIRE Points.

Response to Comment 6-4

The WAIRE Menu has nearly three dozen options that could earn WAIRE Points. However, due to comments from this stakeholder and others, PR 2305 now includes the option for warehouse owners and operators to submit a Custom WAIRE Plan application for proposed projects not on the WAIRE Menu but that achieve quantifiable, verifiable, and real NOx and DPM emission reductions. These Custom WAIRE Plans must meet all the requirements as outlined in PR 2305 Section (d)(4). The Custom WAIRE Plan provides an opportunity to propose specific projects that are not included in the WAIRE Menu.

Response to Comment 6-5

The WAIRE Menu includes the installation of a hydrogen fueling station and the use of a hydrogen fueling station as options to earn WAIRE Points. Hydrogen fuel production equipment

was not analyzed as much of the emission reductions would result from the dispensed hydrogen replacing diesel fueled operation. Estimating and any emission reductions from such a scenario is difficult was difficult to set default values for calculation as it is dependent on many equipment design variables. Though hydrogen generation equipment is not included in the WAIRE Menu, a warehouse operator can propose it as a Custom WAIRE Plan application if it meets all the requirements for a Custom WAIRE Plan listed in PR 2305 (see PR 2305, Section (d)(4)).

Response to Comment 6-6

The commenter correctly points out that ZE charging/fueling infrastructure is included in the WAIRE Menu, but not NZE fueling infrastructure. A recent report from the California Energy Commission states that up to 157,000 chargers are needed for medium duty and heavy duty vehicles by 2030 in order to meet state goals, yet very few have been built to date.[46] PR 2305 provides a mechanism to install this needed infrastructure at warehouses – a key destination for medium and heavy duty trucks. While NZE trucks are allowed in PR 2305 (and are an attractive compliance option), fueling infrastructure has not been included in part due to a desire to work towards state ZE goals, and also because previous statements from the natural gas industry have stated that government support is not needed for the fueling infrastructure for widespread deployment of natural gas fueled NZE trucks other than policy and funding support for the trucks themselves.[47] These previous comments have also stated that the natural gas industry is ready to quickly scale up fueling infrastructure to meet the demands of the trucking industry in southern California, and has a track record of previous successful rapid station developments by constructing 70 stations within one year.

There are currently about 66 CNG and LNG stations in the South Coast AQMD that can serve heavy duty trucks. The ports of Los Angeles and Long Beach estimated that up to 14 new stations could be needed to support up to 18,000 Class 8 NZE trucks serving the ports, however their analysis did not consider the use of any of the existing stations throughout the region.[48] At a stringency of 0.0025 WAIRE Points per WATT, the level of deployment of NZE Class 8 trucks in PR 2305 is no more than about 16,000 trucks over a ten year period in the extreme unlikelihood that all warehouse operators only chose NZE Class 8 trucks as a compliance option. Therefore, no more than 14 new stations are expected to be needed to support NZE trucks under PR 2305, and potentially could be much lower if the existing natural gas "station infrastructure is overbuilt for the current natural gas truck market in California".[49] As a result of these factors – the high need for zero emissions charging/fueling infrastructure, the expressed willingness of the natural gas industry to build out fueling stations on its own, and the limited amount of natural gas fueling infrastructure needed to support any NZE trucks that might be introduced due to PR 2305 – natural gas fueling options are not included as a compliance option within PR 2305. Nonetheless, a CEQA alternative has been included that evaluates additional NZE compliance options within PR 2305, and the Governing Board will consider these alternatives as part of its overall consideration of PR 2305. Further, the Final Staff Report and the accompanying WAIRE Implementation Guidelines now explicitly allow NZE yard trucks to earn WAIRE Points through

[46] https://efiling.energy.ca.gov/getdocument.aspx?tn=236237, Accessed 2-28-31

[47] https://cngvc.org/wp/wp-content/uploads/2017/04/ACT-Now-Plan-Final.pdf, pg. 14, Accessed 2-28-21
https://cleanairactionplan.org/documents/2018-draft-drayage-feasibility-assessment-public-comments.pdf, letters at pg. 14 and 47 Accessed 2-28-21

[48] https://cleanairactionplan.org/documents/final-drayage-truck-feasibility-assessment.pdf/, Accessed 2-28-21

[49] https://cleanairactionplan.org/documents/2018-draft-drayage-feasibility-assessment-public-comments.pdf, pg. 17 Accessed 2-28-21

a Custom WAIRE Plan, and example calculations that warehouse operators could use are included.

Response to Comment 6-7

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention.

Response to Comment Letter – 7_Luskin Center– Draft Rule - 12-6-2019

Response to Comment 7-1

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention.

Response to Comment 7-2

The term "Sensitive Receptor" was not used in the draft rule language. However, sensitive sites are listed out in the WAIRE Menu (Table 3 of PR 2305) for possible locations to install minimum efficiency reporting value (MERV) 16 or greater filters filter systems or replace MERV 16 or greater filters. Warehouse facilities can earn WAIRE Points by implementing community benefits, (e.g., filter system installations) to satisfy the warehouse operator's WPCO. Installation of MERV 16 or greater filter systems or replacement of MERV 16 or greater filters at sensitive sites with high risk level such as residences, schools, daycares, hospitals and community centers are intended to provide a local health benefit to communities surround a warehouse by reducing community exposure and emission impacts.

Response to Comment 7-3

As stated in previous response to comments, the term sensitive receptor was not used in PR 2305. The concept of sensitive receptors and/or sensitive sites is only referred in the current version of PR 2305 in the WAIRE menu (see PR 2305, Table 3), for the installation of MERV 16 or great filter systems or MERV 16 or greater filter replacement and not defined under (c) Definitions. Similarly, "Residential Receptors" are not addressed, the localized benefit addresses the benefit of reduced DPM emissions in the communities surrounding warehouses that suffer health impacts from the DPM emissions.

Response to Comment 7-4

The information such as the calculations of Cost, Regional NOx reductions, and Local Benefits are available on the WAIRE Technical Report, available in Appendix B of the Final Staff Report.

Response to Comment 7-5

PR 2305 does not refer to sensitive receptors and/or sensitive sites and there is no requirement for warehouse operators or owners to identify sensitive receptors.

Response to Comment 7-6

PR 2305 allows limited transfer of excess WAIRE Points to a different site under a single operator's control. Due to the concern raised by this commenter and others, the transferred WAIRE Points are discounted to account for any localized emission reductions of Diesel PM that wouldn't be experienced for the community near the warehouse where the Points were transferred. Part of the reason for allowing this type of limited transfer is to, provided the warehouse operator of multiple warehouses the t be able to undertake larger scale WAIRE Menu projects such as the installation of charging or fueling infrastructure. These types of projects which may need to be initiated one warehouse at a time rather than all the warehouses at once due to cost investment and project management. The intent of the limited transfer was to enable large scale capital investment projects to be undertaken and not discouraged.

Response to Comment 7-7

Staff will be reporting on the implementation of the WAIRE Program to the South Coast AQMD Mobile Source Committee on an annual basis. In addition, staff anticipates providing a publicly accessible web portal (similar to other South Coast AQMD web resources) with information about WAIRE Program compliance if PR 2305 passes. Prior to developing that web portal, staff will initiate a public process to get feedback on the development of the website.

Response to Comment 7-8

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention.

Response to Comment Letter #8 CCAEJ January 24, 2020 –Mobile Source Committee

Response to Comment 8-1
Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention.

Response to Comment 8-2
PR 2305 is designed to provide flexibility given the wide variety of business models employed by warehouses subject to the rule. Near zero options for on-road trucks are commercially available today, including for Class 8 trucks, whereas zero emission truck options are not yet widely commercially available. Additionally, NZE trucks can be significantly more cost-effective, both for the warehouse operator in terms of compliance (see Table 22 of the Final Staff Report) and in terms of cost per ton of emissions reduced (see Table 27 of the Final Staff Report). Further, PR 2305 is not designed to address all concerns associated with warehousing (e.g., traffic, aesthetics, economic and worker considerations, climate change impacts, etc.) as its focus is on reducing emissions that impact federal and state air quality standards and air pollution exposures in local communities. The options for NZE and ZE technologies in PR 2305 are expected to have a positive impact on reducing greenhouse gas emissions compared to conventional diesel technologies. For example, as stated in the most recent Proposed Final Integrated Energy Policy Report from the California Energy Commission, renewable natural gas made up about 77% of the pipeline gas supply for vehicles in 2019.[50] According to CARB, the carbon intensity of renewable natural gas fuels is considerably lower than diesel fuels, with many sources showing negative carbon intensity values.[51] Finally, NZE technologies also completely eliminate the emissions of Diesel PM, the toxic air contaminant with the highest impact on environmental justice communities as shown in South Coast AQMD's MATES study.[52]

As documented in the Final Staff Report and its Appendix B - WAIRE Menu Technical Report, the NOx and Diesel PM emission reductions and incremental costs relative to conventional diesel technologies are the factors that determine each WAIRE Menu action's Point value. Using a consistent method across all WAIRE Menu actions results in an ability to ensure approximately equal levels of compliance activity, regardless of the action chosen. Following this methodology, Class 4-7 ZE trucks and NZE trucks earn the same amount of WAIRE Points in the WAIRE Menu due to similar levels of emission reductions and costs between the two technologies. Class 8 truck WAIRE Point totals however are different between ZE and NZE technologies, due to the greater difference in cost and emission reductions for these trucks, with ZE trucks earning more Points than NZE.

Response to Comment 8-3
See Response to Comments 8-2 above.

[50] https://efiling.energy.ca.gov/getdocument.aspx?tn=236905, pg. 134. Accessed 2-28-21
[51] https://ww3.arb.ca.gov/fuels/lcfs/dashboard/dashboard.htm, Accessed 3-1-21
[52] http://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-iv

Response to Comment 8-4

ZE trucks are being commercialized rapidly today, and this is expected to continue over the next several years. However, charging/fueling infrastructure for these trucks has not been fully developed, some truck types will have longer wait times for zero emission technology to be commercialized (e.g., Class 8 trucks), and NZE technologies are significantly more cost effective than their ZE counterparts today. PR 2305 however does provide more options for ZE technologies, and these compliance options are anticipated to grow in popularity through time as these technologies enter the commercial market at greater scale and begin to reduce in price. The ZE technology options in PR 2305 are also designed to allow warehouses to take advantage of these options in ways that match their operations, by allowing WAIRE Points to be earned for charging infrastructure and ZE trucks and yard trucks. However, some warehouse operators have already invested in NZE technology that reduces NOx at least 90% compared to conventional diesel trucks and completely eliminates toxic Diesel PM, and may have needs that will not allow ZE trucks to work in their operations until the technology further matures.

Response to Comment 8-5

The purpose of PR 2305 is to reduce regional and local NOx and PM and facilitate other related rules and regulations, reductions for greenhouse gases would be a collateral benefit. The facilitative purpose of PR 2305 will help with implementation of measures such as the installation of much needed charging and fueling infrastructure and promote demand for ZE trucks which are two components needed by other regulations from CARB and the Governor's Executive Order N-79-20 which direct state agencies toward ZE transportation goals. The targets set by the state have focused on dates far in the future, such as 2035 and 2045. However, air quality needs are immediate – our region is facing deadlines in 2023 and 2031 to attain federal air quality standards and (e.g., attainment dates are as close as 2023, public health is impacted today from poor air quality.), and near-zero technology options have the ability to provide cost-effective solutions today.

Response to Comment 8-6

Impacts of air pollution on communities surrounding warehouses are considered in the structure of the WAIRE Points themselves. WAIRE Points for each WAIRE Menu item were determined by calculating the NOx emission reductions (which affects regional air pollution) as well as Diesel PM emission reductions (which affects regional and local air pollution), and the cost. Further, all warehouse operators must take actions themselves that reduce emissions or facilitate emission and exposure reductions in the communities near their warehouses. This approach will necessarily benefit disadvantaged communities as about 85% of warehouses are in communities that are in at least the worst 70th percentile as determined with the CalEnviroScreen tool (see Figure 4 of the Final Staff Report for a map). Because of the high overlap between the vast majority of warehouses and communities with pollution burdens, the most practical approach to reduce these impacts is to ensure that all warehouse operators must take actions to benefit their local communities.

Finally, in order to ensure that any limited transferring of WAIRE Points that may occur under the rule does not disproportionally effect local communities, any WAIRE Points transferred from a different location are discounted by the number of WAIRE Points associated with local benefits from Diesel PM reductions.

Response to Comment 8-7

Sensitive receptors are not referenced in the draft rule language. However, in the WAIRE Menu under the option for installation of MERV 16 or greater filter systems and MERV 16 or greater filter replacement potential installation examples are provided at sensitive sites such as residences, schools, daycares, hospitals, or community centers. The term sensitive receptor was not used in the determination of the WPCO as that was calculated using the WATT, rule stringency, and an annual variable. The recommended stringency of 0.0025 WAIRE Points per WATT with a three-year phase-in was analyzed in various scenarios to analyze the potential impacts on warehouse operations and air quality (see Final Staff Report Chapter 3).

Response to Comment 8-8

Onsite resting areas for workers or truck drivers were not included in the WAIRE Menu, as default values for costs, NOx reductions, or Diesel PM reductions can vary from warehouse to warehouse. However, warehouse operators could propose a project of a designated onsite rest area for workers and truck drivers as a Custom WAIRE Plan application which would be evaluated based on the requirements listed in PR 2305. If the Custom WAIRE Plan is approved, this approach could earn the warehouse WAIRE Points toward the WPCO.

Response to Comment 8-9

The rule is currently anticipated to go before the South Coast AQMD Governing Board for consideration on May 7, 2021. Additional time has been needed to develop the rule concept and supporting analysis, and to reach out to stakeholders.

Response to Comment 8-10

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention.

Response to Comment Letter #9 Clean Energy Fuels – December 10, 2019

Response to Comment 9-1
Thank you for your interest in the warehouse ISR development process, staff appreciates the time and effort taken to provide your feedback on the WAIRE Points system.

Response to Comment 9-2
By design the WAIRE Program seeks emission reductions and facilitate and enhances other related rules and regulations. While the WAIRE Program will result in emission reductions it will not on its own result in the attainment of the federal ozone standard for 2023, even if all warehouse emissions went to zero. PR 2305 is projected to provide about a 10-15% emission reduction, in the South Coast AQMD. However, PR 2305 is also part of a larger comprehensive strategy described in the 2016 Air Quality Management Plan that is designed to meet federal and state air quality standards. Thus, given the unique nature of the rule and South Coast AQMD's indirect source authority, it is important to include measures that do not necessarily reduce emissions on their own, but that facilitate emission reductions, including by laying the ground work for future emission reduction technologies such as zero emissions trucks.

Further, the WAIRE Menu has been designed to split WAIRE Points between acquiring and using vehicles and equipment. This is to allow warehouse operators to make progress every year as part of an annual program, and to allow incentive funding programs work within a regulatory setting. Incentive programs that offset the purchase price of a vehicle generally cannot be used if the purchase is required to comply with a regulation. However, because PR 2305 encourages the use of those purchased vehicles, as well as their use at specific warehouses, incentivized vehicles may still earn WAIRE Points. This mechanism has the effect of lowering the potential compliance cost of the rule, with the ability to further decrease compliance costs through the identification of additional sources of incentive funding.

Ultimately, all emission reductions achieved or facilitated by PR 2305 should be SIP creditable (see discussion in Appendix D of the Final Staff Report).

Response to Comment 9-3
Early action multipliers are not included in the proposed regulation H, however PR 2305 does have early action provisions including one that allows that allows extra WAIRE Points earned in one year to be banked for up to three future years, and another that allows both warehouse operators and owners to earn WAIRE Points ahead of their warehouse size phase-in schedule. The banking clock on these pre-phase-in WAIRE Points does not begin until the warehouse operator's first compliance period, providing an additional early action benefit.

Finally, the WAIRE Menu includes options that go above and beyond current regulations in order to earn WAIRE Points. Warehouse operators may also decide to take early action ahead of the implementation schedule of U.S. EPA or CARB rules and regulation in order to earn WAIRE Points.

Response to Comment 9-4
NZE and ZE trucks are treated equally in PR 2305. The development of the number of WAIRE Points for implementing each technology is described in detail in Appendix B to the Final Staff

Report. In summary, WAIRE Points in the WAIRE Menu are assigned based on each technology's costs and NOx and DPM emission reductions, relative to conventional diesel technologies. Although reducing greenhouse gases is an important goal, it is not one of the project objectives of PR 2305. The options for both NZE and ZE technologies in PR 2305 are expected to have a positive impact on reducing greenhouse gas emissions compared to conventional diesel technologies. For example, as stated in the most recent Proposed Final Integrated Energy Policy Report from the California Energy Commission, renewable natural gas made up about 77% of the pipeline gas supply for vehicles in 2019.[53] According to CARB, the average carbon intensity of renewable natural gas fuels is considerably lower than diesel fuels, with many sources showing negative carbon intensity values.[54] The average carbon intensity of electricity production is currently lower than for renewable natural gas. Powerplant that provide electricity (including for ZE trucks) are becoming a diminishing source of emissions in the air basin, emitting less than 2 tpd of NOx in South Coast AQMD in 2019 based on an analysis of continuous emissions monitoring systems data. These emissions are anticipated to continue to decline as more renewable sources of power are introduced due to state policies.

Response to Comment 9-5

Costs were included in the determination of WAIRE Points for every WAIRE Menu action in order to recognize the investments that warehouse operators (and owners who opt in) make towards clean air technologies. PR 2305 requires annual compliance in order to ensure ongoing air quality improvements, and it is not possible to provide credit for emission reductions far into the future with this structure. In addition, many logistics industry stakeholders have commented on the short-term nature of business relationships, with warehouse frequently leases common for about three-year terms, and trucking contracts common for one-year terms (or less). In order to ensure the flexibility needed in this environment, investments are allowed to earn WAIRE Points on their own, and in the year that the investment is made. The WAIRE Menu has been designed to split WAIRE Points between acquiring and using vehicles and equipment. This provision is to allow warehouse operators to make progress every year as part of an annual program, and to allow incentive funding programs work within a regulatory setting. Incentive programs that offset the purchase price of a vehicle generally cannot be used if the purchase is required to comply with a regulation. However, because PR 2305 encourages the use of those purchased vehicles, as well as their use at specific warehouses, incentivized vehicles may still earn WAIRE Points. This mechanism has the effect of lowering the potential compliance cost of the rule, with the ability to further decrease compliance costs through the identification of additional sources of incentive funding.

Response to Comment 9-6

The WAIRE Menu does not include NZE options for infrastructure or yard trucks. While NZE trucks are allowed in PR 2305 (and are an attractive compliance option), fueling infrastructure has not been included in part due to a desire to work towards state goals, and also because previous statements from the natural gas industry have stated that government support is not needed for the fueling infrastructure for widespread deployment of natural gas fueled NZE trucks other than policy and funding support for the trucks themselves.[55] These previous comments have also stated that the natural gas industry is ready to quickly scale up fueling infrastructure to meet

[53] https://efiling.energy.ca.gov/getdocument.aspx?tn=236905, pg. 134. Accessed 2-28-21
[54] https://ww3.arb.ca.gov/fuels/lcfs/dashboard/dashboard.htm, Accessed 3-1-21
[55] https://cngvc.org/wp/wp-content/uploads/2017/04/ACT-Now-Plan-Final.pdf, pg. 14, Accessed 2-28-21
https://cleanairactionplan.org/documents/2018-draft-drayage-feasibility-assessment-public-comments.pdf, letters at pg. 14 and 47 Accessed 2-28-21

the demands of the trucking industry in southern California, and has a track record of previous successful rapid station developments by constructing 70 stations within one year.

There are currently about 66 CNG and LNG stations in the South Coast AQMD that can serve heavy duty trucks. The ports of Los Angeles and Long Beach estimated that up to 14 new stations could be needed to support up to 18,000 Class 8 NZE trucks serving the ports, however their analysis did not consider the use of any of the existing stations throughout the region.[56] At a stringency of 0.0025 WAIRE Points per WATT, the level of deployment of NZE Class 8 trucks in PR 2305 is no more than about 16,000 trucks over a ten year period in the extreme unlikelihood that all warehouse operators only chose NZE Class 8 trucks as a compliance option. Therefore, no more than 14 new stations are expected to be needed to support NZE trucks under PR 2305, and potentially could be much lower if the existing natural gas "station infrastructure is overbuilt for the current natural gas truck market in California".[57] As a result of these factors – the high need for zero emissions charging/fueling infrastructure, the expressed willingness of the natural gas industry to build out fueling stations on its own, and the limited amount of natural gas fueling infrastructure needed to support any NZE trucks that might be introduced due to PR 2305 – natural gas fueling options are not included as a compliance option within PR 2305.

There are also key policy distinctions for why ZE yard trucks are the only option considered. First, in the on-road sector ZE trucks are not at the same stage of commercial development as NZE yard trucks, which have been operating in commercial service for several years, especially for Class 8 trucks. However, ZE yard trucks are commercially available today and have been operating at warehouses since 2015. Additionally, because ZE yard trucks are located at an individual facility, they are well-suited to serve as an early beachhead for the longer term development of ZE vehicle solutions.[58] By focusing PR 2305 on ZE yard trucks, warehouse operators are introduced to ZE technology to see how it works in their operations. Nonetheless, a CEQA alternative has been included that evaluates additional NZE compliance options within PR 2305. Further, the Final Staff Report and the accompanying WAIRE Implementation Guidelines now explicitly allow NZE yard trucks to earn WAIRE Points through a Custom WAIRE Plan, and example calculations that warehouse operators could use are included.

Response to Comment 9-7
See Response to Comments 9-2 and 9-5.

Response to Comment 9-8
One of the main goals of PR 2305 is regional NOx reductions, and the installation of EV chargers does facilitate indirect emission reductions by promoting the use of an EV rather than a traditional gasoline or diesel fueled vehicle. Staff agrees that the emissions from employee commuting is less than that of a heavy duty truck emissions, but is still NOx and PM emissions that can be reduced and are present at warehouses.

Response to Comment 9-9
There are many different business relationships between warehouse operators and trucking companies. 3rd parties may be able to provide a service in some instances that can earn WAIRE

[56] https://cleanairactionplan.org/documents/final-drayage-truck-feasibility-assessment.pdf/, Accessed 2-28-21
[57] https://cleanairactionplan.org/documents/2018-draft-drayage-feasibility-assessment-public-comments.pdf, pg. 17 Accessed 2-28-21
[58] https://globaldrivetozero.org/public/The_Beachhead_Model.pdf

Points for an operator. Depending on the nature of the relationship, WAIRE Points could potentially be earned from the acquisition of trucks by a third party (if it is dedicated to a warehouse operator) from the WAIRE Menu, or through some other arrangement that would be detailed in a Custom WAIRE Plan.

Response to Comment 9-10

Both industry and utility stakeholders provided feedback that ZE charging infrastructure projects often can take more than one year to complete. In order to account for these delays and not penalize facilities that are making meaningful progress towards a goal, the milestone steps of equipment purchase, beginning construction, and construction finalization were incorporated into the WAIRE Program. Most WAIRE Points are earned upon completion of the project. As stated in previous comment responses, PR 2305 is a facilitative measure and though the installation of infrastructure does not directly result in emission reductions, it does facilitate reductions from other related rules and regulations and promote usage of ZE trucks and equipment. See Response to Comments 9-5.

Response to Comment 9-11

All comments received are taken into full consideration and appreciated as they help guide the development of the proposed rule.

Response to Comment Letter #10 - WPGA– Other General Comment -2/12/20

Response to Comment 10-1

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention.

Response to Comment 10-2

Staff agrees that NOx reductions from mobile sources have a significant impact within the South Coast Air Basin (SCAB), especially to disadvantaged communities surrounding warehouse uses, and the warehouse ISR would help address these impacts.

Response to Comment 10-3

The primary purpose of PR 2305 is regional and local NOx and PM reductions to assist in attainment of the federal ozone standard and reduce disproportionate impacts on the communities surrounding warehouses. Greenhouse gas reductions would result as a collateral benefit reduced diesel use and the increased usage of renewable fuels. The current WAIRE Menu only includes NZE technology for truck acquisition and use. However, NZE yard trucks using renewable fuels can be submitted as a Custom WAIRE Plan submission, and can earn points upon approval. Additionally, NZE technology including propane will be part of the alternatives section of the CEQA analysis, which will be available for South Coast AQMD Board members to review and consider.

Response to Comment Letter #11 - Lion Electric April 9,2020

Response to Comment 11-1

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention.

Response to Comment 11-2

Staff has researched various sources including the CARB's analysis on ZE costs as they developed their Advanced Clean Truck (ACT) and Low NOx Omnibus regulations. Additionally, staff is aware that costs are continually adjusting in response to decreasing battery costs and availability of technology. However, staff is aware that several truck manufacturers are still in their demonstration phases and have not reached Technology Readiness Level 9 (TRL-9) such that initial price quotes may be higher. The ZE Class 8 truck costs used in the analysis on the WAIRE Menu Technical Report are attributed to the costs in the CARB analysis, and are viewed as being representative and consistent with the ACT regulation. As stated in your comments, there are options on battery size and range which would impact the costs, but these are specific to each fleet or warehouse operator choosing to purchase ZE trucks to satisfy their WPCO. Many business models use a leasing approach for truck acquisition which would further lower costs and is allowed in the WAIRE Program. Staff notes your comment regarding incremental price, and is continuing to monitor changes in the pricing.

Response to Comment 11-3

The WAIRE Points for the ZE Class 8 trucks were calculated using the costs stated in the CARB analysis for the ACT regulation. Staff understands that there are options in battery size and leasing options which may make the acquisition costs less or more depending on the preference and needs of the warehouse operator. ZE trucks are provided additional WAIRE Points due to their higher costs relative to NZE trucks, and this may be a motivating factor for some warehouse operators.

Response to Comment 11-4

The addition of new ZE truck offerings is welcome. A useful list of ZE trucks (including from the commenter), along with their expected commercial availability is maintained at the website below:
https://globaldrivetozero.org/tools/zero-emission-technology-inventory/

Response to Comment 11-5

With regard to the "midlife costs", the source document was CARB's ACT Total Cost of Ownership (TCO) Discussion which presents the "midlife costs" to be the potential to replace a battery should it fail. The 12-year truck life an assumption used in several models, and many manufacturers have warranties that range from 8-12 years with options of extending the warranty. Because different truck manufacturers, and truck operator use cases, will result in different lengths of battery life, the assumption from CARB's ACT analysis was used as a default for purposes of developing the number of WAIRE Points for ZE trucks.

Response to Comment 11-6

The proposed approach of increasing the WAIRE Points for ZE and NZE truck visits is included to encourage operators to choose this option as it is the largest source of emissions associated with warehouses. The commenter's proposed difference between NZE and ZE trucks has not

been included however as the distinctions between those two technologies has already been considered in relation to their relative cost and emission reductions of NOx and DPM.

Response to Comment 11-7

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention.

Response to Comment Letter #12 – Moreno Valley – Draft Technical Document -4/30/2020

Response to Comment 12-1

The WAIRE Menu Technical Report includes many complex analyses in order to simplify the analysis that warehouse operators will need to do when complying with PR 2305 should it be approved by the South Coast AQMD Governing Board. After determining their annual truck trips, warehouse operators will only need to reference the WAIRE Menu (Table 3 of PR 2305) to provide the number of WAIRE Points each action would earn in order to meet their Warehouse Points Compliance Obligation (WPCO).

Response to Comment 12-2

PR 2305 defines the mitigation fee to be $1000 per WAIRE Point, and is meant to be within a similar range of cost as the other WAIRE Menu options and is not meant as a way to avoid PR 2305's objective to reduce emissions of NOx or PM. At the current cost of the mitigation fee there are cheaper options for the warehouse operator to meet their WPCO such as NZE or ZE truck visits, and more expensive options such as the installation of a hydrogen fueling station that could be beneficial to the warehouse operator's business model. Each warehouse operator will decide the correct approach for their operations in any year, however the mitigation fee is not expected to be the most cost-effective approach in most cases as it does not allow a warehouse operator to make early investments that can earn WAIRE Points at a cheaper level in future years through usage of the investments.

Response to Comment 12-3

Elements in the WAIRE Program such as the stringency and phase-in schedule had not been defined at the time City of Moreno Valley drafted this letter. The commenter is directed to the current draft of PR 2305 and the Final Staff Report for the details and analysis requested. PR 2305 has been revised since the date this comment letter was submitted, the recommended stringency is 0.0025 WAIRE Points per WATT with a phase-in of 3 years. The current version of PR 2305 states the recommended stringency to equal 0.0025 WAIRE Points per WATT. The annual variable listed in the WPCO equation corresponds to the three-year phase-in of the stringency as listed in PR 2305, Table 2.

Response to Comment 12-4

The latest draft of the WAIRE Menu Technical Report is included in the Final Staff Report for review, and will not be finalized unless the Board approves the proposed rule.

Response to Comment 12-5

Staff has included commenter on the notice list for updates on the rulemaking process for PR 2305, including updates to PR 2305 and availability of related documents such as the Socioeconomic Impact Assessment.

Response to Comment 12-6

Thank you for bringing this to South Coast AQMD Staff attention. The link has been fixed.

Response to Comment 12-7

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention.

Response to Comment Letter #13 – CCAEJ - May 1, 2020

Response to Comment 13-1

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention. Comments made throughout this group of stakeholders have shaped the rule in many meaningful ways, including pivoting away from a credit-trading program, more explicit focus on individual actions of every warehouse at their facility and in their communities, and consideration of diesel PM as an integral part of the rule. However, many other stakeholders also have an interest in the development of this rule and their concerns are also considered, as well as the limitation of South Coast AQMD's unique authority in relation to mobile sources. Responses to specific comments in this letter are included below.

Response to Comment 13-2

The commenter's continued interest in ZE-only solutions is recognized and understood. While ZE technology solutions are ultimately needed, in the next several years NZE technologies are expected to be considerably more cost-effective in reducing NOx, while also eliminating Diesel PM. The calculation of WAIRE Points for each WAIRE Menu item is based on the cost and emission reductions of NOx and DPM relative to conventional diesel technologies. Hence ZE technologies result in higher WAIRE Points for acquisition (due to higher cost), but nearly identical WAIRE Points for visits (due to nearly equal emission reductions). For any warehouse operators who choose NZE options, their investments are not anticipated to be stranded assets as the transition to full ZE technologies is not anticipated by CARB in their most optimistic scenarios until 2045. This timeline allows a full useful life (between about 13-18 years) for NZE trucks for about the next decade.[59] Given the higher cost of ZE technologies, NZE technologies are included as an option to provide near-term cost-effective benefits until ZE technologies are more widely available commercially, and at cost-competitive levels.

Response to Comment 13-3

The commenter states that ZE truck emission reductions are underestimated, but does not cite any evidence in support of this statement. The analysis included in the WAIRE Menu Technical Report describes the standard emission factors from CARB's EMFAC model to calculate emission reductions from both ZE and NZE technologies. The commenter further states that the assessment that DPM emission reductions are the same between ZE and NZE technologies is incorrect, however no evidence is cited. NZE trucks are defined as those meeting CARB's lowest optional NOx standard (currently 0.02 g/hp-hr). There are currently no diesel fueled trucks that meet this standard, and alternative fueled engines (like natural gas) are the only fuel available. By definition, Diesel Particulate Matter (DPM) is the particulate matter emitted from diesel fueled internal combustion engines.[60] Since trucks that meet the definition of NZE are not diesel-fueled, they do not emit DPM.

Response to Comment 13-4

Staff used several sources from the California Air Resources Board, the North American Council for Freight Efficiency, and the Feasibility Assessment for Drayage Trucks conducted by the Port of Los Angeles and Port of Long Beach to determine the total cost of ownership for trucks. These considered the 12-year useful life of trucks, fuel costs, fuel economy, lifetime maintenance costs, midlife costs, registration fees, and residual value of the trucks to calculate the WAIRE Points

[59] https://ww2.arb.ca.gov/resources/documents/2020-mobile-source-strategy

[60] https://ww2.arb.ca.gov/sites/default/files/classic/toxics/dieseltac/finexsum.pdf

attributed to the cost of the truck visits. However, it is worthwhile to report that since many ZE trucks are not yet commercially available the actual price of a Class 8 ZE truck cannot be accurately predicted.

The commenter cites a study[61] by the Union of Concerned Scientists (UCS) that states that '***With California's policies and incentives***, however, the total cost of ownership is lower than diesel today for 19 of 20 vehicle scenarios examined in the three studies'. The analysis included in the WAIRE Menu Technical Report does not take into account how any incentives programs could reduce costs. As an example, in the case of ZE Class 8 trucks this could include $120,000 from the HVIP Program.[62] The HVIP Program currently includes $25 million in funding for all vehicle categories it covers throughout the state.[63] Even assuming that all funding were dedicated to South Coast AQMD Class 8 trucks going to warehouses, that would incentivize only 250 trucks. The number is expected to be considerably less because funding is for the entire state, and for many use cases unrelated to warehousing (e.g., transit buses). For comparison, in the Final Staff Report a scenario analysis focused on a Class 8 ZE truck-only compliance approach (Scenario 5). This analysis found that in Year 2 (the first year that Class 8 trucks are expected to be available), approximately 6,000 visits per day would be needed across the entire universe of PR 2305 warehouses to meet the collective compliance obligation. With the proposed phase-in of the rule, by Year 5 the number of visits per year would increase to about 14,000 visits per day. The level of incentive funding available is clearly not available to cover this number of trucks. Because of that, as shown in the UCS study, non-incentivized ZE trucks today are significantly more expensive to purchase, and also more expensive over time compared to their diesel counterparts (see Figures 8 and 9 from that study). While this dynamic is anticipated to change in the future due to declining battery costs, in the near term ZE technologies are not the most cost-effective option to reduce emissions. However, because warehouse operators do not need to report their costs as part of compliance with PR 2305, as those costs decline the technology is expected to become more popular due to the higher WAIRE Point totals relative to NZE counterparts.

Response to Comment 13-5

The commenter's claim that NZE trucks are powered by natural gas are correct. The commenter also states that there are burdens of natural gas infrastructure on communities, however the claim is vague, and it is uncertain what level of impact there is. Every natural gas fueled truck brought into service due to PR 2305 will provide a 90% reduction in NOx and an elimination of Diesel PM in the communities around warehouses.

Response to Comment 13-6

[61] https://www.ucsusa.org/sites/default/files/2019-12/ReadyforWorkFullReport.pdf

[62] https://californiahvip.org/vehicle-category/heavy-duty/

[63] As a point of comparison, since 2017, about $105 million of funding has been provided for all on-road vehicles in South Coast AQMD, about $35 million per year. http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/combind-hd-trucks-carb-biz-aqmp-presentations-1-26-21.pdf#page=69

The commenter states that natural gas technologies have negative climate and health impacts and cites to a study from the European Federation[64] as support. The natural gas engines and fuels studied in that report are not equal to natural gas engines or fuels that are certified as NZE by CARB. A study conducted by UC Riverside[65] and the certification executive order by CARB[66] both verify that natural gas NZE trucks have at least 90% lower NOx emissions than diesel counterparts. Further, after factoring in the respective amounts of renewable fuels used in the state, the carbon intensity of natural gas used in transportation is about 52 g CO2e/MJ, whereas diesel fuel is about 90 g CO2e/MJ, representing a reduction of about 45% for natural gas trucks.[67] Therefore, greenhouse gas emissions and NOx emissions are significantly lower for NZE trucks than their diesel counterparts that they would replace if they were used as a compliance option for PR 2305.

Finally, the proposed stringency and phase-in schedule of the rule has been established since the comment letter was written. This proposed stringency is 0.0025 WAIRE Points per WATT, which would result in approximately a 10-15% reduction in NOx emissions, and approximately equal reductions in Diesel PM. While the reduction of greenhouse gas emissions is an important goal, it is not one of the objectives of this proposed rule. The objective of this rule is the reduction of these criteria pollutant emissions in order to assist in meeting federal and state air quality standards, to facilitate emission reductions in other programs, and to provide public health benefits to communities around warehouses. The proposed rule will meet all of these objectives.

Response to Comment 13-7

Staff understands that key information regarding stringency, the annual variable, and points were still under development in the version of the draft PR 2305 when these comments were provided. The current draft of PR 2305 states the recommended stringency to equal 0.0025 WAIRE Points per WATT. The annual variable listed in the WPCO equation corresponds to the three-year phase-in of the stringency as listed in PR 2305, Table 2.

Impacts of air pollution on communities surrounding warehouses are considered in the structure of the WAIRE Points themselves. WAIRE Points for each WAIRE Menu item were determined by calculating the NOx emission reductions (which affects regional air pollution) as well as Diesel PM emission reductions (which affects regional and local air pollution), and the cost. Further, all warehouse operators must take actions themselves that reduce emissions or facilitate emission and exposure reductions in the communities near their warehouses. This approach will necessarily benefit disadvantaged communities as about 85% of warehouses are in communities that are in at least the worst 70th percentile as determined with the CalEnviroScreen tool (see Figure 4 of the Final Staff Report for a map). Because of the high overlap between the vast majority of warehouses and communities with pollution burdens, the most practical approach to reduce these impacts is to ensure that all warehouse operators must take actions to benefit their local communities.

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64 https://www.transportenvironment.org/sites/te/files/publications/2019_09_do_gas_trucks_reduce_emissions_paper_EN.pdf

65 https://ucrtoday.ucr.edu/wp-content/uploads/2018/08/CWI-LowNOx-12L-NG_v03.pdf

66 https://ww2.arb.ca.gov/sites/default/files/classic//msprog/onroad/cert/mdehdehdv/2020/cummins_hhdd-ub_a0210711_11d9_0d02_ng.pdf

67 https://ww3.arb.ca.gov/fuels/lcfs/dashboard/dashboard.htm

Finally, in order to ensure that any limited transferring of WAIRE Points that may occur under the rule does not disproportionally affect local communities, any WAIRE Points transferred from a different location are discounted by the number of WAIRE Points associated with local benefits from Diesel PM reductions.

Response to Comment 13-8
The recommended stringency of 0.0025 WAIRE Points per WATT was analyzed using 18 scenarios that assumed all 2,902 of the warehouses that needed to earn WAIRE Points chose one WAIRE Menu option or a specific combination WAIRE Menu options scenario. Based on the analysis, the range of potential NOx reductions from PR 2305 is ~2.5 - 4 tons per day above the NOx reductions the current CARB regulations would provide. The PR 2305 reductions would also result in immediate reductions toward the 2023 and 2031 attainment goals, and provide emission reduction and public health benefits to communities around warehouses.

Response to Comment 13-9
The term "Sensitive Receptor" was not used in the draft rule language. However, sensitive sites are listed out in the WAIRE Menu (Table 3 of PR 2305) for possible locations to install minimum efficiency reporting value (MERV) 16 or greater filters filter systems or replace MERV 16 or greater filters. Warehouse facilities can earn WAIRE Points by implementing community benefits, (e.g., filter system installations) to satisfy the warehouse operator's WPCO. Installation of MERV 16 or greater filter systems or replacement of MERV 16 or greater filters at sensitive sites with high risk levels such as residences, schools, daycares, hospitals and community centers are intended to provide a local health benefit to communities surround a warehouse by reducing community exposure and emission impacts.

Response to Comment 13-10
Onsite resting areas for workers or truck drivers were not included in the WAIRE Menu, as default values for costs, NOx reductions, or Diesel PM reductions can vary from warehouse to warehouse. However, warehouse operators could propose a project of a designated onsite rest area for workers and truck drivers as a Custom WAIRE Plan application which would be evaluated based on the requirements listed in PR 2305. If the Custom WAIRE Plan is approved, this approach could earn the warehouse WAIRE Points toward the WPCO.

Response to Comment 13-11
The mitigation fee is not designed as a "pay to pollute" alternative. The mitigation fee of $1,000 per WAIRE Point was analyzed to be within a similar range of cost as implementing the other WAIRE Menu options in any one year for a warehouse operator. Through time, the mitigation fee is expected to be a more expensive option if warehouse operators don't take additional actions as early investments within the rule result in later cost savings, and lower emissions. The mitigation fee is proposed to be consistent across all warehouses similar to how the stringency of the rule is consistent across all warehouses. The proposed stringency could result in mitigation fees up to about $195,000 per year for a 'typical' 250,000 square foot warehouse with average levels of truck traffic, and whose operator takes no additional actions, such as encouraging or tracking any NZE or ZE trucks visiting their site.

Response to Comment 13-12
With the WAIRE Program being such a new concept, it is difficult to estimate how many warehouse operators will choose to pay the mitigation fee and how much those mitigation fee

funds will total. The proposed rule language includes equal requirements regardless of warehouse location. This was done in part because about 85% of warehouses are in communities that are in at least the worst 70th percentile as determined with the CalEnviroScreen tool (see Figure 4 of the Final Staff Report for a map). Because of the high overlap between the vast majority of warehouses and communities with pollution burdens, the most practical approach to reduce these impacts is to ensure that all warehouse operators must take actions to benefit their local communities. This rationale for equal application of the rule across all warehouses, also supports the regional need for emissions reductions to meet state and federal air quality standards.
The WAIRE Mitigation Program that would be established if PR 2305 is approved will focus on funding NZE and ZE trucks and ZE charging and fueling infrastructure in the communities around the warehouses that paid the fee. A short description of the proposed program is included in the Final Staff Report at the end of Chapter 2. Additionally, more specific requirements will be included for the Board's consideration in the resolution that would be adopted if they approve PR 2305.

Response to Comment 13-13
PR 2305 does not include onsite generation, distributed energy resources or battery energy storage in the WAIRE Menu. However, the commenter is correct that these options could support the grid and warehouse operators could submit a Custom WAIRE Plan application that includes these options, and if approved the warehouse operator may earn WAIRE Points for those Custom WAIRE Plans.

Response to Comment 13-14
As suggested by the commenter, the socioeconomic analysis will include an analysis of monetized health benefits of the rule as well as potential job gains and losses due to the proposed rule.

Response to Comment 13-15
The impact of air pollution on communities near warehouses is an important consideration, along with the added burden of COVID-19. The proposed rule is anticipated to go before the South Coast AQMD Board for its consideration on May 7, 2021.

Response to Comment Letter #14 - IBEW & NECA

Response to 14-1

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention.

Response to 14-2

The WAIRE Menu does include ZE charging and fueling infrastructure and solar panel systems. WAIRE Points may be earned for solar panel system installation and usage, the WAIRE Points calculation considered the costs of the solar panel system, and the emission reductions that can be gained by offsetting the electricity demand that would otherwise have been generated by a local natural gas fired power plant. The options on the WAIRE Menu will result in NOx and PM emission reductions, facilitate the implementation of other related rules and regulations, and promote the integration of cleaner technologies by warehouse operators. Additional onsite distributed energy resources such as onsite stationary battery systems can also be included in a Custom WAIRE Plan.

Response to 14-3

Although the proposed project labor standards suggested by the commenter are not included within the proposed rule, labor standards are being developed for the Board's consideration as part of the proposed WAIRE Mitigation Program. These could include using a skilled and trained workforce as defined in Public Contract Code section 2601 to perform such work. In addition, any recipients of WAIRE Mitigation Program incentives or funding for the installation of electric vehicle infrastructure could be required to comply with the Public Utilities Code section 740.20, subdivision (2) requirement that at least 25 percent of the total electricians working on an electric vehicle infrastructure project, at any given time, hold Electric Vehicle Infrastructure Training Program certification.

Response to 14-4

The optional mitigation fee of $1000 per WAIRE Point is an optional compliance option to meet the WPCO, in addition to choosing options off the WAIRE Menu or submitting a Custom WAIRE Plan application. The optional mitigation fee is set to be consistent with the level of implementation of other options with the WAIRE Menu. The proposed stringency could result in mitigation fees up to about $195,000 per year for a 'typical' 250,000 square foot warehouse with average levels of truck traffic, and whose operator takes no additional actions, such as encouraging or tracking any NZE or ZE trucks visiting their site. Those actions could significantly reduce or eliminate any mitigation fees paid. All options of compliance with PR 2305 will potential have both positive and negative jobs impacts. The analysis of these impacts will be included in the Socioeconomic Impact Assessment.

Response to 14-5

PR 2305 is designed to work with other state and local regulations and policies, including the ports' proposed Clean Truck Rate. Trucks that go to the port commonly end up at a PR 2305 warehouse, and trucks that comply in one program will be able to comply in the other. Further, potential incentive funding provided by mitigation programs from both PR 2305 and the Clean Truck Rate program are expected to go towards the same pool of trucks.

Response to Comment Letter #15 Lineage Logistics – Draft Technical Document

Response to Comment 15-1

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention. The comments and dialogue throughout the rulemaking process have resulted in improvements to the proposed rule.

Response to Comment 15-2

Potential economic impacts of PR 2305 and PR 316 will be analyzed and available for public review in the socioeconomic report. A supporting study conducted by IEc and commissioned by South Coast AQMD found that the warehousing industry in the region is robust (similar to the LAEDC study cited by the commenter). The IEc study found that the proposed rule would not result in any relocation of warehousing outside of South Coast AQMD. Further, the significant growth in warehousing is not projected to decline and potential impacts to industry take this growth into account.

Response to Comment 15-3

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention.

Response to Comment 15-4

The commenter points out the importance of the underlying calculation in the Technical WAIRE Menu Report. This report was provided to stakeholders early in the process to solicit feedback due to its importance in establishing the WAIRE Points system.

Response to Comment 15-5

PR 2305 does not prohibit the use of incentive funds. Individual incentive funding programs themselves each have their own prohibitions, including how those funds can or cannot be used to comply with regulations. Warehouse operators are encouraged to use incentive funds to lower the purchase costs if allowed by the incentive program. Warehouse operators (and owners who opt in) should consult with the incentive programs they are seeking funding from to ensure funds can be used with PR 2305, should it be approved by the Board.

Response to Comment 15-6

The commenter correctly characterizes how WAIRE Points may be earned for specific milestones for the installation of ZE charging infrastructure. Other infrastructure projects in the WAIRE Menu do not include these milestones due to their expected quicker delivery times, including for solar and hydrogen fueling. For more complex projects that might be carried out that are not included in the WAIRE Menu, a Custom WAIRE Plan application would need to be submitted and approved before Points could be earned. This Custom Plan could include specific milestones similar to those described for ZE charging infrastructure, if appropriate for the project that is proposed.

Response to Comment 15-7

The rates shown include full demand charges and time of use schedules to the extent they are available. SCE has not yet established the demand charges it may apply in the future for TOU-EV-9, and an estimate would therefore be speculative. Different utilities had different tariff schedules and different rates, however an approximate average scenario and cost was used to calculate the WAIRE Points attributed to the WAIRE Menu options. Due to the variation in demand charges overlaid on time of use costs, there can be a wide range in potential monthly costs. However, the warehouse operator may have some flexibility as they can potentially time their charging to lower their costs. Finally, potential Low Carbon Fuel Standard revenue was not included in any estimates. These revenues can be substantial, (above $0.10/kWh), reducing costs potentially more than half.

Response to Comment 15-8

In part due to comments received from this stakeholder, PR 2305 was modified to include the option for warehouse owners and operators to propose a Custom WAIRE Plan to comply with PR 2305 (see PR 2305, Section (d)(4)). A Custom WAIRE Plan contains actions not included in the existing WAIRE Menu, which warehouse owners and operators can propose to meet their WPCO. In order to achieve WAIRE Points, warehouse owners and operators must show how a proposed Custom WAIRE Plan will achieve quantifiable, verifiable, and real NOx and DPM emission reductions, and meet all the requirements as outlined in PR 2305 Section (d)(4). Thus, a Custom WAIRE Plan provides opportunities to pursue flexible solutions to comply with PR 2305, and accommodate new developments in technology. WAIRE Points may only be earned from approved Custom WAIRE Plans.

Response to Comment 15-9

Staff understands the importance of backup generation systems in warehouse operations, particularly those for cold storage warehouses that must use electricity to maintain certain temperatures. There are no back up generation systems listed in the WAIRE Menu, however if there are existing non-alternative fueled back up generation systems that could reduce emissions relative to diesel fueled engines, then a Custom WAIRE Plan application could be submitted and implemented to earn WAIRE Points if approved.

Response to Comment 15-10

Cold storage warehouse facilities are significant users of electricity and can reduce air pollutant emissions from fossil fueled power plants via reduced power consumption and energy generation choice. The proposed methods to reduce onsite electricity consumption is best addressed as a Custom WAIRE Plan, which would need to be approved prior to being able to earn any WAIRE Points. The Custom WAIRE Plan approach was included in part due to suggestions like those made in this comment to allow flexibility for warehouse operators to take actions unique to their facility.

Response to Comment 15-11

PR 2305 has been revised since the date of this comment letter; the most recent version of PR 2305 no longer includes battery storage as a WAIRE Menu action. However, onsite energy storage systems, including the type proposed by the commenter can be included in a Custom WAIRE Plan application. A Custom WAIRE Plan contains actions not included in the existing

WAIRE menu, which warehouse owners and operators can propose to meet their WPCO. Thermal flywheeling could be included in a Custom WAIRE Plan, provided it meets all PR 2305's requirements as outlined in Section (d)(4) of PR 2305's rule language.

Response to Comment 15-12

PR 2305 includes the option for warehouse owners and operators to propose a Custom WAIRE Plan to comply with PR 2305 (see PR 2305, Section (d)(4)). A Custom WAIRE Plan actions and investments would include actions to reduce emissions that are not included in the existing WAIRE Menu, and that go above current regulatory requirements. Warehouse owners and operators can propose a Custom WAIRE Plan that is specific to their warehouse, and once the Custom WAIRE Plan is approved WAIRE Points could be earned to meet the warehouse operator's WPCO. In order to achieve WAIRE Points, warehouse owners and operators must show how a proposed Custom WAIRE Plan will achieve quantifiable, verifiable, and real NOx and DPM emission reductions, and meet all the requirements as outlined in PR 2305 Section (d)(4). Thus, a Custom WAIRE Plan provides opportunities to utilize new or newly affordable solutions to comply with PR 2305.

If PR 2305 is approved, South Coast AQMD staff anticipates bringing annual status reports to the Mobile Source Committee to discuss implementation of the WAIRE Program. If technologies have progressed substantially beyond the currently proposed WAIRE Menu items, staff will seek direction from the Board on future steps during these updates.

Response to Comment 15-13

The WAIRE Program was designed to be simple and allow for flexibility. The commenter's suggestion in this comment is reflected in the modification to the proposed rule that now allows for Custom WAIRE Plans to earn WAIRE Points upon approval. The methodology for calculating WAIRE Points in a Custom WAIRE Plan is outlined in the WAIRE Program Implementation Guidelines, as included with the Final Staff Report (see PR 2305, Section (d)(4) for all Custom WAIRE Plan requirements).

Response to Comment 15-14

The WAIRE Program was specifically designed not to be a crediting system, to ensure maximum actions in communities near warehouses. The original approach in PR 2305 included a crediting and trading scheme, however many stakeholders opposed this approach. They also noted that South Coast AQMD was winding down its RECLAIM cap-and-trade program due in part to concerns that local communities around facilities were not experiencing sufficient levels of emissions reduction. At that time the proposed crediting-trading rulemaking approaches being explored that were similar to the suggestion by the commenter were scrapped in favor of the current menu-based points system. Limited transferring of points is still allowed to provide some flexibility, however only in instances of overcompliance in any one compliance year.

Response to Comment 15-15

The commenter lists three potential mechanisms to allow additional trading of WAIRE Points within PR 2305. See Response to Comment 15-14. In addition, the commenter suggests that hypothetically additional emission reductions could be achieved with more flexibility in trading,

however no specific examples are provided. It is therefore unclear as to whether any additional emission reduction would occur. In addition, the added level of complexity proposed by this comment would pose significant administrative burden on South Coast AQMD and the regulated community, and would likely be confusing to the public. For all these reasons, the proposed suggestions have not been included in PR 2305.

Response to Comment 15-16

CARB's proposed TRU regulation has been modified since the comment letter was submitted.[68] The current CARB concept will focus on ZE TRU trucks (instead of trailers). A later regulation may focus on ZE trailer TRUs, however that rulemaking is not expected until at least 2023. One potential overlap between CARB's current proposal for ZE TRU trucks and PR 2305 relates to the phase-in schedule for fleets. In one case, if a warehouse operator owns a fleet of TRU trucks and submits a Custom WAIRE Plan to convert that fleet to ZE, the implementation schedule in the Custom Plan would need to show early and/or extra compliance beyond CARB's requirements. For example, CARB is currently proposing fleets to turn over 15% of their trucks to ZE TRUs per year starting at the end of 2023. If a Custom Plan included a transition of 20% per year, then the additional 5% could earn WAIRE Points. As a different example, if CARB does not require TRU charging infrastructure to be used, then any kWh of electricity dispensed from TRU plugs at a PR 2305 warehouse could earn WAIRE Points. The specifics of CARB's proposed rule will ultimately determine any potential overlap with PR 2305 if both rules pass. South Coast AQMD staff will continue to coordinate with CARB staff to ensure that there is a common understanding of each other's programs.

Response to Comment 15-27

PR 2305 has been revised since this comment letter date; the most recent version of PR 2305 uses a reporting metric for use of onsite ZE charging or fueling infrastructure of kilowatt-hours (kWh) of dispensed electricity, without referring CARB requirements in the Menu.

Response to Comment 15-28

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention.

[68] https://ww2.arb.ca.gov/sites/default/files/2021-01/Informational%20Document%20on%20Changes%20to%20TRU%20Rulemaking.pdf

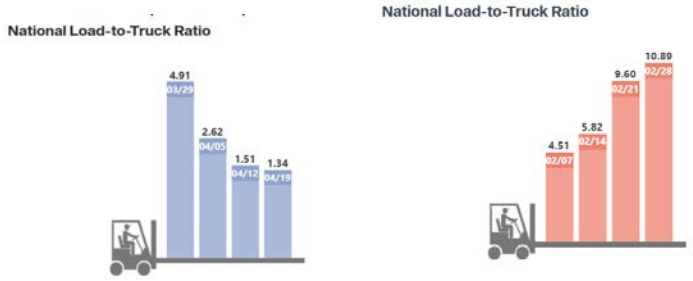
Response to Comment Letter #16 – CTA – Draft Technical Report - 5/8/2020

Response to Comment 16-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention. PR 2305 and PR 316 have been developed within South Coast AQMD's legal authority and care has been taken to ensure industry's concerns have been taken into account. Further, the changes in response to the COVID-19 pandemic have also resulted in significant public health impacts, including from air pollution from the increased movement of goods in our region.

Response to Comment 16-2

South Coast AQMD Staff understand that COVID-19 has had a significant impact on the economy, employment, and specifically the trucking industry. Since the receipt of this comment letter, the Ports of Long Beach and Los Angeles have recorded record volumes and have significantly exceeded their capacity to handle more goods movement, with up to 62 ships anchored awaiting entrance into the Ports.[69] At the same time, the industrial warehouse real estate market shows continued strength, even while other commercial real estate sectors have been affected by the pandemic.[70] While many sectors of the economy were significantly impacted early in the pandemic, some have rebounded dramatically, in particular in goods movement. For example, the DAT Load-to-Truck Ratio cited by the commenter showed a decline from 4.9 to 1.3 in the early part of the pandemic, but has since rebounded to a level of 10.9 in February 2021.[71]



Undoubtedly there are significant economic impacts of the pandemic. While unemployment spiked early at almost 15%, it quickly dropped and is now about 6%.[72] However, the goods movement industry overall has shown significant demand in the South Coast AQMD region and the resulting activity is both expected to continue and to have resulted in increased emissions associated with warehouses.

Response to Comment 16-3

The commenter is correct that the Carl Moyer Guidelines use a 20x weighting factor for PM reductions. PR 2305 looks at Diesel PM, which is both a contributor to regional particulate matter emissions as well as a toxic air contaminant. Particulate matter emissions are an important consideration as the South Coast AQMD is in serious non-attainment for PM2.5, and Diesel PM is also a toxic air contaminant that is the largest contributor of air toxics cancer risk in our region.

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[69] https://www.freightwaves.com/news/62-ships-at-anchor-in-san-pedro-bay-on-wednesday

[70] https://connect.allenmatkins.com/hubfs/Anderson%20Forecast/Winter%202021/AMCRES_Winter_2021.pdf?hsCtaTracking=9cbedffc-5a28-4951-a7e1-255393bef5e5%7Ccecf4503-3ced-43f9-9cd2-36f68c0ac76e

[71] https://www.dat.com/industry-trends/trendlines/van/demand-and-capacity

[72] https://www.bls.gov/news.release/pdf/empsit.pdf

Diesel PM affects communities around warehouses more than those living farther away, and stakeholder concerns were continually expressed during rulemaking working group meetings, and in AB 617 community meetings and Community Emission Reduction Plans (CERPs).

Response to Comment 16-4

In part due to this comment, PR 2305 now includes the option for warehouse owners and operators to propose a Custom WAIRE Plan to comply with PR 2305 (see PR 2305, Section (d)(4)). A Custom WAIRE Plan contains actions not included in the existing WAIRE Menu, which warehouse owners and operators can propose to meet their WPCO. The analysis of the Custom WAIRE Plan applications mirrors the analysis conducted on the WAIRE Menu actions and investments. In order to achieve WAIRE Points, warehouse owners and operators must show how a proposed Custom WAIRE Plan will achieve quantifiable, verifiable, and real NOx and DPM emission reductions, and meet all the requirements as outlined in PR 2305 Section (d)(4). Thus, a Custom WAIRE Menu provides opportunities to pursue flexible solutions to comply with PR 2305 that can provide a streamlined method to evaluate new and emerging technologies.

Response to Comment 16-5

Due to existing statutory or regulatory prohibitions, most state incentive funding programs used to offset the higher purchase price of zero emission NZE/ZE vehicles and equipment cannot be used to aid in complying with state or federal law or South Coast AQMD rules or regulations.[73] In practice, this means that NZE/ZE trucks acquisitions with incentive funding by warehouse operators or owners cannot be used to comply with PR 2305, thus no WAIRE Points can be earned from these acquisitions. However, because PR 2305 requires use of those trucks at specific locations to reduce local emissions, and because PR 2305 does not apply to trucking companies, but rather to warehouse operators, the use of incentivized trucks is not prohibited by incentive programs with a program like PR 2305. Warehouse operators will therefore not be required to determine if a NZE or ZE truck that visits their warehouse is incentivized, and will not be required to determine if any usage is surplus.

Response to Comment 16-6

The statutory authority that PR 2305 relies upon is described in Chapter 1 of the Final Staff Report. South Coast AQMD currently uses a cost effectiveness threshold up to $100,000 per ton in its Carl Moyer Funding Program. This same level was included as a parameter within the development of the WAIRE Menu, however it is not a requirement within PR 2305. The use of $100,000 per ton within the development of the Points used in the WAIRE Menu is a mechanism to provide extra WAIRE Points for investments made by a warehouse operator, even though the investment on its own may not result in emission reductions. Also, with PR 2305, instead of investing $100,000 in whichever WAIRE Menu action made sense to the warehouse operator, the money could be provided to South Coast AQMD as a mitigation fee. South Coast AQMD would then likely fund projects at $100,000 per ton. By providing WAIRE Points at this level directly to the warehouse operator, they are given more flexibility as to how to make investments. Finally, as shown in Table 27 of the Final Staff Report, some options have cost effectiveness

[73] California Health and Safety Codes 44281(b), 44391.4(a), 44271(c), CCR Title 13, Ch. 8.2 Sec. 2353 (c)(4), Moyer Guidelines Ch. 2, CA Beneficiary Mitigation Plan

levels below $100,000 per ton, while others are higher, highlighting that the $100,000 per ton is not a requirement within PR 2305.

Response to Comment 16-7

The commenter cites a cost effectiveness of $3,820 per ton of NOx for the Truck and Bus Rule, however that rule allowed for trucks to be kept for about 13 years, equal to a full useful life, or where the value of the older truck is significantly reduced. The cost effectiveness of more recent mobile source regulations varies depending on the program, and depending on the timescale chosen. The table below summarizes recent key regulations from CARB and their cost effectiveness through about 2032 (dollars per ton of NOx). Costs are substantially lower for many of these regulations when considering cost savings that are projected to occur in the 2030s and beyond, however the shorter timeline is compiled here to show a similar end year as for the analysis for PR 2305 (analysis conducted through 2031). The cost effectiveness for various scenarios with PR 2305 as shown in Table 27 of the Final Staff Report is similar to the wide range of values shown in the table below.

CARB Regulation	Approximate Cost Effectiveness (through 2032)
Airport Shuttle Bus	$430,000/ton NOx
Innovative Clean Transit	$271,000/ton NOx
At Berth (Ocean Going Vessels)	$83,000/ton NOx
Low NOx Omnibus	$39,000/ton NOx
Advanced Clean Trucks	$22,000/ton NOx

Response to Comment 16-8

PR 2305 is not setting new emission standards as described by the commenter. The legal authority used for PR 2305 is listed in Chapter 1 of the Final Staff Report.

Response to Comment 16-9

South Coast AQMD does not intend to pursue a Section 209 waiver under the Clean Air Act for PR 2305.

Response to Comment 16-10

The effect of recent CARB rules has been included in the analysis in the Final Staff Report as shown in Tables 15 through 18. CARB's development of the META tool as a companion to its Draft Mobile Source Strategy allowed recent CARB rules like the Advanced Clean Truck rule to be subtracted from the EMFAC baseline so that the effects of PR 2305 could be isolated.

Response to Comment 16-11

Adjustments to truck emissions through time have been accounted for in the analysis. See Response to Comments 16-10. Warehouse operators will not need to account for changes in emissions through time, only their WAIRE Points Compliance Obligation.

Response to Comment 16-12

The full details of how calculations were conducted are included in the Final Staff Report as well as detailed companion calculation spreadsheets that were made available online.[74]

Response to Comment 16-13

PR 2305's rule language provides a simple, clear methodology for calculating a warehouse operator's WAIRE Points Compliance Obligation, as well as a simple WAIRE Menu with Points for each action. Warehouse operators are not expected to use the EMFAC model or any other model when complying with PR 2305 using the WAIRE Menu. The purpose of the much more complicated WAIRE Menu Technical Report is to develop as much of the complicated analysis up front during rulemaking so as to provide a streamlined methodology for warehouse operators to comply with PR 2305. Further, if PR 2305 is adopted there will be ample outreach efforts in order to inform warehouse owners and operators of their obligations and the steps that can be made to meet them. Additional guidance on PR 2305 will be provided online and in the WAIRE Program Implementation Guidelines.

Response to Comment 16-14

Deterioration rates are included within the EMFAC model and within the META tool that were used to develop emissions and emission reductions estimates in the Final Staff Report. These modeling tools are the standard used throughout the state to evaluate truck emissions.

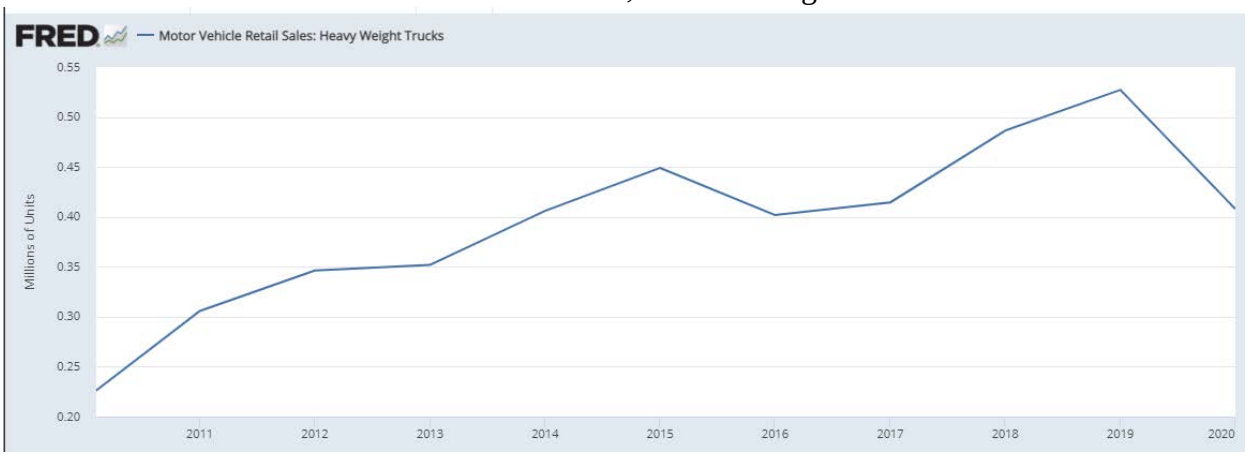
Response to Comment 16-15

The purpose of PR 2305 is to facilitate regional NOx and local DPM emission reductions associated with warehouses and the mobile sources attracted to applicable warehouses in order to assist in meeting state and federal air quality standards for ozone and fine particulate matter. Accelerated fleet turnover and replacing retired vehicles with electric vehicles are possible means to achieve PR 2305 goals. The incremental cost is used as a component in the calculation of the WAIRE Points value of the WAIRE Menu actions and investments, as it represents the additional cost effort that warehouse operators would have to take in order to comply with PR 2305. As part of the analysis of the proposed stringency within PR 2305, the number of new truck sales due to PR 2305 was evaluated relative to baseline new truck sales without PR 2305. This analysis found that in only extreme examples where all warehouse operators chose exactly the same method of compliance (e.g., 4,000 operators all chose to purchase a Class 8 NZE truck) would sales in any one year from PR 2305 exceed baseline levels. With so many operators and so many options for compliance, this extreme outcome is unlikely. Even in this unlikely case, the number of new truck sales varies widely year to year. In the graph below, national new heavy truck sales vary by about 50,000 to 100,000 units every year, out of a baseline of about 400,000 to 500,000 units.[75] In the most extreme case, up to about 7,600 new trucks beyond normal sales could occur in one year due to PR 2305. This is within the range of variability in any given year. Therefore PR 2305 is not expected to result in early retirement of trucks as normal levels of new truck sales can accommodate the compliance requirements of PR 2305. Even if a warehouse operator did

[74] http://www.aqmd.gov/docs/default-source/planning/fbmsm-docs/pr-2305-draft-scenario-calculations.xlsm, http://www.aqmd.gov/docs/default-source/planning/fbmsm-docs/pr-2305-draft-baseline-emission-inventory.xlsx, http://www.aqmd.gov/docs/default-source/planning/fbmsm-docs/pr-2305-draft-truck-emission-rate-calculations.xlsx

[75] https://fred.stlouisfed.org/series/HTRUCKSSAAR#0

purchase a truck earlier than expected, PR 2305 does not have any requirement to scrap a truck, and the vehicle could be sold on the used market, thus retaining the value for the truck owner.



Response to Comment 16-16

The commenter notes that there is wide variability in trucking operations, and homogeneous treatment across the sector results in inconsistencies at the individual level. The use of averages is therefore the most appropriate method to estimate emission reductions precisely because of this variability and the large number of warehouses and truck trips potentially affected by PR 2305. The alternative to using averages in many detailed calculations in the rulemaking analysis is to have all of the warehouse operators calculate their own site specific emissions and submit that to South Coast AQMD for review every year. This approach would be administratively burdensome for warehouse operators and South Coast AQMD, and would not be a good use of resources. Therefore, in order to facilitate a more streamlined approach on the back end for rule compliance, averages that are most applicable to large populations (which applies for the ~4,000 operators subject to PR 2305) are used in calculations at the front end of rulemaking.

Response to Comment 16-17

For off-site investments, the most appropriate action for a warehouse operator is to pursue a Custom WAIRE Plan, which had not been proposed at the time that this letter was written. The warehouse operator can submit a Custom WAIRE Plan application that details specifics on the project, emission reductions, and costs in accordance to the requirements listed in PR 2305 for Custom WAIRE Plan submissions. Off-site actions and investments were not included or evaluated for the WAIRE Menu as it was not possible to calculate default values that any warehouse operator could use to earn WAIRE Points for projects that may be specific to particular warehouses offsite or partnering with other warehouse operators.

Response to Comment 16-18

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention.

Response to Comment Letter #17 - PERC

Response to 17-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention.

Response to 17-2

The WAIRE Menu includes both NZE and ZE on-road truck acquisition and use, but the WAIRE Menu only includes ZE yard trucks. There are key policy reasons supporting why ZE yard trucks are the only option considered. First, in the on-road sector ZE trucks are not at the same stage of commercial development as NZE trucks, which have been operating in commercial service for several years, especially for Class 8 trucks. However, ZE yard trucks are commercially available today and have been operating at warehouses since 2015. Additionally, because ZE yard trucks are located at an individual facility, they are well-suited to serve as an early beachhead for the longer term development of ZE vehicle solutions.[76] By focusing PR 2305 on ZE yard trucks, warehouse operators are introduced to ZE technology to see how it works in their operations. Further, because yard trucks primarily stay at the warehouse facility, their emissions can have a disproportionate impact on communities surrounding warehouses compared to on-road trucks with emission miles away from a facility. Many yard trucks idle as part of their operation at warehouse facilities, and the switch to ZE yard trucks would benefit public health of the communities surrounding the warehouse by not being burdened idling emissions. Although NZE engines have lower emissions than their conventional diesel counterparts, they do still have tailpipe emissions. Finally, although the commenter states that NZE yard trucks exist, there is no acknowledgement that yard trucks come in both on-road and off-road varieties. While propane or natural gas on-road yard trucks can meet CARB's standards for NZE, CARB currently does not have a certification standard for NZE off-road purposes. It is not clear how a default NZE definition would apply in the off-road setting. Nonetheless, a CEQA alternative has been included that evaluates additional NZE compliance options (including for yard trucks) within PR 2305. Further, the Final Staff Report and the accompanying WAIRE Implementation Guidelines now explicitly allow NZE yard trucks to earn WAIRE Points through a Custom WAIRE Plan, and example calculations that warehouse operators could use are included.

Response to 17-3

It is encouraging to see that renewable propane development is being pursued and is emerging as a new fuel source. The reduction of greenhouse gas emissions is an important goal, however it is not one of the objectives of this proposed rule. The objective of this rule is the reduction of these criteria pollutant emissions in order to assist in meeting federal and state air quality standards, to facilitate emission reductions in other programs, and to provide public health benefits to communities around warehouses. While renewable propane may have climate benefits, traditional propane has a carbon intensity almost identical to diesel, and it is not clear how widely available renewable propane is for wide use.[77]

Response to 17-4

Staff appreciates PERC's work in replicating the rule language and analysis on ZE yard trucks to present how NZE yard trucks could be included in both the PR 2305 rule language and the

[76] https://globaldrivetozero.org/public/The_Beachhead_Model.pdf

[77] https://ww3.arb.ca.gov/fuels/lcfs/dashboard/dashboard.htm

WAIRE Menu. However, given the reasons stated in the previous response to comment regarding the commercial availability of ZE, the operation of ZE yard truck at warehouses for several years, and emission impacts from combustion operations and idling to local communities surrounding warehouses, staff is proposing to maintain the inclusion of only ZE yard trucks in the PR 2305 rule language and WAIRE Menu. And as stated in previous response to comments, NZE technology has been analyzed as an alternative in the CEQA analysis and will be available for consideration by South Coast AQMD Governing Board members. Staff will maintain the comment letter with the provided language and calculations for reference should further analysis be required. Additionally, a supplemental discussion on a NZE alternative will be included as an appendix to the Final Staff Report. Additional responses regarding the submitted materials are included below.

Response to 17-5

The information on the 300 NZE yard trucks ordered is helpful, but additional information about how many of those 300 NZE yard trucks have been certified and delivered, and if the facility installed CNG or propane fueling infrastructure at each of the locations the NZE yard trucks operate as part of the demonstration project. As stated previously, one of the reasons that only ZE yard trucks are present in the WAIRE Menu is that they are an established technology, with some warehouses operating them since 2015. While it is interesting to note that the Port's feasibility study stated that the NZE yard truck feasibility was equivalent to ZE yard trucks, and UCR documented the 90% or greater emission reduction, the remaining emissions would still impact the local community since the yard trucks stay onsite and may at times idle. The PERC provided proposed addition to the WAIRE Menu Technical Document does accurately replicate the analysis performed on ZE yard trucks including the 90% emission reduction of a conventional diesel yard truck for NOx and complete reduction of PM, and the cost analysis. However, the 2018 Feasibility Assessment for Cargo-Handling Equipment referenced analyzes a near-zero LNG internal combustion engine, and not the propane model that is proposed. Though propane may be similar to natural gas such as LNG or CNG, the proposed analysis would be better served if actual emission reductions and costs for propane fuel were used.

Response to 17-10

Staff appreciates the effort PERC has exerted in replicating the analysis and calculation of the ZE yard trucks to provide a similar analysis for NZE yard trucks. However, it should be pointed out that there is a potential difference in that the 2018 Feasibility Assessment for Cargo-Handling Equipment referenced analyzes a near-zero LNG internal combustion engine and CNG or Propane models. Additionally, the propane quick tank replacement system may have additional costs not captured in the LNG yard truck analysis.

Response to 17-11

In reviewing the proposed WAIRE Menu addition of NZE yard trucks, staff observed that the general calculation methodology for the ZE yard truck was duplicated. Staff believes that there may be differences in emission reductions and costs between the LNG values used from the 2018 Feasibility Assessment for Cargo-Handling Equipment versus the costs for CNG or propane. It is not known whether the incremental costs for an LNG yard truck would differ from a CNG or propane yard truck. There were also some minor corrections on the acquisition of NZE yard trucks, as the stated incremental cost of acquisition of $50,000 when binned results in two WAIRE Points not 3, and there was rounding for the regional NOx benefit binning that resulted rounding 14.2 to 15 which impacted the three times multiplier which resulted in two more

WAIRE Points than should have been attributed to NZE yard truck usage being 288 rather than the staff calculated 286 WAIRE Points.

Response to 17-12
Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention.

Response to Comment Letter #18 - CCAEJ -10/8/20

Response to Comment 18-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention.

Response to Comment 18-2

Staff agrees with your assessment that air pollution emitted from indirect warehouses sources (i.e., diesel trucks serving warehouses) contribute to air pollution, and thus negative health impacts, in communities located near warehouses. South Coast AQMD has developed PR 2305 to reduce regional and local emissions of nitrogen oxides (NOx) and particulate matter (PM) associated with warehouses assist meet the federal ozone standards and reduce health risks in the community.

Response to Comment 18-3

The objective of this rule is the reduction of these criteria pollutant emissions in order to assist in meeting federal and state air quality standards, to facilitate emission reductions in other programs, and to provide public health benefits to communities around warehouses. South Coast AQMD acknowledges the commenter's support for ZE technology, and the strategy to phase-out NZE. The current WAIRE Menu reflects many options from which warehouse operators may choose, that utilized CARB's technical documents which reflect NZE having a 90% NOx emission reduction as compared to 100% reduction by ZE technology. Based on the greater emission reductions resulting from ZE trucks, the WAIRE menu reflects more WAIRE Points attributed to ZE trucks and are awarding points for ZE charging and Hydrogen fueling infrastructure investments. Currently, the commercially available options for Class 8 Heavy-Duty trucks remain to be conventional diesel and NZE trucks, with the NZE trucks having an incrementally higher purchase price with an established natural gas fueling infrastructure. Staff acknowledges ZE trucks as emerging from demonstration projects, but with future release dates for commercial availability, and with a still developing infrastructure foundation. As the prevalence of ZE trucks and ZE charging infrastructure develops, staff sees the incremental costs of ZE decreasing lower than NZE and at a time may be even with the cost of conventional diesel technology when ZE technology does become widespread. Based on the current commercial availability, the existing NZE infrastructure, and unknown timeline for ZE trucks and infrastructure staff is recommending keeping NZE on-road trucks on the menu. However, NZE fueling stations are not offered on the WAIRE Menu. The Final Staff Report and the accompanying WAIRE Implementation Guidelines now explicitly allow NZE yard trucks to earn WAIRE Points through a Custom WAIRE Plan, and example calculations that warehouse operators could use are included.

Response to Comment 18-4

The WAIRE Menu reflects more WARIE Points attributed to ZE trucks than to NZE trucks and are offering WAIRE Points for ZE charging and Hydrogen fueling infrastructure investments. As mentioned in Response to Comment 18-3, as the prevalence of ZE trucks and ZE charging infrastructure develops, staff sees the incremental costs of ZE decreasing lower than NZE technology, and may even with the cost of conventional diesel technology when the technology become widespread. Based on the current commercial availability, the existing NZE infrastructure, and unknown timeline for ZE truck and infrastructure availability, Staff is

recommending maintaining NZE trucks on the WAIRE Menu, which could be modified in future revisions of PR 2305.

Response to Comment 18-5

The recommended stringency was set after considering many factors including the impacts on emission reductions and public health benefits, modeled availability of trucks to turnover, costs, and the potential for warehouse relocation. The current draft of PR 2305 includes a recommended stringency of 0.0025 WAIRE Points per WATT with a three-year stringency phase-in. This stringency is anticipated to provide about $3.5 billion in monetized public health benefits over ten years, with 42-49 premature deaths avoided each year, along with additional health benefits (e.g., reduced asthma attacks, etc.).

Response to Comment 18-6

PR 2305 sets the mitigation fee at $1,000 per WAIRE Point (see PR 2305 section (d)(5)), which is designed to be within the range of the cost of most WAIRE Menu options. The mitigation fee is not meant as a way to avoid PR 2305's purpose of regional and local emission reductions of NOx and PM. The mitigation fees are meant to be pooled together and subsidize incentives for NZE and ZE trucks or ZE infrastructure to benefit the community surrounding the warehouse that paid the mitigation fee, and staying in the county where the warehouse is located. A short description of the proposed program is included in the Final Staff Report at the end of Chapter 2. Additionally, more specific requirements will be included for the Board's consideration in the resolution that would be adopted if they approve PR 2305.

Response to Comment 18-7

PR 2305 and PR 316 are anticipated to go before the Governing Board for its consideration on May 7, 2021.

Response to Comment 18-9

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention.

Response to Comment Letter #19 - Disneyland Resort – 11/4/2020

Response to Comment 19-1

The applicability of PR 2305 to warehouses greater than or equal to 100,000 square feet of indoor floor space in a single building that may be used for warehousing activities is an applicability that has been revised several times to promote clarity, and adequately capture the population of warehouses that have sufficient warehousing activity that impact the air quality of both the region and the neighboring community of the warehouse. The suggestion of removing "may be" from the applicability cannot be considered because the space used at a warehouse is dynamic and can be modified at any time to accommodate higher product levels, and space can be seasonal to account for the influx of goods movement and storage during the holiday season. Increases in use due to changes in activity or due to seasonal fluctuations results in added truck trip activity which results in added regional and local NOx and PM emissions. Additional clarification has been added however to the definition for 'warehousing activity' to ensure that PR 2305 is focused on those kinds of operations.

Response to Comment 19-2

The proposed revision regarding the exemption provision to include a clause regarding "physical limitation" and "self-imposed administrative control" could lead to circumvention of PR 2305 as added physical limitations or self-imposed administrative control can easily be removed at any time by the warehouse operator to adjust to the demands of additional or seasonal changes. Some physical limitations are inherently included in the rule language already in that it already assumes that any permanent physical limitation in a building that prevent warehousing activities in spaces greater than 50,000 sq. ft. The suggestion to include additional language for "physical limitations" and "self-imposed administrative control" cannot be considered as the warehousing industry is dynamic and could adjust the warehouse square footage to accommodate increased demand or seasonal changes for goods storage or movement needs.

Response to Comment 19-3

Template forms will be included as part of the online portal used for reporting that will be developed if PR 2305 is approved by the Board.

Response to Comment Letter #20 - CCAEJ - December 3, 2020

Response to Comment 20-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention.

Response to Comment 20-2

PR 2305 has continually considered the impacts of warehouse operations on local communities, including the AB617 communities. Staff has been engaged with the AB617 Community Steering Committees, and has continued to update them on the progress of the warehouse ISR. In addition, a community workshop was held to better explain an overview of the rule and how it would be a benefit to the local community. Staff prioritized efforts to solicit feedback and comment from the community, as a way to inform revisions to the draft rule and staff's approach to the development of PR 2305. The Final Staff Report in Chapter 1 also notes that several AB 617 CERP's have included reference to PR 2305.

Response to Comment 20-3

The commenter's reference to Agenda Item 5 related to the undersubscription of the VW Mitigation Trust which is in the first year for the program. Part of the reason for the unused incentive funds was that the program was undersubscribed partially due to the incentive funding amounts being set lower, and thus not being competitive with the previously mentioned established incentive programs. The commenter's point that sufficient demand is needed to fully utilize incentive funding is correct. This can occur through mechanisms like higher incentive levels, complementary strategies across different incentive programs, and through other market drivers, such as regulations.

Response to Comment 20-4

Staff agrees that slow progress to meeting federal air quality standards underscores the need for addressing the immediate needs to reduce emissions in the near term to assist in attainment of the 2023 and 2031 federal ozone standards. PR 2305 stems from the 2016 AQMP as a strategy to reduce regional NOx as a way to meet attainment with the federal and state ambient air quality standards. PR 2305 is being developed to reduce mobile source emissions attracted to warehouses toward the immediate federal ozone attainment goals and to facilitate the implementation of other related rules and regulations.

Response to Comment 20-5

COVID-19 has had a dramatic impact on the health of local communities, while at the same time increasing activity in the logistics industry. The consistently low vacancy rates and higher lease rates mentioned by the commenter were analyzed in the development of PR 2305, to help address the disproportionate burden of air pollution in the communities neighboring warehouses and reduce emissions. PR 2305 is fully defined with the recommended stringency and stringency phase-in determined, while analyzing the emission and cost impacts of the stringency on the range of options offered on the WAIRE Menu.

Response to Comment 20-6

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention.

Response to Comment Letter – 21_SoCalGas

Response to Comment 21-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention.

Response to Comment 21-2

Staff intends to pursue State Implementation Plan (SIP) creditable emission reductions for PR 2305, but the main purpose of the PR 2305 is to reduce regional and local NOx and PM emission reductions toward our immediate need to meet the 2023 and 2031 federal ozone attainment standards, and to reduce emissions and exposures for local communities. Additional information regarding the proposed approach to obtaining SIP credit for PR 2305 can be found in Appendix D of PR 2305's Final Staff Report. Due to the nature of the proposed rule and the accounting rules from EPA, SIP credit for all of the emission reductions cannot be claimed at time of rule adoption. However, the emission reductions evaluated in the Final Staff Report are expected to be SIP creditable, for example through future updates to CARB's EMFAC tool. The best estimate is that about 2.5 – 4 tpd of NOx reduction can be achieved by the rule, however continued tracking will be a necessary component to evaluate rule progress if it is approved by the Board.

Staff agrees with the importance of achieving emission reductions as soon as possible to help with our immediate ozone attainment goals for 2023 and 2031. Early action in complying with PR 2305 is beneficial to warehouse owners and operators because complying with PR 2305 will help them complying with other upcoming state regulations such as CARB's Transport Refrigeration Unit (TRU) or the Low NOx Omnibus regulations. Warehouse operator could purchase new equipment in advance of the CARB regulations in order to earn WAIRE Point for compliance efforts years in advance of the actual implementation dates. In addition, PR 2305 has an early action provision that allows WAIRE Point banking ahead of the WAIRE Program implementation phase in. As an example, a warehouse operator who operates a 150,000 square foot warehouse has an initial compliance period does not start until 2023, but could start earning WAIRE Points as early as January 1, 20222 and the three year banking period would not start until the warehouse officially phases in in 2024. Finally, PR 2305 is designed the be flexible to meet the varied needs of industry, and how those needs can change year to year for any individual facility. Options like solar panels and infrastructure are important components because they can help facilitate emission reductions, and are onsite actions that warehouse operators can potentially take.

Response to Comment 21-3

Staff analyzed the installation of Hydrogen fueling infrastructure separately from electric charging stations due to the inherent differences in the construction and operation of these technologies. However, the analysis of ZE truck acquisitions and usage were calculated together for both electric and hydrogen fuel cell trucks. The lower cost for electric trucks was included in the WAIRE Menu Technical Report with the assumption that warehouse operators will choose the lower cost option. However, if hydrogen trucks make sense for warehouse operators (e.g., by becoming cheaper than electric counterparts), they will receive the same number of WAIRE Points due to the same level of emission reductions. Because emission reductions are one of the

primary goals of PR 2305, no extra WAIRE Points were provided for hydrogen trucks that have the same emissions benefit as electric trucks.

Response to Comment 21-4

WAIRE Points are earned for every truck trip to a facility and annual mileage per truck is not considered. The mileage per trip assumed for trucks is within the range of commercial and pre-commercial ZE trucks (~40 miles per trip for tractors, ~14 miles per trip for straight trucks) and is therefore appropriate for use. While electric trucks do not currently have the range to travel many hundreds of miles, the emissions analysis and WAIRE Points do not assume this is the case, and emission reductions are not overestimated.

Response to Comment 21-5

VMT calculations are impractical for warehouse operators to make in the context of PR 2305 for many reasons. First, trucking companies have expressed concern that they do not want to share where they go with warehouse operators as it can affect business competition. Second, determining how much of a truck load is dedicated to one warehouse's VMT is not clear when a single load could contain goods from or going to multiple destinations. Finally, the administrative burden of tracking this VMT is impractical for a warehouse operator, and for South Coast AQMD to manage for 4,000 warehouse operators subject to PR 2305.

Response to Comment 21-6

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention.

Response to Comment Letter #22 - Tesla - December 16, 2020
Tesla submitted an email with a Word Version of the PR2305 with tracked changes and comments, a subsequent call and conversation was held with Tesla on 01/27/2021.

Response to Comment 22-1
Staff is aware of the different business models of warehouse owners with a number of warehouse operators also owning and operating a fleet. The WAIRE Menu includes actions and investments for NZE or ZE truck visits of Class 2b-7 or Class 8 whether or not the warehouse operator owns the fleet. Based on the analysis of staff, many warehouse operators do not own their own fleet, but can contract with fleets with NZE or ZE trucks. Additionally, if the warehouse operator installed ZE charging infrastructure, the warehouse operator would earn WAIRE Points for the installation and also the usage of the ZE charging infrastructure based on the annual metrics as listed on the WAIRE Menu. At the present time, there are no adopted CARB Regulations that require operating a ZE fleet or installation of ZE charging infrastructure. One of the purposes of PR 2305 is to facilitate other local or regional reductions. Having the ZE truck acquisition and use along with ZE infrastructure installation and use, motivates early action on those other regulations for early adoption of ZE technology. When other regulations require and implement deadlines to electrify their fleets or use ZE chargers, then WAIRE Points would no longer be earned for those actions that no longer go above and beyond U.S. EPA, CARB, or South Coast AQMD rules and regulations.

Response to Comment 22-2
Staff agrees that some charging station stalls will include two plugs, but WAIRE Points will only be earned for the use of one plug, and the installation of an optional plug is not necessary and will not earn additional WAIRE Points. A two plug charging station stall, may increase utilization which would result in more WAIRE Points earned for the increased usage. The definition provided for Electric Charger, is specifically worded for the WAIRE Program menu-based point system concept.

Response to Comment 22-3
Staff agrees with the comment on the defined levels for the range and level of chargers, and has revised the rule to reflect the different ranges of chargers. The charger level references were removed in favor of listing ranges of charger kW ratings, and the 240-volts electric charge rate was included in the Electric Charger definition.

Response to Comment 22-4
The analysis of truck trips assumes a certain number of miles per trip depending on the class of the trucks and if the warehouse is a cold storage facility or not, and also factors in a discounting for overlapping trips. Providing for these factors, a truck trip was assumed to be 39.9 miles. We recognize that some actual trips will be longer, as in the long haul example provided in the comment of 600 miles, and some actual trips will be shorter, but the trip length is assumed to be an average.

Response to Comment 22-5

WAIRE stands for Warehouse Actions and Investments to Reduce Emissions, and is spelled out on the main heading of PR 2305, but not on the header section d. The header for section (d) has been revised to avoid confusion.

Response to Comment 22-6

For the WATTs calculation, the Class 2b-7 straight trucks and the Class 8 tractors engaged in commercial operations are to be counted to determine the WATTs. Truck trips for such activities as correspondence mail deliver or vendor service trucks will not be counted as part of the truck trips to determine the WATTs.

Response to Comment 22-7

The 2.5 coefficient for the Class 8 truck trips represents the approximately 2.5 times more emissions or activity of Class 8 tractors than the smaller Class 2b-7 straight trucks.

Response to Comment 22-8

Truck trip count data should be representative and verifiable, and utilize a method of counting that can meet that standard. The subsection of the rule highlighted in the comment, is in the event of force majeure when due to an event such as a fire that destroys the truck trip count data. This alternative calculation can only be used in the extreme case where data is lost and a warehouse operator must use the Weighted Truck Trip Rate (WTTR). There is no reliable correlation between the size of a warehouse and the number of truck trips, and that poor relationship can be seen in the high number of truck trips for small cold storage or cross dock warehouses. Therefore the use of the WTTR is only in the extreme case of truck trip data loss due to force majeure. Nevertheless, the WAIRE Program Implementation Guidelines provide for a variety of methods that can be utilized by a warehouse operator to provide truck trip count data. The purpose of the alternatives methods is to provide warehouse operators with the flexibility to choose a methodology that is best adaptable to their operations and thereby reduce any burden from reporting.

Response to Comment 22-9

There is an immediate need and legal obligation in the South Coast AQMD jurisdiction to meet the federal ozone standards in 2023 and 2031. To do so NOx and PM emissions must be reduced as quickly as feasible, so it is necessary to have time limits on the Custom WAIRE Plans. Without the deadlines, project development could take years and never meet the potential emission reductions outlined in the Custom WAIRE Plan applications. Additionally, there are deadlines in the Custom WAIRE Plan application process to provide adequate time for the warehouse operator to implement the Custom WAIRE Plan once approved in order to earn WAIRE Points, and there are also time lines for which approved plans will be available for public review.

Response to Comment 22-10

Most of the requirements of the PR 2305 are the responsibility of the warehouse operator. The warehouse owner is mainly required to provide limited reporting. However, there are cases where the warehouse owner is also the warehouse operator or if the warehouse operator wishes to comply with PR 2305 on behalf of the warehouse operator and then transfer those WAIRE Points. The requirement to earn WAIRE Points or pay the optional mitigation fee to meet the WPCO is the responsibility of the warehouse operator and not the warehouse owner. Therefore, the warehouse owner would never be responsible for paying the mitigation fee.

Response to Comment 22-11

The mitigation fee funds would be pooled to subsidize incentive programs toward NZE or ZE trucks or ZE charging infrastructure back to the communities surrounding the warehouse that paid the mitigation fee. More details on the mitigation fee program will be developed, and brought to the South Coast AQMD Governing Board, as it is not currently known how many warehouse operators will actually choose to pay the optional mitigation fee in lieu of the lower cost WAIRE Menu options such as NZE or ZE truck visits.

Response to Comment 22-12

Staff acknowledges that there are warehouse operators that have operational control over other applicable warehouses. The provision to allow the limited transfer of excess WAIRE Points, does include conditions such as discounting the local benefit component of the WAIRE Points as that local benefit should stay near the community where the local benefit was generated. This limited transfer provision of excess points to other warehouses under the same operational control allows warehouse operators to implement larger scale projects one warehouse at a time, rather than be limited to smaller projects at each warehouse due to the high capital expenses of large projects.

Response to Comment 22-13

The comment bubble on page 8 of PR 2305, just has highlighted text, but no entry in the comment bubble and appears to relate to the charging infrastructure component of the Initial Site Information Report. No response will be provided as it appears to just be a highlighted section.

Response to Comment 22-14

The annual variable is related to the phase in of the recommended stringency, which was not available on the draft version of PR 2305 the comment bubbles address. In the latest draft of PR 2305, the recommended stringency is 0.0025 WAIRE Points per WATT with a phase-in of 3 years. In order to phase-in the stringency over three-years, the annual variable is set to successive thirds, with the First Year Annual Variable being 1/3, the Second Year Annual Variable being 2/3, and the Third Year Annual Variable reaching full stringency of 1 for that year and each year thereafter.

Response to Comment 22-15

As stated in the previous response to comments, the charging levels were revised to clarify charging ranges for chargers above 19.2 kW and up to 350 kW. Staff acknowledges the potential for charging levels higher than 350 kW. In the event a warehouse operator would like to install or use higher charging level chargers, they may earn WAIRE Points by submitting a Custom WAIRE Plan application. In that application they can analyze the new technology and higher charging levels to calculate the WAIRE Points that may be earned. Once the Custom WAIRE Plan is approved, the warehouse operator may start earning WAIRE Points.

Response to Comment 22-16

The TRU Plug EVSE purchase is the purchase of the wall or pedestal plug unit that trailer TRUs may plug into at cold storage warehouse or other facilities that get regular deliveries of time sensitive goods in TRU equipped trucks or trailers.

Response to Comment 22-17

The methodology on calculating the WAIRE Points for the WAIRE Menu actions and investments considers cost effort. At this time the cost of hydrogen fuel and hydrogen fueling equipment is expensive but is expected to decrease in time. The high costs of hydrogen fueling stations is reflected in the higher amount of WAIRE Points attributed to the hydrogen fueling

stations. Though the cost may be higher, some warehouses may decide on fuel cell technology because it may be more beneficial to their business model.

Response to Comment Letter –23_CCAEJ – 2/5/2021

Response to Comment 23-1

Thank you for your participation in the rule development process and your comments in support of a warehouse ISR.

Response to Comment 23-2

The recommended stringency is 0.0025 WAIRE Points per WATT, which will be phased-in over three-years will results in annual variables of 0.33, 0.67, and 1, when full stringency is reached. The recommended stringency of 0.0025 WAIRE Points per WATT was analyzed in various scenarios to analyze the complex structure of warehouse operations in the development of PR 2305, to reduce regional and local emissions of NOx and particulate matter, and to help address the disproportionate burden of air pollution in the communities neighboring warehouses. Staff devised calculations of the WPCO and the WAIRE Menu that are designed to be equitable and promote the implementation of cleaner technologies to help address state and federal attainment standards and the disproportionate impacts of air pollution faced by disadvantaged communities.

Response to Comment 23-3

Staff understands the importance of prioritizing zero emission technology. Currently, the WAIRE Menu includes both NZE and ZE on-road trucks because on-road ZE trucks are not commercially available in all sizes and some of the ZE trucks are in the demonstration phase and not yet ready for commercial availability. By allowing NZE technology in part of the WAIRE Menu, NZE can provide at least a 90% reduction in NOx emissions when compared to conventional diesel fueled trucks. The reduction of diesel fueled trucks can produce emission reductions in the near term which can increase the public health benefit to the communities surrounding the warehouse, as on-road ZE trucks and ZE charging and fueling infrastructure are developed and become widespread and commercially available.

Response to Comment 23-4

The mitigation fee is an option warehouse operators can use, including to make up shortages in the warehouse operator's WPCO and provide options for warehouse operators that best address their individual business needs in complying believe paying such a fee is a more optimal way to comply with their WPCO than the other compliance options in the rule. The mitigation fee of $1,000 per WAIRE Point was analyzed to be within a similar range of cost as the other WAIRE Menu options and is not meant as a way to allow for a "pay-to-pollute" compliance option. There are less expensive options for the warehouse operators to meet their WPCO, so the current cost of the optional mitigation fee may not be the most cost-effective option for warehouse operators. With the WAIRE Program being a new regulatory concept, staff is not sure how many warehouse operators would actually opt to pay the mitigation fee in lieu of choosing an item off the WAIRE Menu. Each warehouse owner and operator will make decisions on which WAIRE menu items to pursue, based on their specific situation and circumstances. The mitigation fee funds would be tracked to ensure the funds are used to incentivize NZE and ZE trucks and ZE charging and fueling infrastructure in the communities surrounding the warehouses that paid the mitigation fees.

Response to Comment 23-5

Staff understands the needs for public engagement. Staff will be reporting on the effectiveness of the WAIRE Program to the South Coast AQMD Mobile Source Committee on an annual basis. This annual reporting will ensure that all aspects of the WAIRE Program are evaluated and a version of the annual update report will be released for public review. Custom WAIRE Plan applications would also be released for public review prior to their approval.

Response to Comment 23-6

Thank you for your comments and support of PR 2305. We look forward to working with you in the future.

Response to Comment Letter – 24_Coalition NZE – 2/16/2021

Response to Comment 24-1

Thank you for your participation in the rule development process and your comments in support of a warehouse ISR.

Response to Comment 24-2

The purpose of PR 2305 is to reduce regional NOx and PM, facilitate other related rules and regulations, and reduce emissions and exposures for local communities around warehouses. The WAIRE Menu only includes ZE terminal tractors (aka yard hostlers, yard tractors, etc.) as a compliance pathway under PR 2305 as ZE yard trucks are commercially available and they are an established technology that have operated in some warehouses for several years. It was necessary to include on-road NZE trucks as part of the WAIRE menu options because there is currently a lack of commercially available on-road ZE trucks and uncertainty on when on-road ZE trucks or ZE fueling infrastructure will be widely commercially available. Using NZE trucks at warehouse facilities would provide at least a 90% reduction in NOx emissions as compared to conventional diesel fueled trucks and the use of NZE trucks would provide immediate emission reductions for the communities surrounding warehouses. While use of NZE and ZE yard trucks both lead to emission reductions, yard trucks primarily stay on the warehouse premises and they are a constant source of mobile emissions that could impact the community surrounding the warehouses. The switch to ZE yard trucks at these warehouse facilities would lead to greater and more near-term emission reductions and will provide a greater benefit to the public health of the communities. Nonetheless, the Final Staff Report and the accompanying WAIRE Implementation Guidelines now explicitly allow NZE yard trucks to earn WAIRE Points through a Custom WAIRE Plan, and example calculations that warehouse operators could use are included.

Response to Comment 24-3

Many yard trucks stay on site and idle as part of their operations at warehouse facilities. ZE yard trucks will benefit the communities surrounding the warehouse as they do not idle, and therefore will not result in emissions that will negatively impact the neighboring communities. Conventional on road NZE trucks are included in the WAIRE Menu because on-road ZE are not well established and in comparison, have much shorter dwell time at warehouse facilities. NZE technology is being analyzed as an alternative in the CEQA analysis. Further, the Final Staff Report and the accompanying WAIRE Implementation Guidelines now explicitly allow NZE yard trucks to earn WAIRE Points through a Custom WAIRE Plan, and example calculations that warehouse operators could use are included.

Response to Comment 24-4 and Appendix

South Coast AQMD acknowledges the support in reducing emissions from both mobile and stationary sources with the use of clean fuel and low emission technologies. The citations made by the commenter on the importance of near-zero emission options in this comment and the appendix to the letter are recognized and a key part of South Coast AQMD's strategies to achieve clean air. The WAIRE Menu includes both NZE and ZE on-road truck acquisition and use, but in one instance the WAIRE Menu only includes a ZE option for yard trucks. There are key policy distinctions for why ZE yard trucks are the only option considered. First, in the on-road sector ZE trucks are not at the same stage of commercial development as NZE trucks, which have been

operating in commercial service for several years, especially for Class 8 trucks. However, ZE yard trucks are commercially available today and have been operating at warehouses since 2015. Additionally, because ZE yard trucks are located at an individual facility, they are well-suited to serve as an early beachhead for the longer term development of ZE vehicle solutions.[78] By focusing PR 2305 on ZE yard trucks, warehouse operators are introduced to ZE technology to see how it works in their operations.

Further, because yard trucks primarily stay at the warehouse facility, their emissions can have a disproportionate impact on communities surrounding warehouses compared to on-road trucks with emission miles away from a facility. Many yard trucks idle as part of their operation at warehouse facilities, and the switch to ZE yard trucks would benefit public health of the communities surrounding the warehouse by not being burdened idling emissions. Although NZE engines have lower emissions than their conventional diesel counterparts, they do still have tailpipe emissions. Finally, although the commenter states that NZE yard trucks exist, there is no acknowledgement that yard trucks come in both on-road and off-road varieties. While propane or natural gas on-road yard trucks can meet CARB's standards for NZE, CARB currently does not have a certification standard for NZE off-road purposes. It is not clear how a default NZE definition would apply in the off-road setting. Nonetheless, a CEQA alternative has been included that evaluates additional NZE compliance options (including for yard trucks) within PR 2305. Further, the Final Staff Report and the accompanying WAIRE Implementation Guidelines now explicitly allow NZE yard trucks to earn WAIRE Points through a Custom WAIRE Plan, and example calculations that warehouse operators could use are included.

Response to Comment 24-5

Staff thanks you for your comment and continued support of the South Coast AQMD's Technology Advancement / Clean Fuels Program goals to provide incentives to promote the commercialization of clean technologies. As stated in previous response to comments, only ZE yard truck purchase and usage is included in the WAIRE Menu due to the commercial availability of NZE yard trucks and emission impacts to communities located near warehouses. However, NZE technology is being analyzed as an alternative in the CEQA analysis and the Final Staff Report and the accompanying WAIRE Implementation Guidelines now explicitly allow NZE yard trucks to earn WAIRE Points through a Custom WAIRE Plan, and example calculations that warehouse operators could use are included.

Response to Comment 24-6

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention.

Response to Comment 24-Appendix

Refer to Response to Comment 24-4.

[78] https://globaldrivetozero.org/public/The_Beachhead_Model.pdf

Response to Comment Letter –25_ Energy Distribution Partners – 2/8/2021

Response to Comment 25-1

Thank you for your participation in the rule development process and your comments in support of a warehouse ISR.

Response to Comment 25-2

The purpose of PR 2305 is to reduce regional NOx and PM, facilitate other related rules and regulations, and reduce emissions and exposures for local communities around warehouses. The WAIRE Menu only includes ZE terminal tractors (aka yard hostlers, yard tractors, etc.) as a compliance pathway under PR 2305 as ZE yard trucks are commercially available and they are an established technology that have operated in some warehouses for several years. It was necessary to include on-road NZE trucks as part of the WAIRE menu options because there is a lack of commercial availability for on-road ZE trucks and uncertainty on when on-road ZE trucks or ZE fueling infrastructure will be widely commercially available. Using NZE trucks at warehouse facilities would provide at least a 90% reduction in NOx emissions as compared to conventional diesel fueled trucks; the use of NZE trucks would provide immediate emission reductions for the communities surrounding warehouses. While use of NZE and ZE yard trucks both lead to emission reductions, yard trucks primarily stay on the warehouse premises and they are a constant source of mobile emissions that could impact the community surrounding the warehouses. The switch to ZE yard trucks at these warehouse facilities would lead to greater and earlier emission reductions and benefit the public health of the communities. Nonetheless, the Final Staff Report and the accompanying WAIRE Implementation Guidelines now explicitly allow NZE yard trucks to earn WAIRE Points through a Custom WAIRE Plan, and example calculations that warehouse operators could use are included.

Response to Comment 25-3

Many yard trucks stay on site and idle as part of their operations at warehouse facilities. ZE yard trucks will benefit the communities surrounding the warehouse as they do not idle, and therefore will not produce emissions that could negatively impact the neighboring communities. Conventional on road NZE trucks are included in the WAIRE Menu because on-road ZE trucks are not well established and in comparison, also have a much shorter dwell time at warehouse facilities. Nonetheless, a CEQA alternative has been included that evaluates additional NZE compliance options (including for yard trucks) within PR 2305. Further, the Final Staff Report and the accompanying WAIRE Implementation Guidelines now explicitly allow NZE yard trucks to earn WAIRE Points through a Custom WAIRE Plan, and example calculations that warehouse operators could use are included.

Response to Comment 25-4

South Coast AQMD acknowledges the support in reducing emissions from both mobile and stationary sources with the use of clean fuel and low emission technologies. The citations made by the commenter on the importance of near-zero emission options in this comment and in Comment 25-5 are recognized and a key part of South Coast AQMD's strategies to achieve clean air. The WAIRE Menu includes both NZE and ZE on-road truck acquisition and use, but in one instance the WAIRE Menu only includes a ZE option for yard trucks. There are key policy reasons supporting why ZE yard trucks are the only option considered. First, in the on-road sector ZE trucks are not at the same stage of commercial development as NZE trucks, which have

been operating in commercial service for several years, especially for Class 8 trucks. However, ZE yard trucks are commercially available today and have been operating at warehouses since 2015. Additionally, because ZE yard trucks are located at an individual facility, they are well-suited to serve as an early beachhead for the longer term development of ZE vehicle solutions.[79] By focusing PR 2305 on ZE yard trucks, warehouse operators are introduced to ZE technology to see how it works in their operations.

Further, because yard trucks primarily stay at the warehouse facility, their emissions can have a disproportionate impact on communities surrounding warehouses compared to an individual on-road trucks since most of the miles traveled may not be near the surrounding community. Many yard trucks idle as part of their operation at warehouse facilities, and the switch to ZE yard trucks would benefit public health of the communities surrounding the warehouse by not being burdened idling emissions. Although NZE engines have lower emissions than their conventional diesel counterparts, they do still have tailpipe emissions. Finally, although the commenter states that NZE yard trucks exist, there is no acknowledgement that yard trucks come in both on-road and off-road varieties. While propane or natural gas on-road yard trucks can meet CARB's standards for NZE, CARB currently does not have a certification standard for NZE off-road purposes. It is not clear how a default NZE definition would apply in the off-road setting. Nonetheless, a CEQA alternative has been included that evaluates additional NZE compliance options (including for yard trucks) within PR 2305.. Further, the Final Staff Report and the accompanying WAIRE Implementation Guidelines now explicitly allow NZE yard trucks to earn WAIRE Points through a Custom WAIRE Plan, and example calculations that warehouse operators could use are included.

Response to Comment 25-5

Staff thanks you for your comment and continued support of the South Coast AQMD's Technology Advancement / Clean Fuels Program goal to provide incentives and promote the commercialization of clean technologies. As stated in previous response to comments, only ZE yard truck purchase and usage is included in the WAIRE Menu due to the commercial availability of NZE yard trucks and emission impacts to communities located near warehouses from their use. However, NZE technology are analyzed as an alternative in the CEQA analysis and the Final Staff Report and the accompanying WAIRE Implementation Guidelines now explicitly allow NZE yard trucks to earn WAIRE Points through a Custom WAIRE Plan, and example calculations that warehouse operators could use are included.

Response to Comment 25-6

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention.

Response to Comment 26 - Public Workshop and Community Meeting 2/16 & 2/17/2021

Public Workshop 02/16/2021 Live Public Comments

[79] https://globaldrivetozero.org/public/The_Beachhead_Model.pdf

1. Can you please explain how credit is given for use of a ZE truck under a state mandate but not the purchase since the tonnage taken for such a rule is based on use? How do you avoid double counting?
    a. Answer: Currently there is no state mandate that would require the trucks visiting warehouses to be ZE. ARB is currently working on the Advanced Clean Fleet rule, which could have requirements for ZE trucks. Some of the concepts in the Advanced Clean Fleet rule could potentially overlap with the concepts of the ISR rule but it is not entirely clear at this date. Staff is coordinating with ARB to make sure we understand how a potential overlap could work. Currently there is no overlap we are anticipating with CARB's Advanced Clean Fleet rule and the South Coast AQMD ISR that concerns trucks.

2. Does this rule apply to warehouses without fleet trucks?
    a. Yes, this rule would apply to any warehouses that are over 100,000 sf.

3. Do docks without doors count towards the square footage?
    a. The rule and definition refer to the indoor square footage space inside the warehouse building and not the entire property.

4. How do you know how many WAIRE points you will need in a year?
    a. The WAIRE points are based on your WPCO which is based on a facility's truck trips multiplied by the stringency factor multiplied by the annual variable. Truck trips are based on the amount of Class 2-7 trucks that enter and exit your facility during the 12 months period plus 2.5 times the number of Class 8 trucks that enter and exit your facility. Truck trips determine your WATTs, which will be multiplied by the stringency factor and the annual variable to determine your WPCO, i.e. the amount of WAIRE Points you need for the compliance period.

5. When do you envision the rule applying to warehouses under 100,000 sf?
    a. Staff is not currently contemplating expanding rule coverage to warehouses under 100,000 sf. Instead, the focus is on the approximately 3,000 warehouses covered by PR 2305 that are 100,000 sf or greater. Warehouses under 100,000 sf could be potentially included in PR 2305 in a future action, but that would only occur after a public process and formal rulemaking.

6. Can you please explain how points are banked in PR 2305?
7. There are very limited amounts of banking or trading of WAIRE points. There is no trading or selling of WAIRE points, however, there are three very limited cases allowing WAIRE points transfer. The first type of transfer is if a warehouse operator has operational control over another applicable warehouse in our basin, they can transfer the points to the other location minus the local benefit discount. The second type of transfer is the banking of points which is transferring the points forward in time. The points can only be transferred up to 3 years and they only have a 3 years life. If some of the banked points were done for early compliance, and now new regulations apply, such that the WAIRE compliance action is no longer above and beyond the new regulation (ie: CARB or South Coast AQMD rule) the WAIRE Points can no longer be applied for that action. If you are taking credit for earlier compliance action, that piece of equipment must be on site and in operation. Any WAIRE points earned prior to the phase in cannot be transferred off-site. Finally, a warehouse landowner does have the ability to earn points for the warehouse operators and transfer them to the operator.

8. Will custom plan approvals be appealable to the Hearing Board? Is there any public review process for these custom plans?
    a. All custom WAIRE Plans will fall under South Coast AQMD Rule 216 and Rule 221 and will be appealable to the Hearing Board.

9. Has South Coast AQMD performed any surveys on warehouses to find out how warehouses will use payment of mitigation fees rather than to using ZE trucks.
    a. South Coast AQMD has not conducted this type of survey. Discussions with various warehouses show facilities will try to find the most cost-effective methods for compliance. In the analysis in the Draft Staff Report, the mitigation fees very often will be more expensive than other options. While it is available for facilities to use, it is anticipated facilities will choose other more cost-effective actions on the WAIRE menu in lieu of the mitigation fees.

10. If warehouse more than 100,000 sf changes use, will the warehouse no longer be required to earn WAIRE Points?
    a. For the portion of the compliance period of which the facility is used as a warehouse, they will be required to earn WAIRE points, in other words, it will be prorated.

11. What is the proposed marketing approach of PR 2305 and are businesses aware of these changes?
    a. South Coast AQMD has sent out mailers to every facility that could be potentially affected by PR 2305. These addresses are in Appendix C of the staff report. We have also performed outreach to various trade associations, chambers of commerce, and held publicly noticed public workshops and community meetings. If PR 2305 is adopted, we anticipate a robust outreach process of training and continued outreach with facilities to go through all the details of the rule and compliance requirements.

12. Will near zero emission trucks be allowed to mitigate fees until 2050, state mandate to go all electric?
    a. At the time of the workshop there was no proposed sunset on PR 2305 or for any of the options within the rule,. The Governor's executive order directed state agencies to look at that transition to all electric by 2035. But there are no actual mandates, no actual regulations in place or developed yet. As the state requirements come along, PR 2305 will be evaluated at that time. Currently, the rule contains a sunset provision effective when CARB and EPA have determined the South Coast Air Basin has attained the 70 ppb ozone standard.

13. What cost estimates or modeling have been made for an average warehouse of 100,000 sf to comply with PR 2305?
    a. We have a lot of details in our preliminary draft staff report and subsequent drafts that explain the analysis and cost estimates. Please refer to the preliminary draft staff reports for a high-level summary of those analysis. Additional details are available in the socioeconomic analysis. A user calculator is also available at www.aqmd.gov/fbmsm for warehouse operators to evaluate different compliance options for their warehouse.

14. Would a warehouse owner, land owner, and contracted operator both need to meet WAIRE points requirements for the same location?
    a. Requirements for a warehouse owner/landowner are typically different than for an operator,. Most of the compliance requirements of the rule fall on the operator. There are limited reporting requirements for owners. Warehouse owners can comply and earn WAIRE points on behalf of the operators if they chose to but is not required by the rule..

15. Is there a reason why an electric charging station counts towards the WAIRE Points menu but not a natural gas fueling station?
    a. There is currently a lot of policy direction from the state and interest from many community members in zero emissions technology. Sakeholders have expressed a desire to accelerate zero emission operations. To meet that goal there is a need to build charging and fueling infrastructure for zero emission operations and PR 2305 is a potential mechanism to assist in that effort. Meanwhile, natural gas fueling infrastructure is more available and natural gas fueling providers have said that they can deploy their infrastructure without additional incentives.

16. What if a facility resides in a shared location? What if 2 companies reside in a single building? Will the facility be subjected to a single facility's square footage or the entire square footage?
17. The rule applies to any warehouse over 100,000 s., If there are more than one tenant at the building, if any of the tenants conduct warehousing activities in spaces of more than 50,000 sf, they will be subjected to the points requirement of the rule. If not, the facility will be just subjected to the reporting part of the requirements. Trucks at airports may travel to many warehouses before departure, how will those truck trips be calculated?
    a. Each individual warehouse will count truck trips on their own, independent of the business next to them.

18. Tonight's meeting is a public workshop and tomorrow night's meeting is a community meeting, will the content be different?
    a. The slides are posted on South Coast AQMD's website and there is a slight difference in contents of the meeting. The public workshop is a more detailed walked through of the rules; the community meeting is a high-level summary of the rule with a community focus.

19. What is the policy or reasoning for excluding near zero emission yard trucks from earning points on the WAIRE Menu?
    a. In general, stakeholders have expressed strong interest in zero emission operations and this interest is also reflected in state policy promoting ZE technology. While both ZE and NZE yard trucks are commercially available, ZE yard trucks are far more expensive, and have not been adopted as broadly as NZE yard trucks. PR 2305 can facilitate a facility to choose ZE technology even though it is more expensive. Since

the public workshop, staff received multiple comments regarding the benefits that NZE yard trucks provide and the need to reflect those benefits in PR 2305. Staff are therefore recommending that renewable natural gas yard trucks may be used in a Custom Waire Plan.

20. Can you earn WAIRE points for zero emission forklifts currently operating at the warehouse?
    a. Currently the rule does not allow points for the zero emission forklifts. There is already a widely adopted number of zero emission forklifts being used in the industry so they do not need to be incentivized and it is not clear that any surplus emission reductions would occur by allowing forklifts into PR 2305.

21. Is there consideration of a greater than 12 months period if electrical infrastructure is needed to be installed by electrical companies in order to earn points?
    a. Yes, in the WAIRE Menu, for charging infrastructure there are multiple milestones that can earn points because we recognized for some of the installation of the charging infrastructure can take more than 1 single year. There are 3 built in milestones included in the WAIRE Menu. The 3 milestones are as follows: purchase of the electric supply equipment, begin construction of project, with most of the points earned for final permit signoff and energization of the infrastructure.

22. Can a warehouse operator earn WAIRE points for actions already taken?
    a. The WAIRE menu is set up to earn points from either purchase of ZE trucks or through usage of that equipment. If chargers were already installed prior to rule adoption, they will not be able to earn points for their purchase, but they are able to earn WAIRE points through the usage of the chargers.

23. Is it possible for a WAIRE operator to meet the WPCO exclusively through non truck related measures? If not, how does South Coast AQMD envision operators that do not own or operate their trucks in achieving compliance?
    a. Yes, it is possible, there are ways to earn points without owning the trucks. We recognize a lot of operators do not own their own fleet, but there are options available that do not require operators to do anything with their own fleet. For example, points are available for installing charging infrastructure, for installing solar energy, for installing air filtration systems, for acquiring and using ZE/NZE off-road yard trucks, as well as by paying a mitigation fee. However, there are business relationships that can be explored by the operators to try to identify ways for clean trucks to visit the facilities even though the warehouse operator does not own the fleet.

24. Can a warehouse operator avoid most reporting requirements by having only zero emission equipment and only allow zero emission trucks to visit the warehouse?
    a. Currently, PR 2305 does not have any exemptions for reporting requirements if a facility is zero emissions. All facilities will still be required to comply with the same reporting requirements as required by other warehouses. They would easily meet their WPCO well before all trucks visiting the warehouse would need to have zero emissions operations.

25. Would nature based NOx solutions be able to be used to earn points? For example, trees, vegetations, etc. planted at a facility?
    a. It is true that some vegetation can absorb small amounts of NOx, however, the net benefit regarding reduction of regional pollution from those activities – the main

objective of PR 2305 – is unclear. Currently, there is nothing on the WAIRE menu that will utilize vegetation as a way to reduce NOx emission.

26. Where are the slides posted on the South Coast AQMD websites?
    a. The slides are available at http://www.aqmd.gov/fbmsm.

27. Can you repeat slowly what are the cost per year to the warehouse?
    a. We gave an example of a 250,000-sf warehouse that is about the mid-size range for the sizes covered by PR 2305. Assuming the warehouse has an average number of truck trips going to their facility, the range of cost could be $12,500 per year to $195,000 per year to earn the points they need to comply with the rule. Please refer to the draft staff report and socioeconomic analysis for more details regarding costs.

28. Are there reporting fees per warehouse address?
    a. There are administrative fees that are required for every report submitted under PR 2305 that are described in PR 316.

29. Please briefly explain the legal authority for the ISR rule?
    a. An explanation of legal authority to regulate indirect sources is in the staff report. Also see Master Response to Comment 7.

30. Please discuss the equipment subsidy via the incentive fund work for someone wishing to purchase new equipment.
    a. Incentive programs have their own limitations on how they can be used within regulatory settings. There is nothing that South Coast AQMD is aware of within indirect source authority that regulates how incentive funds can be used. Incentives for the mitigation funds that would come out of PR 2305 have not been explicitly defined; the purchasing of the equipment via the incentive funds will not be able to earn points for programs such as Carl Moyer that provide that the incentives cannot be used to comply with another regulation,, but the usage of the equipment will allow a facility to earn points.

31. When is the vote on PR 2305 schedule? If passed, when is the rule expected to be implemented?
    a. Staff was expected to be bringing the rule to the board for a vote on April 3rd, 2021 [subsequently updated to May 7, 2021]. If passed, the first major(WPCO) compliance date was expected to be summer of 2022 [subsequently updated to early 2023]. But there will be reporting requirements prior to summer 2022, starting with the first report in September 2021.

32. Please explain again how NOx reduction is calculated?
    a. The NOx reduction of each of the WAIRE Menu items was calculated relative to conventional diesel for trucks and yard trucks. Staff used standard emission factors from CARB to calculate the difference based on different amount of activity. There is more detailed analysis on emission reductions based on PR 2305 that is available on http://www.aqmd.gov/fbmsm. The PR 2305 emission reductions and analysis presented are calculated so that they are above CARB's Advanced Clean Truck Rule, Low NOx Omnibus Rule, and Heavy Duty Inspection Maintenance Rule.

33. If costs prove to be higher, will PR 2305 be evaluated over time?

a. Staff will be providing regular updates regarding PR 2305 to the South Coast AQMD Mobile Source Committee after rule adoption. The report will likely include an annual look back and provide information on facilities compliance rates and methods of compliance and what implications or effects it has on the facilities, including costs.

34. Do owners of multiple warehouses provide a separate report on each address of the warehouse?
    a. Yes.

35. If a connective/ contiguous warehouse building has 2 or more addresses, how do you report?
    a. Currently, PR 2305 requires each building to have its own reporting requirements for owners. Operators are required to provide their own report for their operations, so multiple operators in a single building may provide reports.

36. Adoption in April would require initial notifications 2 months later in June of 2021.
    a. There are some initial reporting requirements for original warehouse owners required by June if PR 2305 is required. [subsequently updated to September 1, 2021 for the first warehouse operations notification report, and July 1, 2023 for the first Initial Site Information report].

37. To clarify in terms of compliance, the annual WAIRE [points? Report?] for warehouse greater than 250,000 sf will be due August 2, 2022. But utilizing real world truck data beginning July 2, 2021.
    a. Yes, that is correct. [subsequently updated to 30 days after January 1, 2023, using truck data from calendar year 2022].

38. If a truck leaves a yard at start of day and returns at end of day is that considered one trip or two? Is it a trip every time it goes through the gate or every round trip?
    a. PR 2305 WAIRE menu counts a truck trip as every time a truck leaves a facility and every time it enters a facility. Truck trips used in the WATT is counted as one-way trips (entering and exiting the facility gates). So the example given counts as two trips. The PR 2305 online portal for reporting will make it clear on how to count the truck activity.

39. How are the fees be collected? Would the fees be collected as property taxes so a lien could be placed on a property?
    a. The fees associated with this rule are not taxes, and will not be collected as property taxes. Fees are instead collected as part of a regulatory program, Some of the fees will be invoiced and paid by facilities due to South Coast AQMD at the time of reporting. Some of the reports in PR 316 will have fees associated with them and those fees are paid when the reports are turned in. For a custom WAIRE plan, there will be some specific fees for the time that the material is reviewed and there will be invoicing associated with that. Mitigation fees are something that will be turned in based on a facility's WAIRE points obligation and that will be something that the facility will be paying on their own at the time the demonstration of compliance with the WPCO is due. There will be reporting so that it will be clear what fees are due through the PR 2305 online portal.

40. What if a company does not comply with a payment of fees? What is the process to collect?

a. This would be typical for other regulatory program at South Coast AQMD, a potential Notice of Violation could be issued to the facility and that Notice goes through the South Coast AQMD compliance process, including efforts to settle out of court.

41. Will the district provide a template for truck trip record keeping for warehouses to use?
    a. There will be an online portal that facility will be required to enter the truck trip information on their facilities. Warehouses will probably not have a specific form for their daily truck trip counts as there are many ways for a facility or operator to track truck trips. There will not be any specific form imposed for record keeping, but we would like to make sure the facility hascontinuous and verifiable records that are reported back to the South Coast AQMD online portal.

42. Will this rule go to a public vote?
    a. This rule will go to a vote with the Governing Board of South Coast AQMD and it is anticipated for April 2, 2021. [subsequently updated to May 7, 2021]

43. Will the slides be posted on the web after the presentation today?
    a. The slides are available at http://www.aqmd.gov/fbmsm.

44. Thank you for the presentation. The warehouse industry and goods movement are responsible for significant source of pollution and disproportionally impacted communities. There is a need for a stronger stringency (at least 3 times the current proposed stringency) and prioritizing zero emission technology.
    a. Thank you for your comments.

45. The warehouse sector contributes to LA's ozone pollution and cause immense public health burdens. The indirect source rule should focus on zero emission trucks and infrastructure. The rule is needed urgently, and urge the district to pass it quickly.
    a. Thank you for your comments.

46. The Covid-19 pandemic has exacerbated the existing health risks faced by frontline communities, and the warehouse industry has reported record-breaking profits. AQMD must pass a strong rule that prioritizes public health and good jobs. We support a strong ISR Rule that puts the health of frontline communities and good green jobs first.
    a. Thank you for your comments.

47. I know firsthand how bad the problem with the trucks causing increased NOx emissions and ozone, I have severe asthma and I've been hospitalized. Is it possible to taper down the proportion of points that can be achieved through just paying fees as opposed to actual use of zero-emission trucks and buying zero-emission trucks?
    a. The implementation of PR 2305, if approved, will be reported to the Mobile Source Committee annually. Staff may make recommendations for amendments as part of those annual updates.

48. Limit the opportunities for paper compliance and get emission reductions in those communities. Support a stronger stringency factor, and don't want a pay-to-pollute type option for warehouses.
    a. Thank you for your comments.

49. Is "table 2 annual variable" for calculation of WPCO?

a. Table 2 is referring to Table 2 in the rule.

COMMUNITY MEETING 2/17/2021 - FORMS SUBMISSION

ID 7

What is your experience with warehouses?
Review warehouse designs and involved with warehouse construction. Provide feedback to owners during construction.

RESPONSE: The proposed approach is not included in PR 2305. South Coast AQMD staff reviews CEQA documents prepared for new warehouses and provides comments through that existing process.

What do you most want the South Coast AQMD Board to consider with the proposed Warehouse Indirect Source Rule?
Emission reductions, near zero technologies, enforcement

RESPONSE: Thank you for your comments.

ID 8

What is your experience with warehouses?
Since I live in Carson there are tons of trucks transporting back and forth to these warehouses. The tons of trucks are the main things in the streets causing traffic which is also causing the major air pollution by my house and community. It does not help that the warehouses are literally right by the neighborhoods. Its only been brought to my attention right now that these trucks and warehouses are doing more bad to me and my community than good.

RESPONSE: Thank you for your comments.

What do you most want the South Coast AQMD Board to consider with the proposed Warehouse Indirect Source Rule?
Consider the communities by these warehouses. Its one thing that these trucks slow down the daily life of someone in the nearby communities commute.

RESPONSE: Thank you for your comments.

ID 9

What is your experience with warehouses?
Multiple warehouses are located in or around my community of West Long Beach, which experiences high levels of pollution as a result of such warehouses, the nearby Ports of Long Beach and Los Angeles, a rail yard, refineries, and the 710 and 405 freeways. Warehouses, in my experience, are often accompanied by diesel trucks that emit toxic particles into the lungs of those who live and work near them. Residents of West Long Beach and similar communities deserve better.

RESPONSE: Thank you for your comments.

What do you most want the South Coast AQMD Board to consider with the proposed Warehouse Indirect Source Rule?
I want the rule to focus not only on the monitoring and lowering of emissions from trucks but also on said trucks moving in the direction of zero-emissions. I want to see this rule implemented as soon as possible. It is imperative that this rule is vigorously executed and warehouses are no longer allowed to pollute communities like my own that are frequently the target of toxic industries that find ways to evade emission standards.

RESPONSE: Thank you for your comments.

ID 10

What is your experience with warehouses?
General Motors (GM) owns and operates one warehouse in Rancho Cucamonga for smaller aftermarket auto parts and operates one warehouse in Fontana for bulk aftermarket auto parts. Both warehouses are roughly 400,000ft2. These warehouses supply GM auto parts to much of the Pacific Coast region and are part of GM's Customer Care and Aftersales warehousing network. Globally, GM offers hundreds of thousands of parts, with about 8% of its annual volume flowing through California.

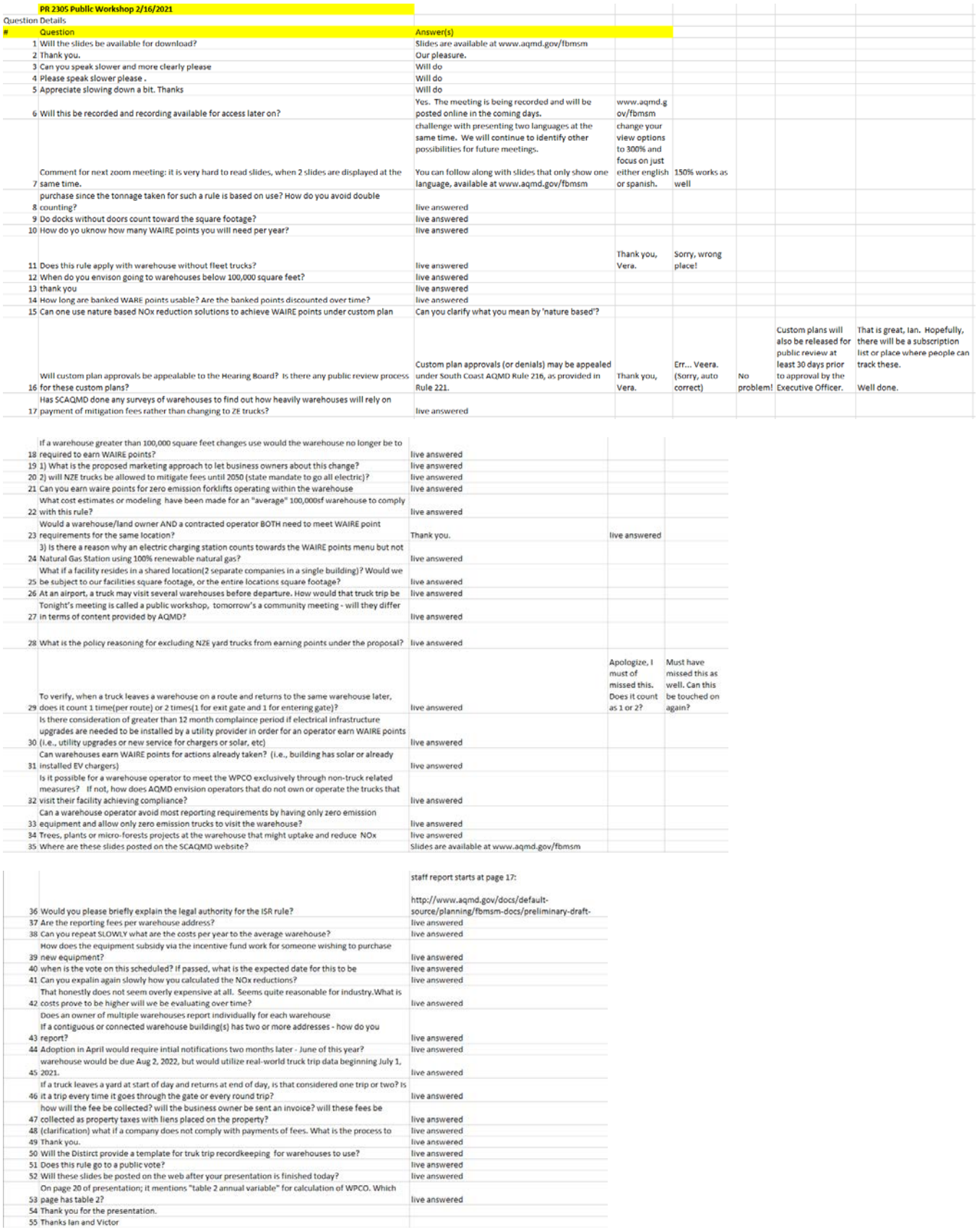
RESPONSE: Thank you for your comments.

What do you most want the South Coast AQMD Board to consider with the proposed Warehouse Indirect Source Rule?
General Motors' vision is a world with Zero Crashes, Zero Emissions, and Zero Congestion. Our company's recent announcements show we are committed to our vision's emissions strategy by aspiring to only sell electric vehicles in our light-duty portfolio by 2035. Additionally, GM plans to achieve carbon neutrality by 2040. GM is also expanding its Zero Emissions vehicle strategy into the goods movement market through the addition of BrightDrop commercial electric vehicles and pallets and through collaborative agreements with Nikola and Navistar to produce fuel cell powered semi-trucks. Clearly, GM cannot fulfill its vision of Zero Emissions without sound energy and environmental policies that encourage and enable the shift to electric vehicles. Accelerating the transition to a Zero Emission future will require a comprehensive suite of well-designed policies and incentives, including vehicle incentives, utility engagement and infrastructure support, and complementary policies, to reduce costs and overcome hurdles. Like many of the warehouses in operation in the South Coast District, GM does not own the fleets that service our warehouses and must work with our suppliers and partners to encourage this transition. The Warehouse ISR directs a gradual transition through a phased-in approach that allows warehouses both time to phase in the use of zero emission trucks and offers flexibility in achieving WAIRE points obligations through other projects such as installing zero emission charging or fueling infrastructure, installing onsite solar panels, or through the use of an approved custom approach. As this is a first-of-its-kind regulation striving to encourage rapid uptake of vehicles that are in the early stages of pre-commercial or early commercial deployment, GM also believes the proposed stringency factor is appropriate to encourage this transition while providing needed flexibilities. Implementing this regulation now – in conjunction with complementary policies such as incentives and infrastructure support – will likely speed up the transition to cleaner air quality directly in the communities where warehouses are abundant providing a better quality of life for our employees and neighbors. As such, GM supports South Coast Air Quality Management District's innovative approach to begin the

transition to zero emission trucks in the region through the implementation of Proposed Rules 2305 and 316.

RESPONSE: Thank you for your comments.

	Community Meeting 2/17/2021		
Question Details			
#	Question	Answer(s)	
1	Online Feedback Form: https://bit.ly/3b06qKb	This is the link to the online feedback form to submit comments to South Coast AQMD staff.	
2	Reading PR2305, What does alternative energy generation mean?	Power generation sysems such as solar or	
3	Is there a problem with the audio?	resolved	
4	Would you please repeat the rule numbers? Thanks	PR 2305 and PR316	
5	https://www.menti.com/6jbgn42i7r	live answered	
6	I'm from Moreno Valley	Thank you	
7	I'm in Yorba Linda	Thank you	
8	fyi - easier for all to POST the URLs in a chat window as an active link vs. forcing the consituients to type obscure url	thank you	
9	don't see poll	sorry it maybe a technical difficulty due to the zoom version or the device	
10	to bad we cant pick more then one..	thank you	
11	live near, air quality	thank you	
12	ok hard to see for us seniors	We apologize for the inconvenience, we will consider your comments for future presentations. If you are access by a smart phone, you may be able to zoom into the text	
13	If we go all or mostly EV, what are we going to do with the old batteries?	live answered	
14	Is it possible to get the slides emailed?	The slides were emailed with the meeting notification, but if you would require me to resend them please email me at vjuan@aqmd.gov. They are also available at aqmd.gov/fbmsm	
15	How do we participate in public comment tonight during your meeting?	There will be open discussion at slide 27	
16	For those that would like to zoom in for better viewing on PC:	live answered	
17	I hope the slides will be available after the meeting. They have valuable information	live answered	You can find the slides at: http://www.aqmd.gov/docs/default-source/planning/fbmsm-docs/warehouse-isr-community-meeting-02-17-2021.pdf?sfvrsn=14
18	Depending on your version of Zoom, you can go to view options at the top, then you can click on Zoom ratio to zoom in or out at different levels	live answered	
19	Can you send a link to the slide presentation	www.aqmd.gov/fbmsm	http://www.aqmd.gov/docs/default-source/planning/fbmsm-docs/warehouse-isr-community-meeting-02-17-2021.pdf?sfvrsn=14
20	Do you monitor how many companies leave your district due to your regulations?	live answered	
21	I think the translation should read "Ganan anualmente 'WAIRE' puntos"... aguja means pointy.. we appreciate the spanish though	live answered	
22	Concerns with transfers from facilities in impacted communites to other communities. I understand what you are talking about but overburdened communties do not need more impacts, period.	live answered	
23	Could a warehouse comply with the rule by simply installing filters and not reducing any emissions?	live answered	
24	why is there such a wide range for annual cost of compliance?	live answered	
25	Will planned facilities be required to show full compliance planned before construction begins on any new facility?	live answered	
26	Is there a cap on warehouses in any given area? If not why.	live answered	
27	https://www.menti.com/td1zwfjhqc	live answered	
28	How are the public health benefits quantified?	live answered	SCAQMD uses the EPA Health Benefit model which basically can relate the change in concentration of pollution to a certain health end point such premature mortality, Asthma, loss school days, and etc.
29	Sorry, I don't see the question at that link	live answered	
30	My answers:	live answered	
31	Clean air quality	live answered	
32	Great online tool. It's fun to see what everyone's priorities are.	live answered	
33	I have been following SCAQMD for the last 9 years. Have you ever not followed a rule after going this far in the rule	live answered	
34	Would you please notify me when the socio-economic impact study is available? My email address is on file with the SCAQMD. I have another meeting starting now so I need to leave. Thank you.	Yes, we will make sure you are notified.	
35	Appreciate extra CEQA compliance, thoughtful	live answered	
36	Last question for me. What about alternative fuels like CNG and Propane. They both have low NOx engines.	live answered	
37	No thanks, Ian— just here to listen to community input	live answered	
38	Thank you everyone for your participation tonight. Your feedback is critical to this rule making. Best, Senator Vanessa Delgado (ret)	live answered	
39	Thank you for your transparancy and availibility.	live answered	
40	we need her to do more then listen to community... actions please!!! folks in her region are dying dour to poor air	live answered	
41	due**	live answered	
42	Rutherford please stand with community folks are dying!!	live answered	
43	I am so excited to see AQMD board members here tonight and hope that they can take action. We need them to pass a strong rule to build a future for cleaner air and green jobs. Big warehouses need to be regulated many of which are pollute and are near impacted communities, this willl not kill jobs or hurt our economy goods movement has already grown so much! AQMD and others have done the research	Thank you	live answered
44	communities we work with?	http://www.aqmd.gov/docs/default-	
45	Can you post the location of tonight's slides? Thank you.	www.aqmd.gov/fbmsm	You cand find them at our website www.aqmd.gov/fbmsm here's also the direct link: http://www.aqmd.gov/docs/default-source/planning/fbmsm-docs/warehouse-isr-community-meeting-02-17-2021.pdf?sfvrsn=14
46	please pass a strong Indirect Source Rule!!!!!		
47	Thank you AQMD.		



	PR 2305 Public Workshop 2/16/2021						
Question Details							
#	Question	Answer(s)					
1	Will the slides be available for download?	Slides are available at www.aqmd.gov/fbmsm					
2	Thank you.	Our pleasure.					
3	Can you speak slower and more clearly please	Will do					
4	Please speak slower please .	Will do					
5	Appreciate slowing down a bit. Thanks	Will do					
6	Will this be recorded and recording available for access later on?	Yes. The meeting is being recorded and will be posted online in the coming days.	www.aqmd.gov/fbmsm				
7	Comment for next zoom meeting: it is very hard to read slides, when 2 slides are displayed at the same time.	challenge with presenting two languages at the same time. We will continue to identify other possibilities for future meetings. You can follow along with slides that only show one language, available at www.aqmd.gov/fbmsm	change your view options to 300% and focus on just either english or spanish.	150% works as well			
8	purchase since the tonnage taken for such a rule is based on use? How do you avoid double counting?	live answered					
9	Do docks without doors count toward the square footage?	live answered					
10	How do yo uknow how many WAIRE points you will need per year?	live answered					
11	Does this rule apply with warehouse without fleet trucks?	live answered	Thank you, Vera.	Sorry, wrong place!			
12	When do you envison going to warehouses below 100,000 square feet?	live answered					
13	thank you	live answered					
14	How long are banked WARE points usable? Are the banked points discounted over time?	live answered					
15	Can one use nature based NOx reduction solutions to achieve WAIRE points under custom plan	Can you clarify what you mean by 'nature based'?					
16	Will custom plan approvals be appealable to the Hearing Board? Is there any public review process for these custom plans?	Custom plan approvals (or denials) may be appealed under South Coast AQMD Rule 216, as provided in Rule 221.	Thank you, Vera.	Err... Veera. (Sorry, auto correct)	No problem!	Custom plans will also be released for public review at least 30 days prior to approval by the Executive Officer.	That is great, Ian. Hopefully, there will be a subscription list or place where people can track these. Well done.
17	Has SCAQMD done any surveys of warehouses to find out how heavily warehouses will rely on payment of mitigation fees rather than changing to ZE trucks?	live answered					
18	If a warehouse greater than 100,000 square feet changes use would the warehouse no longer be to required to earn WAIRE points?	live answered					
19	1) What is the proposed marketing approach to let business owners about this change?	live answered					
20	2) will NZE trucks be allowed to mitigate fees until 2050 (state mandate to go all electric)?	live answered					
21	Can you earn waire points for zero emission forklifts operating within the warehouse	live answered					
22	What cost estimates or modeling have been made for an "average" 100,000sf warehouse to comply with this rule?	live answered					
23	Would a warehouse/land owner AND a contracted operator BOTH need to meet WAIRE point requirements for the same location?	Thank you.	live answered				
24	3) Is there a reason why an electric charging station counts towards the WAIRE points menu but not Natural Gas Station using 100% renewable natural gas?	live answered					
25	What if a facility resides in a shared location(2 separate companies in a single building)? Would we be subject to our facilities square footage, or the entire locations square footage?	live answered					
26	At an airport, a truck may visit several warehouses before departure. How would that truck trip be	live answered					
27	Tonight's meeting is called a public workshop, tomorrow's a community meeting - will they differ in terms of content provided by AQMD?	live answered					
28	What is the policy reasoning for excluding NZE yard trucks from earning points under the proposal?	live answered					
29	To verify, when a truck leaves a warehouse on a route and returns to the same warehouse later, does it count 1 time(per route) or 2 times(1 for exit gate and 1 for entering gate)?	live answered	Apologize, I must of missed this. Does it count as 1 or 2?	Must have missed this as well. Can this be touched on again?			
30	Is there consideration of greater than 12 month complaince period if electrical infrastructure upgrades are needed to be installed by a utility provider in order for an operator earn WAIRE points (i.e., utility upgrades or new service for chargers or solar, etc)	live answered					
31	Can warehouses earn WAIRE points for actions already taken? (i.e., building has solar or already installed EV chargers)	live answered					
32	Is it possible for a warehouse operator to meet the WPCO exclusively through non-truck related measures? If not, how does AQMD envision operators that do not own or operate the trucks that visit their facility achieving compliance?	live answered					
33	Can a warehouse operator avoid most reporting requirements by having only zero emission equipment and allow only zero emission trucks to visit the warehouse?	live answered					
34	Trees, plants or micro-forests projects at the warehouse that might uptake and reduce NOx	live answered					
35	Where are these slides posted on the SCAQMD website?	Slides are available at www.aqmd.gov/fbmsm					
36	Would you please briefly explain the legal authority for the ISR rule?	staff report starts at page 17: http://www.aqmd.gov/docs/default-source/planning/fbmsm-docs/preliminary-draft-					
37	Are the reporting fees per warehouse address?	live answered					
38	Can you repeat SLOWLY what are the costs per year to the average warehouse?	live answered					
39	How does the equipment subsidy via the incentive fund work for someone wishing to purchase new equipment?	live answered					
40	when is the vote on this scheduled? If passed, what is the expected date for this to be	live answered					
41	Can you expalin again slowly how you calculated the NOx reductions?	live answered					
42	That honestly does not seem overly expensive at all. Seems quite reasonable for industry. What is costs prove to be higher will we be evaluating over time?	live answered					
43	Does an owner of multiple warehouses report individually for each warehouse If a contiguous or connected warehouse building(s) has two or more addresses - how do you report?	live answered					
44	Adoption in April would require intial notifications two months later - June of this year?	live answered					
45	warehouse would be due Aug 2, 2022, but would utilize real-world truck trip data beginning July 1, 2021.	live answered					
46	If a truck leaves a yard at start of day and returns at end of day, is that considered one trip or two? Is it a trip every time it goes through the gate or every round trip?	live answered					
47	how will the fee be collected? will the business owner be sent an invoice? will these fees be collected as property taxes with liens placed on the property?	live answered					
48	(clarification) what if a company does not comply with payments of fees. What is the process to	live answered					
49	Thank you.	live answered					
50	Will the Distirct provide a template for truk trip recordkeeping for warehouses to use?	live answered					
51	Does this rule go to a public vote?	live answered					
52	Will these slides be posted on the web after your presentation is finished today?	live answered					
53	On page 20 of presentation; it mentions "table 2 annual variable" for calculation of WPCO. Which page has table 2?	live answered					
54	Thank you for the presentation.						
55	Thanks Ian and Victor						

Response to Comment Letter #27 – Rail Cents -01/20/2021 and 02/19/2021

Response to Comment 27-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention. The concept of introducing direct pick-up and drop-off of large lot shipments in urban areas would require participation by the large railroads and use of Tier 4 locomotives or cleaner to achieve emissions benefits.[80] PR 2305 is applicable to warehouse operators, many of which do not have access to rail lines in order to invest in rail sidings. Based on the lack of availability for warehouse operators to access rail lines and the commercial availability of NZE or ZE locomotives, this concept will not be added to the WAIRE Menu. Warehouse operators that have projects that are site- or business model-specific which were not analyzed for the WAIRE Menu, can propose the concept in a Custom WAIRE Plan application, and if approved the warehouse operator may earn WAIRE Points.

Response to Comment 27-2

Thank you for acknowledging South Coast AQMD's leading efforts in incentivizing cleaner locomotives and funding the demonstration of the ZE battery locomotive.

Response to Comment 27-3

As stated in Response to Comments 27-1, railroading concepts will not be included in the WAIRE Menu as most warehouse operators do not have access to rail lines and the NZE and ZE locomotive technology is not commercially available. As with other site or business model specific concepts, warehouse operators can propose the concept as a Custom WAIRE Plan application.

Response to Comment 27-4

Staff appreciates the time and information provided regarding locomotive technology and railroad insight.

Response to Comment 27-5

Thank you for providing the reasons and benefits of using cleaner locomotives over trucks.

Response to Comment 27-6

Staff appreciates the effort made to explain where the rail side track concept may fit in the WAIRE Menu, but as stated in previous response to comments the concept will not be included in the WAIRE Menu. This concept could be proposed by warehouse operators as a Custom WAIRE Plan application.

Response to Comment 27-7

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention.

[80] https://ww2.arb.ca.gov/resources/fact-sheets/draft-truck-vs-train-emissions-analysis

Response to Comment Letter #28 – Earthjustice - 02/19/2021

Response to Comment 28-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention.

Response to Comment 28-2

It is recognized that the COVID-19 pandemic has added to the health impacts faced by communities already burdened by poor air quality. The logistics and warehouse industry have increased their activity while hitting record cargo volumes in the ports. This has in turn increased the public health burden on those same communities.

Response to Comment 28-3

PR 2305 is anticipated to get significant reductions at the recommended stringency of 0.0025 WAIRE Points per WATT phased-in over three-years. Based on the analysis of 18 WAIRE Menu scenarios, PR 2305 could achieve NOx reductions in the range of 2.5 – 4 tons per day beyond CARB Rules, which is 10-15% reductions from baseline of both NOx and PM. While CARB's strategies are targeting dates in 2035 and 2045, PR 2305 would get immediate reductions as soon as 2023. Further analysis on other stringencies within the range of the CEQA analysis and relocation was conducted, however a screening analysis of the commenter's proposed tripling of the recommended stringency indicates that it could require NZE/ZE truck sales to significantly surpass the limited number of new NZE and ZE truck sales projected by CARB modeling, and could lead to some warehouses relocating to other areas outside South Coast AQMD. As currently proposed, the WAIRE Menu contains ZE yard trucks, ZE charging/fueling infrastructure, and ZE on-road trucks as potential compliance options. The methodology to determine WAIRE Points for each WAIRE Menu item (ZE or NZE) is included in the WAIRE Menu Technical Report included as Appendix B to the Final Staff Report.

Response to Comment 28-4

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention.

Response to Comment Letter #29 – RRC - 02/17/2021

Response to Comment 29-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention.

Response to Comment 29-2

PR 2305 is intended to reduce emissions to meet federal and state air quality standards for ozone and fine PM, facilitate emission reductions from other regulations and policies, and reduce emissions and exposures for local communities surrounding warehouses. The WAIRE Menu provides nearly three dozen NZE and ZE technologies that will reduce emissions or reduce exposure to benefit both the community and the logistics industry workers.

Response to Comment 29-3

The commenter's support for PR 2305 is appreciated.

Response to Comment 29-4

PR 2305 as proposed is expected to result in about 2.5 – 4 tons per day of needed NOx emission reductions, that would result in a 10-15% reduction of the baseline emissions which will assist in meeting the federal and state air quality standards. PR 2305 is designed to address local and regional air pollution, but climate benefits are expected as well with a transition to lower carbon intensity fuels like electricity.

Response to Comment 29-5

Staff is recommending a stringency a 0.0025 WAIRE Points per WATT, which was a result of a thorough analysis of 18 WAIRE Menu scenarios. These scenarios looked at the emissions and the available technology production, a relocation study, and a socioeconomic analysis. The recommend stringency of 0.0025 WAIRE Points per WATT results in significant emission reductions and facilitates emission reductions from other related rules and regulations. A screening analysis of the commenter's proposed tripling of the recommended stringency indicates that it could require NZE/ZE truck sales to significantly surpass the limited number of new NZE and ZE truck sales projected by CARB modeling, and could lead to some warehouses relocating to other areas outside South Coast AQMD. The mitigation fee of $1,000 per WAIRE Point is not intended to be a "pay-to-pollute" scheme as the funds from the optional mitigation fee would be pooled to subsidize incentives for NZE and ZE trucks and ZE charging infrastructure back in the communities surrounding the warehouse that paid the mitigation fee. Based on the analysis conducted during rulemaking, the $1,000 per WAIRE Point value is similar to other WAIRE Menu actions and investments in any one year, but would be a higher cost option over time as it would not allow warehouse operators to make early investments that could lead to cheaper compliance options later.

Response to Comment 29-6

As currently proposed, the WAIRE Menu contains ZE yard trucks, ZE charging/fueling infrastructure, and ZE on-road trucks as potential compliance options. NZE on-road trucks options are also present in the WAIRE Menu as many warehouse operators may find this technology choice better fits their operations. These NZE on-road trucks provide a 90% or better

NOx emission reduction compared to diesel engines, and will assist with meeting the federal ozone attainment goals and provide public health benefit to the local communities surrounding the warehouses. Job impacts from PR 2305 will be included in the socioeconomic analysis.

Response to Comment 29-7

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention.

Response to Comment Letter #30 – Origin Engines - 02/18/2021

Response to Comment 30-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention.

Response to Comment 30-2

The WAIRE Menu includes both NZE and ZE on-road truck acquisition and use, but the WAIRE Menu only includes ZE yard trucks. There are key policy reasons supporting why ZE yard trucks are the only option considered. First, in the on-road sector ZE trucks are not at the same stage of commercial development as NZE trucks, which have been operating in commercial service for several years, especially for Class 8 trucks. However, ZE yard trucks are commercially available today and have been operating at warehouses since 2015. Additionally, because ZE yard trucks are located at an individual facility, they are well-suited to serve as an early beachhead for the longer term development of ZE vehicle solutions.[81] By focusing PR 2305 on ZE yard trucks, warehouse operators are introduced to ZE technology to see how it works in their operations.
Further, because yard trucks primarily stay at the warehouse facility, their emissions can have a disproportionate impact on communities surrounding warehouses compared to on-road trucks with emissions miles away from a facility while traveling between destinations. Many yard trucks idle as part of their operation at warehouse facilities, and the switch to ZE yard trucks would benefit public health of the communities surrounding the warehouse by not being burdened by idling emissions. Although NZE engines have lower emissions than their conventional diesel counterparts, they do still have tailpipe emissions. Finally, although the commenter states that NZE yard trucks exist, there is no acknowledgement that yard trucks come in both on-road and off-road varieties. While propane or natural gas on-road yard trucks can meet CARB's standards for NZE, CARB currently does not have a certification standard for NZE off-road purposes. It is not clear how a default NZE definition would apply in the off-road setting. Nonetheless, a CEQA alternative has been included that evaluates additional NZE compliance options (including for yard trucks) within PR 2305. Further, the Final Staff Report and the accompanying WAIRE Implementation Guidelines now explicitly allow NZE yard trucks to earn WAIRE Points through a Custom WAIRE Plan, and example calculations that warehouse operators could use are included.

Response to Comment 30-2

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention. Staff has noted that Origin Engines is a developer of NZE engines for use in off-road applications.

[81] https://globaldrivetozero.org/public/The_Beachhead_Model.pdf

Response to Comment Letter 31 – Long Beach Area Chamber of Commerce - 02/22/2021

Response to Comment 31-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention. See Master Response 4 for a discussion on the warehousing industry during the COVID-19 pandemic.

Response to Comment 31-2

PR 2305 is a part of the targeted strategy to reduce regional and local NOx and PM emissions toward meeting the federal ozone standards for 2023 and 2031, meeting federal PM 2.5 standards, meeting state standards for ozone and PM 2.5, and for improving public health. The most recent version of the PR 2305 rule language released April 7, 2021 addresses the commenter's concerns regarding rule implementation dates. The first compliance date requiring the submission of the Warehouse Operations Notification is September 1, 2021, an informational report to be submitted by the warehouse owner requiring basic warehouse information including the square footage information on the warehouse, the tenant(s), lease duration, and contact information. The first compliance period for the largest warehouse operators to earn WAIRE Points begins on January 1, 2022. Warehouses will be phased into PR 2305 based on size over three years and once in, there is a three-year phase-in of the rule stringency.

Response to Comment 31-3

The potential costs stated by the commenter are inaccurate and as potential cost ranges are significantly lower. The commenter did not mention that the growth of the warehousing industry has continued during the COVID-19 pandemic. See Master Responses 1, 5, and Socioeconomic Impact Assessment (SIA) for a discussion on the potential costs of PR 2305 and economic impacts.

Response to Comment 31-4

See Master Response 2a through 2c for a discussion on feasibility.

Response to Comment 31-5

See Master Response 2d for a discussion of available technology on the WAIRE Menu.

Response to Comment 31-6

See Master Response 4 and 5 for discussions on the warehousing industry and economic impacts.

Response to Comment 31-7

See Master Response 4 and 5 addressing economic uncertainty related to goods movement during the COVID-19 pandemic.

Response to Comment 31-8

See Master Response 6 and the Socioeconomic Impact Assessment for a discussion on the jobs impacts of PR 2305.

Response to Comment 31-9

See Master Response 7 and Response to Comment Letters 39, 40, and 44 for discussion of South Coast AQMD legal authority.

Response to Comment 31-10

Thank you for your interest in the warehouse ISR and your comments. This letter and responses will be provided to the South Coast AQMD Governing Board.

Response to Comment Letter 32 – Clean Energy - 02/25/2021

Response to Comment 32-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention. The estimated emission reductions from the proposed rule are included in the Final Staff Report in Tables 15 and 16. These anticipated emissions reductions will help the region get closer to reaching attainment of federal and state air quality standards. Additional detailed responses are included below.

Response to Comment 32-2

The WAIRE Menu offers nearly three dozen actions and investments that warehouse operators and owners may choose to satisfy the warehouse operator's WPCO. Some WAIRE Menu items involve acquiring equipment which does not directly result in emission reductions but it does support other WAIRE Menu items and will enhance the effectiveness of other regulations and policies that will help result in the reduction of emissions necessary to attain federal and state air quality standards. This includes options such as installing zero emission fueling and charging infrastructure, installing TRU plugs, and installing solar panels. WAIRE Points are calculated with three components: the incremental cost relative to conventional technologies, the estimated NOx emissions reduction, and the estimated diesel particulate matter emission reduction. The cost is a critical component to ensure that the level of effort for warehouse operators is taken into account when assigning WAIRE Points to an action. Further, because some WAIRE Menu items on their own will not result in emission reductions (e.g., ZE charging/fueling infrastructure) but instead facilitate emission reductions from other actions, including the cost allows a common metric that can be used to compare all WAIRE Menu items. Although other schemes could have been used to determine the WAIRE Point value for each action, the proposed approach is considered the most appropriate balance of all of the needs of the proposed rule. The approach of including the cost is uniformly applied to all WAIRE Menu options and does not disincentivize the market of cost-effective emission reductions. In fact, some NZE truck options that the commenter advocates are found to be more cost effective options with the current approach than ZE options. Costs for third party visits from Class 8 NZE trucks are anticipated to be $0.12/sf/yr while third party visits from Class 8 ZE trucks are anticipated to be $0.14/sf/yr (see Table 20 in the Final Staff Report).

Response to Comment 32-3

While emission reductions are a critical consideration when determining the WAIRE Point value for each action, they are not the only consideration. The level of effort needed to implement the action, the ability of the action to facilitate emission reductions from other regulations and policies, and the ability of incentive funding to be used with PR 2305 are also important considerations. The structure of the proposed WAIRE Points system allows all of these additional considerations to be included, while also furthering the primary objective of reducing regional and local emissions. As shown in the WAIRE Menu Technical Report (Appendix B of the Final Staff Report), ZE and NZE technologies are treated equally using the proposed approach. Although other schemes could have been used to determine the WAIRE Point value for each action, the proposed approach is considered the most appropriate balance

of all of the needs of the proposed rule. See Response to Comment 32-2 for additional discussion.

Response to Comment 32-4

ZE yard trucks are commercially available and have been in commercial service for several years at local warehouses who have expressed no issues with their usage. ZE yard trucks have no tailpipe emissions which provide both 100% NOx and DPM emission reductions which improves the public health in the communities surrounding warehouses as ZE yard trucks do not cause emissions from idling.

The WAIRE Implementation Guidelines have been updated since this comment letter was submitted. In the recent version released on April 7, 2021, NZE yard trucks using renewable fuels can earn WAIRE Points in a Custom WAIRE Plan. Using the calculation methods for ZE yard trucks and NZE on-road trucks, the evaluation process for NZE yard trucks will follow a streamlined approach.

Response to Comment 32-5

While NZE trucks are allowed in PR 2305 (and are an attractive compliance option), NZE fueling infrastructure has not been included. This is in part due to a desire to work towards state ZE goals, and also because previous statements from the natural gas industry, and implied statements from this comment letter, have identified that government support is not needed for the fueling infrastructure for widespread deployment of natural gas fueled NZE trucks other than policy and funding support for the trucks themselves.[82] These previous comments have also stated that the natural gas industry is ready to quickly scale up fueling infrastructure to meet the demands of the trucking industry in southern California, and has a track record of previous successful rapid station developments by constructing 70 stations within one year.

Response to Comment 32-6

While emission reductions are a critical consideration when determining the WAIRE Point value for each action, they are not the only consideration. The level of effort needed to implement the action, the ability of the action to facilitate emission reductions from other regulations and policies, and the ability of incentive funding to be used with PR 2305 are also important considerations. The structure of the proposed WAIRE Points system allows all of these additional considerations to be included, while also furthering the primary objective of reducing regional and local emissions. As shown in the WAIRE Menu Technical Report (Appendix B of the Final Staff Report), all technologies are treated equally using the proposed approach. Although other approaches could have been used to determine the WAIRE Point value for each action, the proposed approach is considered the most appropriate balance of all of the needs of the proposed rule. See Response to Comment 32-2 for additional discussion.

Response to Comment 32-7

[82] https://cngvc.org/wp/wp-content/uploads/2017/04/ACT-Now-Plan-Final.pdf, pg. 14, https://cleanairactionplan.org/documents/2018-draft-drayage-feasibility-assessment-public-comments.pdf, letters at pg. 14 and 47

PR 2305 is not contrary to the 2016 AQMP. PR 2305 includes both NZE and ZE options that warehouse operators can choose to earn WAIRE Points. In some instances, NZE options are more cost-effective than ZE options (e.g., third party Class 8 truck visits), whereas other instances are the opposite (e.g., third party Class 6 truck visits). There are many considerations incorporated into the proposed rule, and the proposed approach strikes the most appropriate balance to achieve cost-effective emission reductions, while facilitating other regulations and policies throughout the state, and providing flexibility for warehouse operators to tailor the options to their specific operation.[83]

[83] Note that the cited resolution language by the commenter applies to incentive programs, not regulations.

Response to Comment Letter 33 – Carson Dominguez Employers Association - 03/01/2021

Response to Comment 33-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention. See Master Response 4 for responses on the warehousing industry during the COVID-19 pandemic.

Response to Comment 33-2

See Master Response 7 for a discussion of legal authority.

Response to Comment 33-3

See Master Responses 1, 5, and the Socioeconomic Impact Assessment (SIA) for a discussion on the potential costs of PR 2305 and economic impacts.

Response to Comment 33-4

See Master Response 2a through 2c for a discussion on feasibility.

Response to Comment 33-5

See Master Response 2d for a discussion of available technology on the WAIRE Menu.

Response to Comment 33-6

See Master Response 4 and 5 for discussions on the warehousing industry and economic impacts.

Response to Comment 33-7

See Master Response 4 and 5 addressing economic uncertainty related to goods movement during the COVID-19 pandemic.

Response to Comment 33-8

See Master Responses 1 and 6 and the SIA for discussion on job and economic impacts.

Response to Comment 33-9

Thank you for your interest in the warehouse ISR and providing your comments.

Response to Comment Letter –34-Weber – 3/1/2021

Response to Comment 34-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention. See Master Responses 5 and 6 for responses on concerns on the warehousing industry and the economy, and the potential for relocation of warehousing.

Response to Comment 34-2

See Master Response to Comments 1, 5, 6, and 9 for discussion of economic and job impacts of PR 2305, as well as the emissions from the state's goods movement industry.

Response to Comment 34-3

PR 2305 offers flexibility by providing 32 WAIRE Menu options, a Custom WAIRE Plan option, and an optional mitigation fee that warehouse operators may choose from to comply with PR 2305. No warehouse operator is required to pay a mitigation fee. See Master Responses 1 and 8 for responses to the costs of PR 2305 and concerns on being a duplicative effort.

Response to Comment 34-4

See Master Response to Comments 8 for a discussion of recent and upcoming CARB regulations, and how PR 2305 is not duplicative with their efforts. See Master Response to Comments 1 and 5 for discussion of costs and economic impacts. See Master Response to Comments 3 for a discussion of air quality benefits.

Response to Comment 34-5

See Master Response to Comments 8 for a discussion of recent and upcoming CARB regulations, and how PR 2305 is not duplicative with their efforts. See Master Response to Comments 1 and 5 for discussion of costs and economic impacts. See Master Response to Comments 3 for a discussion of air quality benefits including what was presented at the referenced meeting.

Response to Comment 34-6

Thank you for your interest in the warehouse ISR and providing your comments. See Master Response to Comments 8 for a discussion of recent and upcoming CARB regulations, and how PR 2305 is not duplicative with their efforts. See Master Response to Comments 7 for a discussion of South Coast AQMD legal authority. Staff developed PR 2305 and PR 316 through a thorough public process. Following the Board's approval of the 2016 AQMP, staff initiated a year-long process to identify potential voluntary measures to address emissions from warehouses that included five working group meetings. As no viable voluntary measures were identified during that process, the Board directed staff to initiate rulemaking in May 2018. Staff subsequently has conducted 12 working group meetings, two community meetings, seven updates to the Mobile Source Committee and two updates to the full South Coast AQMD Governing Board. Staff has also conducted dozens of warehouse site visits, presented updates of the proposed rule to numerous outside organizations such as Councils of Governments and trade

associations, and had hundreds of meetings with individual businesses, governments, and community members during development of the proposed rules.

Response to Comment Letter 35 – United - March 2, 2021

Response to Comment 35-1

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention.

Response to Comment 35-2

See Master Response to Comments 7 for discussion of legal authority. The comment contends that PR 2305 is preempted by the Airline Deregulation Act ("ADA"). Courts apply the same preemption analysis under the ADA that they apply under the Federal Aviation Administration Authorization Act ("FAAAA"). *Ward v. United Airlines, Inc.*, 986 F.3d 1234, 1243 n.2 (9th Cir. 2021). The District has responded to other comments contending that PR 2305 is preempted by the FAAAA, and those responses apply fully here. *See* Responses to Comments 44-4, 106-1, 106-2.

Response to Comment 35-3

The comment incorrectly represents what was agreed to in the airport MOU's.[84] The MOU's do not contain any provision which restricts South Coast AQMD from applying PR 2305 to warehouses, even if they are in some way related to airports.[85] To the contrary, during the development of the MOU's staff clarified repeatedly that warehouses associated with airports would not be included in the MOU's and would instead be addressed in PR 2305. For example, the minutes to the November 15, 2019 Mobile Source Committee record the following discussion:

> "Mayor Pro Tem McCallon inquired whether airport tenants engaged in cargo operations at Ontario airport are aware of the proposed Indirect Source Rule (ISR) for warehouses which would affect cargo trucks operating at the airport. Dr. Philip Fine, Deputy Executive Officer/Planning, Rule Development, and Area Sources, confirmed that they are aware of the ISR and have requested to be under the ISR instead of the airport MOU."[86]

Further, the comment states that the CEQA analysis does not analyze the potential impacts of PR 2305 on the existing airport MOU's and Air Quality Improvement Plans (AQIP's) [also called Air Quality Improvement Measures (AQIM's) in the MOU's]. As stated above, PR 2305 is not in conflict with the MOU's, and in fact was anticipated during the development of the MOU's. Therefore, there is no impact to the MOU's or the AQIP's/AQIM's included

[84] All airport MOU's are available here: http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/facility-based-mobile-source-measures/commercial-airports-mous

[85] Rather, the MOU's explicitly state the opposite: "Nothing in this MOU is intended or shall be interpreted to apply to: (1) any source that is not specifically identified in the MOU Measures, or (2) the operation of any source that is not specifically identified in the MOU Measures." Warehouses are not included in the MOUs., For example, see section (I)(C)(3)(a) here: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/facility-based-mobile-source-measures/mou-la-department-of-airports.pdf

[86] http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2019/2019-dec6-021.pdf

within them, and the analysis included within the Final Environmental Assessment accurately analyzes and discloses the potential environmental impacts of the proposed project.

Response to Comment 35-4

See Master Response to Comments 2a through 2d. In addition, the compliance options that are available that are not related to on-road trucks include actions that either reduce NOx (e.g., through the use of solar panels which reduce the reliance on power plants which emit NOx), facilitate emission reductions from other measures (e.g., through ZE charging/fueling infrastructure that powers cars and trucks), or it reduces exposures to air pollution from trucks visiting their facility (e.g., through installation of filters in nearby schools, daycares, etc.).

Response to Comment 35-5

The definition of warehouse is appropriately designed and captures the range of facilities that PR 2305 is intended to cover. Staff is unaware of any buildings that are "connected to, or part of, other transportation centers (such as a port, commercial airport or rail yard)" that would be subject to PR 2305 that are not warehouses. For example, it is staff's understanding that cargo facilities adjacent to airports clearly store "cargo, goods, or products on a short- or long-term basis for later distribution to businesses and/or retail customers." [see PR 2305 (c)(27)] These facilities can be clearly distinguished from airport terminals. To the extent that an airport terminal stores any cargo, staff is unaware of any terminals in the South Coast AQMD that include more than 100,000 square feet for warehousing activities (the threshold in PR 2305 (d)(1) for earning WAIRE Points).

The commenter also refers to the terms "distribution" and "retail customer". "Distribution" in the context of PR 2305 (d)(27) follows the common definition, for example for 'distribute' in the Merriam-Webster dictionary: "to give out or deliver especially to members of a group".[87] "Retail customers" in the context of (c)(27) similarly follows common definitions found in Merriam-Webster for "retail": "the sale of commodities or goods in small quantities to ultimate consumers" and "customer": "one that purchases a commodity or service".[88] Retail customers are distinguished from business in PR 2305 (c)(27) because some warehouses are used for distributing goods directly to retail customers (e.g., through e-commerce that delivers goods directly from a warehouse to an individual's home), while others are used for distributing goods to stores, other warehouses, or an intermodal facility like a railyard (which are businesses). Indeed, some individual warehouses could be used for distribution to any of the businesses or retail customers listed above.

Finally, to the extent that a building stores cargo that does not utilize trucks for distribution of that cargo, then the WAIRE Points Compliance Obligation for the facility would be zero using the formula under PR 2305 (d)(1), and no WAIRE Points would need to be earned. The hypothetical example provided by the commenter may indeed have a short distance of travel

[87] https://www.merriam-webster.com/dictionary/distribute
[88] https://www.merriam-webster.com/dictionary/retail, https://www.merriam-webster.com/dictionary/customer

from a warehouse to a plane or train for one leg of the journey (e.g., inbound), but the other leg (e.g., outbound) may be to a more distant location using a truck.

Response to Comment 35-6

See Response to Comment 35-5 for a discussion of the definition of retail customer. The example cited in this comment appears to refer to distribution to a business rather than a retail customer (delivery from a warehouse near an airport to another warehouse near another airport, regardless of who ultimately picks up or drops off the goods at each warehouse). If the proposed service of the commenter ('United Cargo') allows shipment of goods dropped off at an airline terminal and picked up at another airline terminal, then the size threshold of PR 2305 would need to be evaluated to determine whether the facility has more than 100,000 square feet used for warehousing activity when determining if the operator needs to earn WAIRE Points [see PR 2305 (d)(1)]. Staff is unaware of any airline terminal that meets this criteria, or of any operator within a terminal that operates more than 50,000 square feet within the terminal for warehousing activities.

The definition in (c)(27) is purposefully written so as not to place the commenter's proposed limits on the applicability of the definition or PR 2305.

Response to Comment 35-7

The commenter's statement that LAX could be a warehouse facility under PR 2305 is correct, and the proposed definition for warehouse facility is meant to reflect this situation. LAX is either a 'warehouse facility owner' or 'warehouse land owner' under PR 2305 (the exact ownership relationship is not clear at this time, but would be reported if PR 2305 is approved). However, the comment regarding the obligations for reporting on a warehouse facility under PR 2305 (d)(7) is not the intent. PR 2305 (d)(7) is proposed to be clarified to state:

> *Warehouse operators shall submit an Initial Site Information Report in the manner specified in paragraph (e)(2) no later than July 1 of the year that they must submit their first annual WAIRE Report for <u>their operations at</u> that warehouse facility,*

This is the only instance within PR 2305 staff identified where a clarification based on the definition for 'warehouse facility' is necessary. The requirements throughout the rest of PR 2305 are clear with regards to warehouse owner compared to warehouse operator obligations. Further, the suggestion to incentive owners to earn WAIRE Points in multi-tenant situations is not included because warehouse owners who are not operators do not have day-to-day control of activity at a warehouse. There may be situations where warehouse operators and owners will need to cooperate to earn WAIRE Points (e.g., for upgrades to a building like some charging/fueling infrastructure or installation of solar panels that aren't already allowed in the tenant agreement), however not all WAIRE Menu options require the agreement of the warehouse owner. If a tenant is unable to come to an agreement with the warehouse owner, they will need to earn WAIRE Points in another way. However, it is anticipated that warehouse owners will be incentivized by the existence of the rule (if approved) to cooperate with warehouse operators in order to keep their warehouses competitive in the marketplace.

Response to Comment 35-8

PR 2305 uses truck trips as a metric for calculating the WPCO as VMT is a difficult metric to capture. Many trucking companies expressed concern about providing VMT as it relates to their proprietary business model, specific routes, and may disclose the warehouses and clients that their truck fleets visit. Further, if a truck visits multiple warehouses on the same route, it is unclear how much VMT to assign to each warehouse. Therefore, VMT is not included in PR 2305 except to the extent that it can be applied to Custom WAIRE Plans as described in PR 2305 (d)(4)(v).

The comment also expresses concern that an operator would be required to count truck trips to a facility, however PR 2305 (d)(1)(B) does not require this, nor does any other part of PR 2305. Operators are required to count truck trips to their warehouse, not a warehouse facility. To the extent there are multiple operators in a warehouse, they only are required to count truck trips to their operation.

Additionally, the comment states that a truck that visits the commenter's warehouse and another warehouse at LAX should not count as more than one trip. As discussed during follow up conversations with LAX staff and various airlines, this is impractical to track as it would require operators to know the origin and destination of every truck that visits their warehouse, as well as whether it left LAX at any point and subsequently returned. Further, LAX is a large property, and it is possible that a truck could travel about two miles in between warehouses just at LAX, without accounting for how far they travel once they leave the airport. The shorter truck trip distances between warehouse located close to one another have been included with other longer trip distances that trucks take by using the average truck trip length from SCAG's Regional Transportation Plan model. These averages allow for a reasonable estimate of potential emissions impacts from PR 2305, including in the development of the WAIRE Points system. The commenter has not provided evidence that the overall average trip length associated with warehouses located at an airport are substantially different than the average trip length used throughout the rest of the analysis in the Final Staff Report and its appendices, despite some of those truck trip lengths potentially being shorter.

Response to Comment 35-9

The comment states that an operator's WAIRE Points Compliance Obligation should be determined at the facility level if there are multiple warehouses at a facility. Each warehouse operator is required to determine their own WAIRE Points Compliance Obligation. Warehouse facility or land owners are not responsible for the day-to-day operations of their tenants. Staff is unaware of any viable means of determining the exact number of truck trips to every warehouse at a facility like LAX, whether those trucks are travelling between warehouses at LAX, and the extent to which those trucks are transporting goods from one warehouse at LAX for delivery at another warehouse at LAX. This last point is important because it is not clear if the trips between warehouses located as close as next door to each other at LAX that share a

truck trip are actually experiencing any overall reduced VMT. While the trip between the warehouses is short, the trip to the first warehouse may have been long. If goods are being transported from the first warehouse at LAX to the second warehouse at LAX, than the longer trip would have occurred to the second warehouse regardless of whether the truck visited the first warehouse or not.

Response to Comment 35-10

There are multiple methods for counting trucks allowed by PR 2305 and the WAIRE Implementation Guidelines. Updated language in the rule since the comment was submitted has added additional flexibility for warehouse operators to document the number of truck trips to their warehouses. For example, operators now must only use methods that provide a verifiable and representative record of truck trips. This allows for once per month trip counts, as well as systems like existing warehouse security protocols like security logs and/or security cameras to be used to count truck trips. See the WAIRE Implementation Guidelines section on Truck Trip Counts for Determining WPCO for additional details.

Response to Comment 35-11

The commenter's suggestion is already allowed under PR 2305 (d)(6)(C). A warehouse facility or land owner can opt in and earn WAIRE Points for any project completed using the WAIRE Menu or under an approved Custom WAIRE Plan at the warehouse facility and then transfer those WAIRE Points to any warehouse operator at that warehouse facility.

Response to Comment 35-12

The commenter's support for including an option for an in lieu mitigation fee in PR 2305 is appreciated. The mitigation fee has been set at a level that is designed to achieve approximately the same level of implementation as what a warehouse operator could do on their own using the WAIRE Menu in any particular year. However, the commenter's suggestion to add a feasibility test into determining what level the mitigation fee should be is not practical. For example, this feasibility test would likely require that South Coast AQMD staff to determine when a warehouse operator can arrange for third party visits from NZE and ZE trucks, and when that is infeasible. While this practice may be different than a warehouse operator's current practices, other warehouse operators have business models that allow this and can work within their operations. In addition, it is not clear under which conditions a warehouse operator not approving their tenant's proposed WAIRE Points project should be considered as a matter of infeasibility. While a tenant does not own a building, they do have the ability to negotiate with their landlord to find terms that work for both parties. By including a feasibility test, it may require South Coast AQMD staff to understand the details of those negotiations, which is not practical for thousands of operators, or desirable by industry.

Response to Comment 35-13

Thank you for your interest in the warehouse ISR and your comments.

Response to Comment Letter 36 - PriceTransfer – 3/2/2021

Response to Comment 36-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention. PR 2305 is a menu-based point system that offers nearly three dozen flexible options for warehouse operators to choose from to comply and has no requirement that warehouse operators or owners pay a mitigation fee. See also Master Response to Comments 1, 3, 8, and 10 for responses to concerns on the costs of PR 2305, concerns about air quality improvements achieved, concerns on duplicative efforts, and concerns about the mitigation fee.

Response to Comment 36-2

See Master Response to Comments 4 for a discussion of PR 2305 in relation to the COVID-19 pandemic.

Response to Comment 36-3

See Master Response to Comments 5 and 6 for discussion of concerns about the economy and concerns about job impacts. Warehouses are not anticipated to relocate out of the region due to PR 2305, as documented in a study commissioned by South Coast AQMD. Therefore, there is not expected to be any lost tax revenue from PR 2305. In addition, as documented in the Socioeconomic Impact Assessment, tax revenues could potentially increase due to the additional sales of NZE or ZE trucks, ZE charging and fueling infrastructure, etc. that are anticipated through warehouse operators complying with PR 2305.

Response to Comment 36-4

See Master Response to Comments 9 for the response to the comment that California has the cleanest supply chain.

Response to Comment 36-5

See Master Response to Comments 8 for a discussion of recent and upcoming CARB regulations, and how PR 2305 is not duplicative with their efforts. See Master Response to Comments 1 and 5 for discussion of costs and economic impacts. See Master Response to Comments 3 for a discussion of air quality benefits. See Master Response to Comments 7 for a discussion of South Coast AQMD legal authority.

Response to Comment 36-6

See Master Response to Comments 1, 3, and 8 for responses to concerns on the emission reductions from PR 2305, concerns on the costs of implementing PR 2305, and concerns that PR 2305 is duplicative. See Master Response to Comments 10 for discussion about PR 2305 being a funding mechanism.

Response to Comment 36-7

See Master Response to Comments 1, 3, and 8 for responses to concerns on the emission reductions from PR 2305, concerns on the costs of implementing PR 2305, and concerns that PR 2305 is duplicative. Thank you for your interest in the warehouse ISR and your comments.

Response to Comment Letter 37 - FCL – 3/2/2021

Response to Comment 37-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention. PR 2305 is a menu-based point system that offers nearly three dozen flexible options for warehouse operators to choose from to comply and has no requirement that warehouse operators or owners pay a mitigation fee. See also Master Response to Comments 1, 3, 8, and 10 for responses to concerns on the costs of PR 2305, concerns about air quality improvements achieved, concerns on duplicative efforts, and concerns about the mitigation fee.

Response to Comment 37-2

See Master Response to Comments 4 for a discussion of PR 2305 in relation to the COVID-19 pandemic.

Response to Comment 37-3

See Master Response to Comments 5 and 6 for discussion of concerns about the economy and concerns about job impacts. Warehouses are not anticipated to relocate out of the region due to PR 2305, as documented in a study commissioned by South Coast AQMD. Therefore, there is not expected to be any lost tax revenue from PR 2305. In addition, as documented in the Socioeconomic Impact Assessment, tax revenues could potentially increase due to the additional sales of NZE or ZE trucks, ZE charging and fueling infrastructure, etc. that are anticipated through warehouse operators complying with PR 2305.

Response to Comment 37-4

See Master Response to Comments 9 for the response to the comment that California has the cleanest supply chain.

Response to Comment 37-5

See Master Response to Comments 8 for a discussion of recent and upcoming CARB regulations, and how PR 2305 is not duplicative with their efforts. See Master Response to Comments 1 and 5 for discussion of costs and economic impacts. See Master Response to Comments 3 for a discussion of air quality benefits. See Master Response to Comments 7 for a discussion of South Coast AQMD legal authority.

Response to Comment 37-6

See Master Response to Comments 1, 3, and 8 for responses to concerns on the emission reductions from PR 2305, concerns on the costs of implementing PR 2305, and concerns that PR 2305 is duplicative. See Master Response to Comments 10 for discussion about PR 2305 being a funding mechanism.

Response to Comment 37-7

See Master Response to Comments 1, 3, and 8 for responses to concerns on the emission reductions from PR 2305, concerns on the costs of implementing PR 2305, and concerns that PR 2305 is duplicative. Thank you for your interest in the warehouse ISR and your comments.

Response to Comment Letter 38 - American Lung Association – 2/26/2021

Response to Comment 38-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention.

Response to Comment 38-2

Thank you for bringing attention to the 2020 State of the Air Report. Staff is aware of the recently released 2021 State of the Air Report which unfortunately came to the same conclusion as the 2020 report as well as many before it that the South Coast AQMD region has the worst ozone in the nation, and is among the worst in the nation regarding fine particulate matter.[89] The comment is correct that trucks are a large part of the pollution, being the largest source of NOx in the air basin according to the 2016 AQMP. Disparities in air pollution exposure are also prevalent as identified in the 2016 AQMP, the various AB 617 Community Emission Reduction Plans, and as shown in Figure 4 of the Final Staff Report.[90] PR 2305 is designed to reduce emissions, and public health impacts associated with warehouses, as documented in the Final Staff Report and Socioeconomic Impact Assessment.

Response to Comment 38-3

The comment highlights a report which shows the potential public health benefits that could be achieved by transitioning to ZE transportation by 2050.[91] The results in this report show the transition would result insubstantial reductions in NOx and ozone, as well as $14.1 billion in monetized health benefits in 2050. This analysis supports the conclusions of the 2016 AQMP socioeconomic analysis that found $173 billion in monetized public health benefits from meeting federal air quality standards by 2031,[92] as well as the monetized public health benefits of PR 2305 of about $1 billion to $3 billion from most compliance scenarios for PR 2305 documented in the Socioeconomic Impact Assessment.

PR 2305 includes many options designed to encourage increased adoption of ZE trucks, including allowing warehouse operators to earn WAIRE Points from acquiring ZE trucks and yard trucks, as well as using them, or getting third party fleets to use them at their facility. In addition, WAIRE Points can be earned for ZE charging and fueling infrastructure, a critical facilitating measure necessary for the use of ZE trucks and yard trucks.

Response to Comment 38-4

Thank you for your comments and your interest in the rule development for PRs 2305 and 316.

[89] https://www.lung.org/getmedia/17c6cb6c-8a38-42a7-a3b0-6744011da370/sota-2021.pdf
[90] http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf, www.aqmd.gov/ab617
[91] https://www.lung.org/getmedia/99cc945c-47f2-4ba9-ba59-14c311ca332a/electric-vehicle-report.pdf
[92] http://www.aqmd.gov/docs/default-source/clean-air-plans/socioeconomic-analysis/final/sociofinal_030817.pdf,

Response to Comment Letter 39 – CalTax – March 2, 2021

Response to Comment 39-1

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention. District counsel has carefully evaluated PR 2305 and PR 316 for compliance with Proposition 26 and other constitutional provisions and has concluded that they are fully constitutional. District counsel has further concluded that the proposed rules do not impose a tax requiring a vote of the people under Article XIII C of the California Constitution and applicable case law. As the letter acknowledges, not all charges are taxes, and non-tax charges need not be adopted by a vote of the people.

The in-lieu fee provided for in PR 2305 is not a tax primarily because it is not compulsory and provides a benefit to those that pay the fee in the form of compliance flexibility. The definition of tax in Proposition 26 includes only charges "imposed" by public agencies. Cal. Const. art. XIII C, § 1(e). The in-lieu fee is not imposed by PR 2305: the rule does not require any warehouse owners or operators (i.e., covered entities) to pay that fee. The only circumstance in which a warehouse operator will pay the fee is if it *elects* to do so rather than using another source of Warehouse Actions and Investments to Reduce Emissions ("WAIRE") points. The obligatory portion of the proposed rule is the WAIRE Points Compliance Obligation ("WPCO"), and the in-lieu fee is only one route to satisfying an entity's WPCO. In *616 Croft Ave., LLC v. City of West Hollywood*, 3 Cal. App. 5th 621 (2016), the court confronted affordable housing fees that a developer could pay in lieu of complying with a requirement to set aside units as affordable housing. The court found "the fees are not compulsory because developers could choose the set-aside option" and therefore were not special taxes. *Id.* at 630-31; *see also id.* (holding that the in-lieu fee was paid "voluntarily as an *alternative* to setting aside a number of units").

The fee thus also provides payors with the privilege of avoiding the need to implement other measures to comply with PR 2305. California courts have repeatedly recognized that there is no right to pollute; that a regulated entity is allowed to continue polluting is thus a "privilege" and a "substantial benefit." *Cal. Chamber of Commerce v. State Air Res. Bd.*, 10 Cal. App. 5th 604, 645 (2017) ("*CalChamber*") (citing cases). Proposition 26's definition of tax includes an express exemption for charges paid in exchange for a "privilege granted directly to the payor that is not provided to those not charged." Cal. Const. art. XIII C, § 1(e)(1). Here, payment of the in-lieu fee provides the payor with WAIRE points equivalent to the payment, which can be used in satisfying the WPCO. Those points and their compliance benefits are not afforded to anyone other than the payor. Moreover, as required by the Proposition 26 exemption, the amount of the fee is based on an estimate of the cost of obtaining emission reductions comparable to those achieved by the WAIRE menu items. *See* Draft Staff Rep. at 33, 213; *see also Cal. Bldg. Indus. Ass'n v. San Joaquin Valley Unified Air Pollution Control Dist.*, 178 Cal. App. 4th 120, 128, 131-35 (2009) (upholding ISR fee based on the cost of offsetting the payors' emissions).

The fee will benefit payors in an additional way. The District will expend the fees, at least in part, to subsidize acquisition of low- and zero-emission trucks. Covered entities will further benefit from those expenditures to the extent those trucks make trips to warehouses regulated under PR 2305 because covered entities obtain credit for such visits through the WAIRE menu. This benefit is reflected in Scenario 7a analyzed in the Final Staff Report, which concludes that it would substantially reduce the cost of compliance with the rule. Draft Staff Rep. at 61, 66-67.

The fee draws strong support from the *CalChamber* case, on which the comment letter repeatedly relies. *CalChamber* upheld the auction of greenhouse gas emission allowances under the State's cap-and-trade program against a claim that it imposed an unconstitutional tax. As the letter acknowledges, *CalChamber* held that "generally speaking, a tax has two hallmarks: (1) it is compulsory, and (2) it does not grant any special benefit to the payor." 10 Cal. App. 5th at 640. First, the court concluded that participating in the auction was not compulsory because the cap-and-trade rule did not mandate that regulated entities bid at auction, and they had other options for reducing or meeting their compliance obligations. Second, it found that bidders obtained a valuable benefit in exchange for their bids: emission allowances that could be used for compliance with the cap-and-trade regulation. *Id.* at 646-49.

As noted above, PR 2305's in-lieu fee shares both features of the auction charge. The proposed rule does not require any covered entities to the pay the fee; they may instead obtain WAIRE points through a variety of methods. In addition, those that elect to pay the fee obtain WAIRE points in exchange—a valuable benefit that they would otherwise need to obtain by investing in other projects.

Moreover, in *California Building Industry Association v. City of San Jose*, 61 Cal. 4th 435 (2015), the California Supreme Court recognized that the availability of a constitutional option for complying with regulation means that a fee offered in lieu of compliance cannot be invalidated as unconstitutional. *Id.* at 468-69 (citing *Koontz v. St. Johns River Water Mgm't Dist.*, 133 S. Ct. 2586, 2599 (2013)). Here, PR 2305 offers covered entities the option to pay the in-lieu fee rather than implementing items from the WAIRE menu. The WAIRE menu items plainly do not impose an unconstitutional tax,[93] and thus the availability of that compliance option dictates that the in-lieu fee option cannot be invalidated as an unconstitutional tax. Indeed, because Article XIII C poses no obstacle to imposing the rule's regulatory obligation—the WPCO—if the position taken by the commenter were accepted by a court, the in lieu fee would be invalidated but the compliance obligation would remain. It would thus have the paradoxical effect of *reducing* flexibility for covered entities and thereby potentially *increasing* the costs of compliance for at least some covered entities.

Although the letter offers no analysis to support its contention that the administrative fee imposed by PR 316 is tax, it likewise is not a tax. It is a fee imposed to cover the costs to the District of administering a program to regulate the payors alone. Courts have routinely upheld such fees, including fees specifically to offset the costs of regulating air pollution. *See, e.g., San Diego Gas & Elec. Co. v. San Diego Cty. Air Pollution Control Dist.*, 203 Cal. App. 3d 1132, 1145-49 (1988). Here too, Proposition 26 provides an applicable exemption from the definition of tax. Article XIII C, Section 1(e)(3) exempts "a charge imposed for the reasonable regulatory costs to a local government for issuing licenses and permits, performing investigations, inspections, and audits, enforcing agricultural marketing orders, and the administrative enforcement and adjudication thereof."

PR 316 allows the District to recoup the "reasonable regulatory costs" of implementing PR 2305—and those costs alone—from the entities subject to the program. First, it allows recovery of the District's estimated costs in processing reports and notices submitted by covered entities under PR 2305 and carrying out compliance activities including audits, inspections, and

[93] The letter is vague about whether the commenter contends that aspects of the rule other than the in-lieu fee impose a tax. However, the WAIRE menu items do not involve payments to the District and cannot be taxes for that reason, among others. *See Schmeer v. Cty. of Los Angeles,* 213 Cal. App. 4th 1310 (2013).

enforcement for covered entities. The fee "is equal to the level of effort required by South Coast AQMD staff to conduct compliance activities related to the reports for which the fees are being paid." Draft Staff Rep. at 38. This is consistent with the cases upholding fees imposed to recoup the direct costs of regulating payors. The fee does not fund unrelated District activities and is not imposed on any party that does not cause the District to incur the costs. *See S. Cal. Edison Co. v. Pub. Util. Comm'n*, 227 Cal. App. 4th 172, 199 (2014) (upholding fee against Proposition 26 challenge and holding that it "does not embrace fees charged in connection with regulatory activities which do not exceed the reasonable cost of providing services necessary to the activity for which the fee is charged and are not levied for unrelated revenue purposes"). It thus satisfies Proposition 26's requirement that the "costs [that] are allocated to a payor bear a fair or reasonable relationship to the payor's burdens on . . . the governmental activity." Cal. Const. art. XIII C, § 1(e) (trailing paragraph); *see also Griffith v. City of Santa Cruz,* 207 Cal. App. 4th 982, 996-97 (2012).

Second, PR 316 provides for a fee to be paid by covered entities that elect to pay the in-lieu fee or apply for approval of a custom WAIRE plan. Like the fees for processing submissions by covered entities, these fees do no more than recoup the administrative costs that the District incurs in implementing those portions of PR 2305. Furthermore, like the in-lieu fees themselves, these fees are only paid if a covered entity *elects* to use one of these alternatives to implementation of WAIRE menu items to satisfy their WPCO. As a result, these fees are not taxes for the reasons discussed above for the in-lieu fee. Moreover, the amount of the fees is calibrated to the District staff effort required to implement these tasks. *See* Draft Staff Rep. at 37.

Response to Comment 39-2

This comment largely does not address the proposed rules, but rather provides the commenter's view of the history of Propositions 13 and 26. District counsel acknowledges that, as noted in the final paragraph of this comment, in the event of a challenge to the proposed rules, the District would bear the burden of proving that the fees provided for in the proposed rules are not taxes. Cal. Const. art. XIII C, § 1 (trailing paragraph).

Response to Comment 39-3

The comment contends the proposed rules would impose a tax. As explained above in Response to Comment 39-1, District counsel has concluded that the proposed rules do not impose taxes for purposes of Proposition 26.

The comment's reference to *Morning Star Co. v. Board of Equalization,* 201 Cal. App. 4th 737 (2011), is inapposite. The charge imposed in *Morning Star* was intentionally imposed as a tax to fund general operations of the Department of Toxic Substances Control. *Id.* at 755. The tax in *Morning Star* is plainly distinguishable from the fees in PR 2305 and PR 316. The PR 2305 in-lieu fee will not be used to fund general District operations, as explained above, but rather to fund projects that reduce emissions or facilitate emission reductions to offset the same emissions caused by the payors' businesses. Likewise, the fees charged under PR 316 will recoup only the costs incurred by the District in implementing regulatory activities directly related to PR 2305. Unlike the tax in *Morning Star,* the District here is not funding its general operations at the payors' expense. On the contrary, the charges in PR 2305 and PR 316 are tailored to the cost of offsetting pollution associated with the payors' businesses and the cost of implementing regulation necessitated directly by the payors' activities.

Response to Comment 39-4

The comment also asserts that the proposed rules impose taxes because they do not provide a sunset date and that a true regulatory requirement would supposedly include such a date. The comment points to no supporting case law or other legal authority for this novel contention, and the District is aware of none. The District is under no legal obligation to adopt sunset dates for its regulations, and there is similarly no such obligation for fees offered in lieu of compliance obligations. Moreover, because the in-lieu fee is offered solely as an alternative mechanism for satisfying an operator's WPCO, the fee option will only remain available as long as covered entities have WPCOs. The duration of the fee is thus perfectly calibrated to the duration of the underlying regulatory obligation. If the District is successful in reducing emissions in the Basin sufficiently to attain the state and federal ambient air quality standards, the rule can be brought back to the District Board for reconsideration. Since this response was initially written, the proposed rule has been modified to include a sunset provision effective when CARB and EPA determine that the South Coast Air Basin has attained the 70 ppb ozone standard.

Response to Comment 39-5

The comment emphasizes the *CalChamber* case, discussed above, in which the Court of Appeal rejected a challenge to somewhat similar regulatory charge. The comment misconstrues the case. It argues the case established a new basis for concluding that a charge is a tax, when it instead found a new basis for concluding that a charge is *not* a tax. The commenter thus attempts to use a shield as a sword. The court held that the auction payments in *CalChamber* were not a tax in large measure because they were voluntary and were paid in exchange for benefits enjoyed solely by the bidders. The court thus upheld them despite the fact that they did not qualify as non-tax charges under the prior case law identifying several categories of non-tax fees. *See* 10 Cal. App. 5th at 639-40, 650. The court never suggested that all charges that are compulsory and do not provide a direct benefit to the payor are taxes. As discussed above, far from suggesting that the PR 2305 in-lieu fee is a tax, *CalChamber* strongly supports the conclusion that it is not. *See* Response to Comment 39-1.

Similarly, nothing in *CalChamber* holds or even implies that charges that are not "evenly distributed" across the population are taxes, as the commenter contends. The comment provides no citation to support that theory. On the contrary, the auction charge in *CalChamber* plainly was not evenly distributed: it was paid only by the narrow group of bidders in the cap-and-trade auction and the amount of payments would differ based on bidders' demand for allowances.[94]

The comment also suggests that a charge can avoid being considered a tax only if its expenditure benefits only the payors. Here too, the comment cites no authority for this assertion. Neither *CalChamber* nor any other case of which District counsel is aware supports that conclusion. In fact, the trailing paragraph of Article XIII C, Section 1(e) makes clear that a fee may be based on "the payor's burdens on, *or* benefits received from, the governmental activity." Cal. Const. art. XIII C, § 1(e) (emphasis added); *see also S. Cal. Edison Co.*, 227 Cal. App. 4th at 199. In any event, as discussed previously, the in-lieu fee does provide benefits to payors in the form of regulatory flexibility. *See supra* Response to Comment 39-1.

[94] In fact, because participation in the auction was not compulsory, the auction price was not even paid by all entities with a compliance obligation under the cap-and-trade program.

Response to Comment 39-6

The comment again contends that charges must be "evenly distributed" and not apply "to a limited segment of the population." There is no legal support for that proposition and indeed the comment cites none. *See* Response to Comment 39-5.

Response to Comment 39-7

The District agrees that whether a charge is compulsory and the extent to which it is paid in exchange for a benefit to the payor can be relevant to determining whether the charge qualifies as a tax. As noted previously, the PR 2305 in-lieu fee is not compulsory and provides the benefit of compliance flexibility to payors. Although sufficient, those features are not necessary to prevent a charge from being considered a tax. The administrative fee established by PR 316 is compulsory for covered entities, but as explained above, it is not a tax because it is a fee properly imposed to recoup only the direct costs of processing the payors' submissions. *See* Response to Comment 39-1.

Response to Comment Letter 40 – NAIOP – March 2, 2021

Response to Comment 40-1

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention.

Response to Comment 40-2

The assertion in the comment that South Coast AQMD does not have indirect source authority for existing sources is incorrect. See Master Response 7 and Response to Comments for Letter #44 (Holland and Knight on behalf of California Trucking Association).

Response to Comment 40-3

The assertion in the comment that the mitigation fee option in PR 2305 is an illegal tax is incorrect. See Master Response 7 and Response to Comments for Letter # 39 (CalTax).

Response to Comment 40-4

The assertion in the comment that the rule has numerous infeasible, as well as arbitrary and capricious provisions is incorrect. This comment is vague, and it is not clear what provisions it is referring to, so cannot be responded to in detail here. Additional detailed responses are included below.

The assertion in the comment that the potential for emission reductions and ozone reductions is unknown and that the rule cannot achieve any reductions is incorrect. As documented in the Final Staff Report, and in detailed calculations available at www.aqmd.gov/fbmsm, 19 separate scenarios were evaluated to estimate the potential emission reductions of PR 2305. The estimates vary due to the flexibility allowed under the rule, however they provide a bounding analysis to show the potential emission reductions that would occur. For the 13 cheapest scenarios on a $/sf/yr basis (with the highest cost scenario being $0.23/sf/yr), NOx emission reductions average 1.8 tons per day (see Tables 15 and 20 in the Final Staff Report), and they generally achieve reductions in the range of 1.5 to 3 tons per day. As stated in the Final Staff Report (Chapter 1, Air Quality Management Plan section), the 2016 AQMP determined that new measures are needed to reduce NOx by 108 tons per day and 88 tons per day to meet the 80 parts per billion (ppb) and 75 ppb federal ozone standards, respectively. PR 2305 would assist in meeting these federal ozone standards as part of the larger, comprehensive strategy included in the 2016 AQMP.

The concern about SIP credit does not consider the full range of options normally available to fold emission reductions into the SIP inventory. These options are discussed in Appendix D of the Final Staff Report. As an example, the indirect source rule adopted by San Joaquin Valley Air District was approved into the SIP by EPA, but the approval did not include any 'SIP credit' for emission reductions.[95] However, the emission reductions achieved by their rule are included as part of normal updates to the mobile source emissions inventory in regular updates by CARB.

[95] When EPA approved the SJVAPCD Rule 9510 into the SIP, it specifically did not allow the rule to be used for prospective SIP credit (76 FR 26609). Notwithstanding this approach, the most recent Annual Report for Rule 9510 shows that since its inception the rule has resulted in 15,617 tons of NOx and PM10 that have been avoided, with another 12,147 tons of NOx and PM10 that has been reduced through use of its mitigation fee program (https://www.valleyair.org/ISR/Documents/2020-ISR-Final-Annual-Report.pdf)

This proven example is expected to be the primary process by which SIP creditable emissions reductions would be accounted for with PR 2305 as well. Other prospective SIP creditable emission reductions methods may be possible too with the WAIRE Mitigation Program once funds are received and the program has been established.

Response to Comment 40-5

The assertion that "warehouses have no control over the marketplace for heavy duty trucks" is incorrect. About 40% of warehouse operators are estimated to own their own truck fleets, and additional warehouse operators arrange for at least some of the trucking services to move the goods stored in their warehouse. See Master Response 2c for a discussion of warehouses that don't own truck fleets.

Response to Comment 40-6

The assertion that "No one knows when low emission trucks will be commercially available in sufficient supply to even be able to achieve any WAIRE Points" is incorrect. NZE Class 8 trucks have been in commercial service for several years, and South Coast AQMD has incentivized at least 1,200 NZE trucks which are already in commercial service. Recent discussions with representatives from Cummins, the manufacturer of NZE engines, and Peterbilt (a truck manufacturer) confirmed that there are no limitations to how many NZE trucks could be ordered or manufactured today relative to conventional diesel trucks. They only need to be ordered and purchased. See Master Response 2d for additional discussion about truck availability. Also see Appendix B of the Final Staff Report which contains information on the commercial availability of technology in the WAIRE Menu.

Response to Comment 40-7

See Master Response 8 for a discussion of other regulations being pursued by CARB. EPA is also pursuing their Cleaner Trucks Initiative, but that is not expected to take effect any earlier than 2027, and this would not result in significant turnover of trucks until the 2030s, well after air quality attainment deadlines for South Coast AQMD.[96]

Response to Comment 40-8

The public may provide comments at the South Coast AQMD's Governing Board's Public Hearing on PR 2305 on May 7, 2021, but written comments are requested by May 4, 2021 at 5PM if the commenter wishes for them to be included in the Board materials.

[96] https://www.govinfo.gov/content/pkg/FR-2020-01-21/pdf/2020-00542.pdf

Response to Comment 40-9

See Master Response 4 for a discussion of warehouses as an essential industry, including during the COVID-19 pandemic.

Response to Comment 40-10

See Master Response 6 for a discussion of how PR 2305 would affect jobs.

Response to Comment 40-11

The suggestion that PR 2305 and PR 316 imposes a tax is incorrect. See Response to Comment Letter 39 for a discussion of taxes. The potential economic impacts of PR 2305 and PR 316 have been analyzed in the Socioeconomic Impact Assessment. This analysis found that the monetized public health benefits of most compliance scenarios outweighed the potential costs by a ratio of about 3:1, including in 11 of the 13 scenarios with the lowest costs ($\leq$\$0.23/sf). Further, the increase in operating costs for these cheapest compliance scenarios would be less half of the approximately \$0.50/sf/yr increase in rental prices that warehouse operators have had to absorb continually over the past decade (see Figure 12 in the Final Staff Report). PR 2305 could potentially increase the cost of goods by about 0.05%, which is much less than the typical increases of about 2% from inflation as shown in the Consumer Price Index.[97]

Response to Comment 40-12

South Coast AQMD Staff understand that warehouses have provided many community benefits. Those benefits are expected to continue if PR 2305 is approved, as warehousing is expected to continue as a thriving industry in the region. The warehouse relocation study commissioned by South Coast AQMD determined that no warehouses would relocate unless costs increased more than \$1.50/sf/yr here compared to any surrounding market area. PR 2305 and PR 316 are expected to add up to \$0.83/sf/yr in costs in the worst case, but probably closer to \$0.23/sf/yr or less as most compliance scenarios were found to cost no more than this amount. Even with these costs, the potential monetized public health benefits outweigh the potential costs of the rule for most compliance scenarios modeled by about 3:1. Warehouse operators have faced rental price increases of about \$0.50/sf/yr continuously for the past decade and the warehousing market responded by growing even faster while maintaining very low vacancy rates (see Chapter 3 of the Final Staff Report and Socioeconomic Impact Assessment). Therefore the community benefits identified in the comment are expected to continue if PR 2305 is approved.

Response to Comment 40-13

The comment that South Coast AQMD does not have the legal authority to adopt PR 2305 is incorrect. See Master Response 7 and Response to Comments 44-2. The South Coast AQMD is indeed governed by Health and Safety Code 40400, but not exclusively. The comment ignores the many other statutes that grant authority to South Coast AQMD. The statement that the Final Staff Report omits any citation of section 40440 is incorrect. In the Draft Findings under California Health and Safety Code Section 40727 in Chapter 3, section 40440 is listed along with many other authorizing statutes under the section labelled 'Authority'. Nothing in

[97] https://www.dir.ca.gov/OPRL/CPI/EntireCCPI.PDF

Section 40440(b)(3) indicates that it is intended to impose a limitation on the South Coast AQMD's indirect source authority.

Response to Comment 40-14

The comment that the rule is a regulation of mobile sources, rather than a true "indirect source" rule is incorrect. The federal Clean Air Act does not limit the South Coast AQMD's authority to adopt indirect source rules. See Master Response 7 and Response to Comments 44-2.

Response to Comment 40-15

The comment that several respects of Rule 2305 is arbitrary, capricious, entirely lacking in evidentiary support, or unlawfully or procedurally unfair is incorrect. The reasoning supporting PR 2305 is contained within the Final Staff Report, as well as the Socioeconomic Impact Assessment, and the Environmental Assessment. The development of PRs 2305 and 316 included significant public outreach and has followed all required procedures to ensure that the public has had a fair process to understand and comment on the proposed rules.

Response to Comment 40-16

The purpose of PR 2305 and PR 316 is to reduce local and regional emissions of NOx and PM associated with warehouse operations in order to assist in meeting attainment of state and federal air quality standards. See Master Response 2d for information on the commercial availability of NZE/ZE technology. Also see Appendix B of the PR 2305 Final Staff Report, which contains information on the commercial availability of technology on the WAIRE Menu. All warehouse owners and operators are expected to be able to use any of the WAIRE Menu items to meet rule compliance, with one limited exception. As shown in the analysis of a scenario only focused on solar panel acquisition and usage, all warehouse operators will be unlikely to be able to fully satisfy their WPCO just by using solar panels they install and use, assuming that they can only use solar panels equal to about 50% of their warehouse's square footage. They would need to then use any of the other WAIRE Menu options to cover any shortfall.

Further, while the scenario modeling conservatively assumed that warehouse operators would not use earn any WAIRE Points for Class 8 truck acquisitions in the first compliance year, this technology is expected to be commercially available before the end of 2021 by some major truck manufacturers, with additional models becoming commercially available during the first compliance period in 2022.[98] To the extent that warehouse operators want to pursue options from the WAIRE Menu related to on-road truck acquisitions or visits, there are no limits, other than what they choose to do and/or can negotiate with the goods owners and trucking companies that they work with. For the non-truck acquisition/ visit options, these measures are either facilitating actions that are necessary components for ZE trucks (e.g., charging/fueling infrastructure) which will assist in encouraging the adoption of ZE trucks in order to reduce NOx, or they will directly reduce NOx on their own (e.g., on-site NZE or ZE yard truck acquisition or usage, installation and usage of solar panels that reduce the reliance on fossil-fueled power plants that emit NOx in South Coast AQMD), or they will provide a community

[98] See https://globaldrivetozero.org/tools/zero-emission-technology-inventory/ for a summary of truck manufacturer announcements.

benefit to mitigate indirect source emissions related to their operation (e.g., filtration projects in nearby schools, homes, etc.). The mitigation fees would be used to incentivize NZE and ZE trucks, and ZE charging and fueling infrastructure. Based on communications with truck and engine manufacturers of NZE trucks, there are no limitations to how many can be produced relative to their conventional diesel counterparts. ZE truck production is just beginning, however those trucks are expected to become more commercially available as orders are placed. See Master Response 2c. ZE charging / fueling infrastructure can serve ZE trucks that are already in commercial service. PR 2305 was designed the be flexible and offer different methods of complying with the WPCO. Options such as solar panel systems, air filters, and infrastructure can help facilitate emission reductions by supporting cleaner technologies and assist in the transition to cleaner technologies in goods movement or reduce exposure to remaining emissions in the community.

Response to Comment 40-17

The comment is noted.

Response to Comment 40-18

The statement that PR 2305 constitutes an illegal tax is incorrect. See Master Response 7 and Response to Comment 39-1 (comment letter 39, response 1) for a discussion of taxes in relation to PR 2305.

Response to Comment 40-19

To comply with PR 2305, warehouse owners or operators can choose to complete WAIRE Menu actions, pay a mitigation fee, implement an approved Custom WAIRE Plan, or a combination of any of the three.

Response to Comment 40-20

The comment that states that ZE and NZE technologies are not commercially available on a scale to enable warehouse operators to satisfy their compliance obligation is incorrect. Many of the ZE/NZE technologies are commercially available for sale now. For example, South Coast AQMD has incentivized more than 1,200 NZE trucks,[99] and NZE engine and truck manufacturers have stated that there are no limits to producing these trucks relative to their conventional diesel counterparts.[100] ZE trucks are commercially available below Class 7 today, and are expected to be commercially available starting in late 2021, before the start of the first compliance period.[101] PR 2305 also includes a five year phase-in period that will also ensure that technologies will continue to grow in their commercial availability. Please refer to Master Response 2 for a discussion on feasibility and the commercial availability of NZE/ZE truck engines. See Appendix B of the PR 2305 Final Staff Report, which contains information on the commercial availability of technology on the WAIRE Menu. PR 2305 includes an optional

[99] These trucks have been funded since the AQMP was published in 2017. http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/combind-hd-trucks-carb-biz-aqmp-presentations-1-26-21.pdf#page=69 (slide 69)

[100] For example, see comments from Tom Swenson with Cummins. http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2021/2021-apr2-020.pdf

[101] See https://globaldrivetozero.org/tools/zero-emission-technology-inventory/ for a summary of truck manufacturer announcements.

mitigation fee that warehouse operators may choose to pay the to comply with their WPCO, but is not a requirement. To comply with PR 2305, warehouse owners or operators can choose to complete WAIRE Menu actions, pay an optional mitigation fee, implement an approved Custom WAIRE Plan, or a combination of the three.

Response to Comment 40-21

The funds generated from the mitigation fee will be used to provide incentives for the purchase of NZE or ZE trucks, or for the installation of fueling and charging infrastructure, with priority given for projects in the communities near warehouses that paid the mitigation fee. Please refer to Master Response 2 for a discussion on feasibility and the commercial availability of NZE/ZE trucks and Response to Comment 40-20. See Appendix B of the PR 2305 Final Staff Report, which contains information on the commercial availability of technology options in the WAIRE Menu. Staff is unaware of any shortfall in the opportunity to fund NZE trucks, ZE trucks, and ZE charging and fueling infrastructure, even if all warehouse operators only complied with PR 2305 by paying a mitigation fee. To the contrary, the level of funding identified in the 2016 AQMP to turn over the truck fleet to meet air quality standards was identified as $4.2 billion.[102] Further a recent report from the California Energy Commission identified that 141,000 50 kW charging stations and 16,000 350 kW charging stations could be needed statewide to support the 180,000 medium and heavy-duty on-road vehicles that would need to be deployed to meet air quality standards by 2030.[103] More than half of these vehicles could be needed in South Coast AQMD. Cost estimates have not yet been developed for this level of infrastructure buildout, but at minimum the cost is expected to be many billions of dollars.[104] As shown in Table 7 of the Final Staff Report, the level of incentive funding in the worst case scenario over a ten year period is anticipated to be no more than $5.3 billion and a more realistic mitigation fee scenario would only collect about $1 billion. This level of funding is well short of the level needed to offset emissions from warehouses.

Response to Comment 40-22

In the worst-case example of every warehouse operator paying the mitigation fee and then not earning any WAIRE Points for the trucks incentivized by the WAIRE Mitigation Program, the cost could total up to about $670 million per year. A more realistic scenario involving a mitigation fee based compliance approach (where warehouse operators earn WAIRE Points for incentivized trucks) results in total costs of about $114 million per year. In fiscal year 2019-2020, South Coast AQMD administered about $200 million in incentive funding, but only about $60 million in fiscal year 2016-2017.[105] The comment that the South Coast AQMD budget was only $173 million does not account for this additional pass-through incentive funding.[106] PR 316 includes additional fees that must be paid by warehouse operators to offset

[102] http://www.aqmd.gov/docs/default-source/clean-air-plans/socioeconomic-analysis/final/appfinal_030817.pdf#page=44 (page 2-A-42)
[103] https://efiling.energy.ca.gov/getdocument.aspx?tn=236237#page=56
[104] As an example, through the CALeVIP program DC fast chargers have cost about $2,000/kW (Ibid, pg. 74). Multiplying this value through the 141,000 50 kW chargers and 16,000 350 kW chargers yields a cost of about $25 billion statewide.
[105] http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/combind-hd-trucks-carb-biz-aqmp-presentations-1-26-21.pdf#page=62
[106] http://www.aqmd.gov/docs/default-source/finance-budgets/fy-2019-20/cafr-2020_for-web-upload.pdf#page=38

the cost of staffing and administering the mitigation program. Therefore, the staffing support needed to administer the WAIRE Mitigation Program will be able to ramp up and down relative to the level of incentive funding received, similar to how it has scaled quickly in recent years. The annual average $114 million expected in a more realistic scenario if every warehouse operator paid the mitigation fee (which still is expected to significantly overestimate how many operators will choose this compliance option) would therefore not be more than South Coast AQMD could spend. See also Response to Comment 44-21.

Response to Comment 40-23

See Response to Comment 40-21 and 40-22 on the ability of the WAIRE Mitigation Program to spend mitigation funding to incentivize NZE and ZE trucks and ZE charging and fueling infrastructure. See also Master Response 2 on the availability of ZE and NZE trucks. The comment correctly identifies some of the materials that have been provided on the proposed WAIRE Mitigation Program. Additional discussion has occurred with the South Coast AQMD Mobile Source Committee,[107] and requirements for the WAIRE Mitigation Program will be included in the Board Resolution accompanying PR 2305 and PR 316. Future details of the WAIRE Mitigation Program will be developed in a public process as funding becomes available. Exact details of the WAIRE Mitigation Program will not be available until the level of funding is known, including in each geographic region. This information is critical to design an effective structure for spending the fees. All solicitations for project funding and project awards will be brought to the South Coast AQMD Governing Board for approval.

Response to Comment 40-24

The funds generated from the mitigation fee will be used to provide incentives for truck owners to purchase NZE or ZE trucks, or for the installation of fueling and charging infrastructure, with priority given for projects in the communities near warehouses that paid the fee. Other funding programs also incentivize these same actions, and the funding from PR 2305 mitigation fees would only be combined with other programs to the extent that both programs would look to reduce NOx and PM related to warehouse operations, either through directly funding NZE and ZE vehicles, or through funding facilitating measures such as ZE charging and fueling infrastructure.

PR 2305 and PR 316 does not impose a tax, and the mitigation fee is one of many compliance options. Please see Master Response 7 and the Response to Comment Letter 39 for a discussion of taxes and regulatory fees in relation to PR 2305.

Response to Comment 40-25

The purpose of this rule is to reduce local and regional emissions of nitrogen oxides and particulate matter, and to facilitate local and regional emission reductions associated with warehouses from the mobile sources attracted to warehouses in order to assist in meeting state and federal air quality standards for ozone and fine particulate matter. This is the very purpose

[107] http://www.aqmd.gov/docs/default-source/Agendas/Mobile-Source/msc041621.pdf#page=7, http://www.aqmd.gov/docs/default-source/Agendas/Mobile-Source/msc031921.pdf#page=17, http://www.aqmd.gov/docs/default-source/Agendas/Mobile-Source/msc021921.pdf#page=5, http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2021/2021-mar5-025.pdf, http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2021/2021-apr2-020.pdf

of an indirect source rule. As shown in the Emissions Inventory of PR 2305 Warehouses section from Chapter 1 of the Final Staff Report, there are many sources of emissions associated with warehouses, but trucks are indeed the largest source, constituting about 90% of the total NOx emissions. Therefore, many compliance options focus on reducing emissions from this category. However there are other emission sources that are also addressed by PR 2305 besides trucks (including yard trucks, TRUs, passenger cars to the extent that charging infrastructure is installed/used to support them, and power plant emissions). Consequently, warehouse operators can essentially offset emissions from trucks through measures from non-truck sources.

Response to Comment 40-26

See Master Responses 7 regarding South Coast AQMD authority for PR 2305.

Response to Comment 40-27

See Master Responses 8 and 9 regarding CARB's role in reducing mobile source emissions, and the state of technology adoption for on-road trucks in California. Further, it is unclear to what the $1 billion per year figure cited by the commenter refers to. The trucking industry spends about $7.5 billion already every year in California on new truck sales,[108] yet is still only ranked 40th out of 50 states in the penetration of 2010 truck engine standards into its fleets statewide.[109]

The analysis included within the Final Staff Report already accounts for all CARB regulations to the extent that they can be quantified and concludes that additional emission reductions of about 1.5 to 3 tons per day of NOx are anticipated with PR 2305 after considering the effect of all CARB regulations.

Response to Comment 40-28

Appendix C of the Final Staff Report documents that an estimate 40% of warehouse operators own a truck fleet. In addition, many others directly contract with at least some trucking companies that visit their warehouses. Though an estimate is not available for this last situation, it is not inconceivable that a majority of warehouse operators either own trucks, or directly contract with trucking companies. The option of acquiring trucks is therefore realistic for at least 40% of warehouse operators. Similarly, warehouse operators can contract with trucking companies to, at least to the extent that they already do this, to have NZE or ZE trucks visit their warehouse. While the action to have third-party NZE and ZE trucks visit a warehouse may not be standard industry practice today, this does not mean it is infeasible. See Master Response 2c.

Response to Comment 40-29

The purpose of this rule is to reduce local and regional emissions of nitrogen oxides and particulate matter, and to facilitate local and regional emission reductions associated with the mobile sources attracted to warehouses in order to assist in meeting state and federal air quality standards for ozone and fine particulate matter. Purchasing and using ZE and NZE trucks (as

[108] https://www.nada.org/WorkArea/DownloadAsset.aspx?id=21474861283
[109] https://www.dieselforum.org/California

opposed to diesel) contributes towards this purpose, and thus are included as WAIRE Menu actions. However, purchasing and using ZE and NZE trucks are not required to comply with PR 2305; there are many other options available to achieve rule compliance, including many other WAIRE Menu actions unrelated to truck purchase or use, implementing an approved Custom WAIRE Plan, paying a mitigation fee, or doing any combination of WAIRE Menu actions, Custom WAIRE Plan, and/or paying a mitigation fee.

Staff took great care to ensure that PR 2305 can use incentive funding to the extent possible, a rare phenomenon with regulations. Further, sufficient levels of incentive funding have not been identified to achieve the level of emission reduction needed to meet federal and state air quality standards, therefore additional regulations must also be pursued, such as PR 2305. The claim that PR 2305 will disincentivize the purchase of lower emissions vehicles is incorrect. Rather, by imposing a broad requirement, the expectation is that many in the goods movement industry will see that trucking options can allow warehouse operators to comply with PR 2305 and will take actions accordingly to provide those options. The proposed rule would therefore provide an important market signal to encourage the adoption of these lower emissions trucks.

PR 2305 itself does not prohibit the use of incentive funds. Individual incentive funding programs themselves each have their own prohibitions, including how those funds can or cannot be used to comply with regulations. Warehouse operators are encouraged to use incentive funds to lower the purchase costs if allowed by the incentive program. Warehouse operators (and owners who opt in) should consult with the incentive programs they are seeking funding from to ensure funds can be used with PR 2305, should it be approved by the Board.

Due to existing statutory or regulatory prohibitions, most state incentive funding programs used to offset the higher purchase price of zero emission NZE/ZE vehicles and equipment cannot be used to aid in complying with state or federal law or South Coast AQMD rules or regulations (For example Health and Safety Codes 44281(b), 44391.4(a), 44271(c), CCR Title 13, Ch. 8.2 Sec. 2353 (c)(4), Moyer Guidelines Ch. 2, CA Beneficiary Mitigation Plan). In practice, this means that NZE/ZE trucks acquisitions with incentive funding by warehouse operators or owners cannot be used to comply with PR 2305, thus no WAIRE Points can be earned from these acquisitions. However, because PR 2305 requires use of those trucks at specific locations to reduce local emissions, and because PR 2305 does not apply to trucking companies, but rather to warehouse operators, the use of incentivized trucks is not prohibited by incentive programs with a program like PR 2305. In other words, the use of an NZE or ZE truck per the WAIRE Menu may earn a warehouse operator or owner WAIRE points, regardless if incentive funding was used to purchase the truck. Warehouse operators will therefore not be required to determine if an NZE or ZE truck that visits their warehouse is incentivized, and will not be required to determine if any usage is surplus.

Response to Comment 40-30

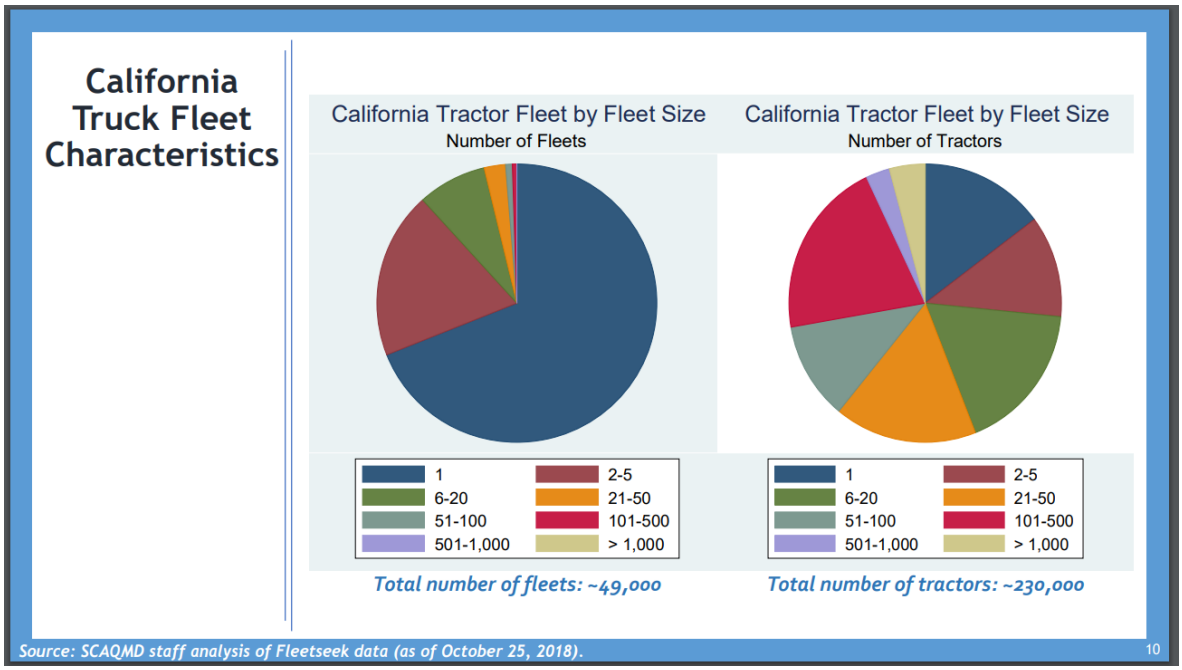
The comment that there are not commercially available Class 8 trucks is incorrect. See Master Response 2d. Also see Appendix B of PR 2305 and PR 316's Final Staff Report, which contains information on the commercial availability of every technology in the WAIRE Menu.

The comment also focuses solely on Class 8 ZE trucks, which account for just two out of 32 options in the WAIRE Menu (with additional options available in a Custom WAIRE Plan and a

mitigation fee). Warehouse operators can choose any of the options to comply, not just the Class 8 ZE trucks the commenter is focused on.

Response to Comment 40-31

The statement that most truck fleets are owned by small business operators with 1-5 trucks is misleading. While most fleets are small, most trucks are in larger fleets of 20 trucks or more as shown in the figure below.[110]



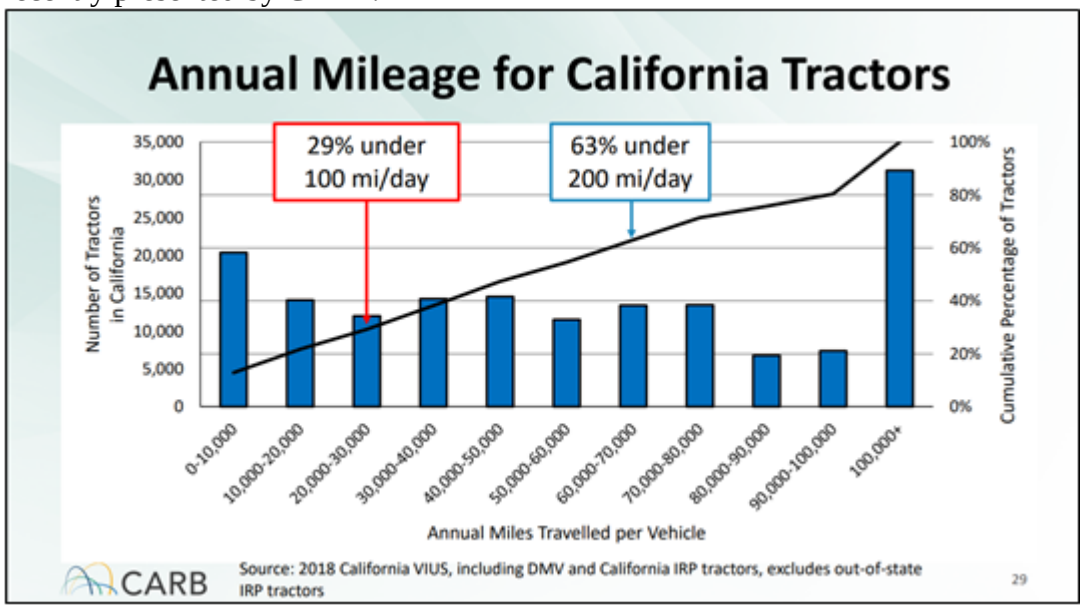
Further, warehouse operators do not have to purchase any trucks to comply with the proposed rules and neither do small truck fleet owners. PR 2305 was designed to allow flexibility in allowing a warehouse operator to choose from 32 actions and investments off the WAIRE Menu, implement an approved Custom WAIRE Plan, pay the optional mitigation fee, or any combination of the three. Purchasing ZE or NZE trucks are options in the WAIRE Menu actions, but warehouse owners or operators are not required to do so for rule compliance, it is just one of the choices provided to make PR 2305 flexible to the various warehouse business models.

Response to Comment 40-32

The report mentioned in the comment is available online for download by the research team that conducted it.[111] The findings from this study supports the approach included in PR 2305. The study used several methods to evaluate how ZE Class 8 trucks could work for specific cases in southern California. This study used hypothetical modeling to conclude that if a fleet converted mostly (e.g., up to 96%) to battery-electric trucks that more than one ZE truck would be needed for every diesel truck replaced. However, at lower levels of adoption (e.g., 15%), and in future years with more advanced technology (2025 and 2030) the total fleet size is nearly

[110] https://www.energy.ca.gov/sites/default/files/2019-12/06%20MacMillan_South%20Coast_11.14.19%20DAWG%20Presentation_ada.pdf
[111] https://ncst.ucdavis.edu/research-product/developing-markets-zero-emission-vehicles-short-haul-goods-movement, https://escholarship.org/uc/item/1jw9m352

identical. The fleet size was found to not change at all for natural gas hybrid trucks. Importantly, the study also included two case studies with detailed travel data from fleets. These two studies revealed that trucks have a range of distances they travel every day. For both fleets, 22-40% of trucks travel less than 80 miles per day (well within the range of current ZE truck technology). This finding is consistent with more comprehensive data recently presented by CARB.[112]



This chart shows that 29% of all in-state tractors travel less than 100 miles per day. Because PR 2305 would only require about 10% of visits to be from Class 8 ZE trucks, warehouse operators are expected to find the most favorable duty cycles first (e.g., lower mileage) if they choose to use this method to earn WAIRE Points. Based on the data presented in the NCST study mentioned by the commenter and in data presented by CARB, this level of implementation will not require acquiring more ZE trucks than diesel trucks. The cost analysis used in the Final Staff Report and Socioeconomic Impact Assessment therefore provide reasonable estimates of expected outcomes of PR 2305 and PR 316.

The comment focuses on extreme use cases to argue that more than one electric truck would be needed to replace a diesel truck, but as the discussion above shows, there is a much higher fraction of electric trucks that could replace diesel trucks on a one-to-one basis using technology available today (between 29% to 63%) than the requirements for ZE truck visits (~10-15%) if that were chosen as the compliance requirement under PR 2305. Further, the study also concluded that NZE trucks powered by natural gas did not have any of the limitations of electric trucks.

The comment that economic estimates of the purchase cost of heavy-duty electric trucks is speculative is true to the extent that predicting the purchase price of any product into the future requires some level of speculation. The purchase prices of electric vehicles included in the Final Staff Report are consistent with information used in CARB's assessment for its Advanced Clean Trucks rulemaking. The purchase prices documented in Appendix B of the Final Staff Report and in the Socioeconomic Impact Assessment are the most reasonable estimates available given the information available at this time.

[112] https://ww2.arb.ca.gov/sites/default/files/2020-09/200918presentation_ADA.pdf

The comment that many firms do not want to quick charge during a shift due to impacts in productivity can hold true for some operations. Importantly, PR 2305 does not mandate that any zero emissions vehicles are used, nor does it require what kind of charging be performed. The flexibility provided by PR 2305 allows operators to find the most suitable technology for their operations, and to implement it at an incremental level, including allowing a phase-in through time. In this way, the impact on operations contemplated by the comment can be avoided.

See Master Response 9 for a discussion of the age of the California truck fleet.

Response to Comment 40-33

There is no requirement in PR 2305 forcing warehouse operators to build a charging station. If this option makes sense within their operational profile, then it may be an attractive option. Examples could include: if they plan to make the transition to electric trucks for their owned fleet, if they work with trucking companies directly and arrange for electric trucks to visit their site, or if they work with the goods owner who then arranges for trucking companies to visit their site with electric trucks. The comment that publicly accessible areas may be 'the way to push turnover of the fleet' is also allowed under PR 2305. Indeed the option for a Custom WAIRE Plan was added to the rule in part because of a request from some in industry to allow off-site charging stations to earn WAIRE Points.

Response to Comment 40-34

No warehouse operator is required to install a charging station by PR 2305. However, if a warehouse operator has arranged for ZE trucks to visit their facility (either with their own fleet or with a third-party fleet), then they may decide that adding a charging station is a good option to earn WAIRE Points. While truck drivers will likely choose where to recharge, having a convenient option to charge at a warehouse is likely to attract usage.

Response to Comment 40-35

There is no requirement that any warehouse operator install a charging station. In addition, an option was included into the rule that allows a warehouse owner to opt in to earn WAIRE Points (for example through the installation of charging infrastructure), and for warehouse owners to transfer WAIRE Points to warehouse operators located at the warehouse owners' sites; warehouse operators can also transfer excess points between different warehouses within their control. Warehouse operators will understand their own operations and the time constraints and relationship they have with the warehouse owner under the terms of their lease. It is the warehouse operator's choice to determine which compliance approach makes the most sense for their operations.

Response to Comment 40-36

There is no requirement that any warehouse operator install a charging station. PR 2305 also includes a phase-in schedule over a five-year period. About two thirds of warehouse operators

will not have any obligation to earn WAIRE Points until 2023, and the first third of warehouse operators will only be required to earn one third of their WAIRE Points in 2022. The leading organization working on a standard is CharIn, who is developing the Megawatt Charging System (MCS). [113] The development of this global standard is progressing rapidly, and the final publication of the standard is expected in time for most charging stations that would be installed under PR 2305 to utilize it. This high power charger is also not yet included in the WAIRE Menu, but can be implemented through a Custom WAIRE Plan. In future technology reviews of the program (every five years), this infrastructure could potentially be added to the WAIRE Menu. Importantly, there are many smaller truck classes that will not need to rely on this MCS standard and can use more widely adopted standards like the Combined Charging System (CCS) or CHAdeMO.[114]

Response to Comment 40-37

There are currently commercially available heavy-duty trucks. Most of the WAIRE Menu options are commercially available and are in commercial service with the exception of ZE Class 8 on-road trucks which are in demonstration service but are not yet commercially available. NZE Class 8 trucks have been in commercial service for several years, and South Coast AQMD has incentivized approximately 1,200 NZE trucks. All but the ZE Class 8 trucks are commercially available and are in commercial service, with ZE Class 8 trucks projected to be available late 2021, with additional availability expected in 2022. Please see Master Response 3 for information on the commercial availability of NZE/ZE technology. Also see Appendix B of PR 2305 and PR 316's Final Staff Report, which contains information on the commercial availability of every technology in the WAIRE Menu.

Response to Comment 40-38

There is no requirement that any warehouse operator install a charging station. Some warehouses may be site constrained and would not have the space to install a charging station onsite, while other may have ample space. Warehouse operators are expected to take this into consideration, as well as any local building code requirements (similar to any construction project at a warehouse), prior to beginning any ZE charging station project. Also, as stated in Appendix C of the Final Staff Report, a warehouse facility's Floor Area Ratio "alone is not the sole determinant if a facility can install ZE charging/fueling infrastructure."

Response to Comment 40-39

The comment that drivers do not wait at warehouses is not always the case. As documented in the American Trucking Research Institute's 2019 study on Driver Detention Impacts on Safety and Productivity, 50% of respondents indicated that drivers were detained at their destination between 1 to 4 hours. There were many reasons cited for these delays, including lack of dock space, appointment issues, product readiness, dock-employee issues, etc. Therefore, there may be windows of opportunity that would be useful for truck drivers to take advantage of short

[113] https://www.charin.global/media/pages/news/the-charin-path-to-megawatt-charging-mcs-successful-connector-test-event-at-nrel/12a6cecdf4-1615552637/201007_press_release_nrel_testing_final.pdf

[114] Charging stations installed today for light duty vehicle commonly have both of these standards. A review of the South Coast AQMD region showed that 250 stations have ≥50 kW chargers with both CHAdeMO and CCS standards. https://www.plugshare.com/

'opportunity charging' to top off their battery. The availability of charging may thus allow a truck to go directly to another destination rather than returning to charge at its home base, which provides more efficient operations.

Response to Comment 40-40

The comment notes that coordination is needed between the warehouse operator or owner who wants to install charging infrastructure and their local utility. Utility stakeholders have also commented on this during rulemaking, and have indicated that they stand ready to assist customers who choose to pursue charging infrastructure. See Comment 41 for an example. Utilities have initiated programs to assist customers in charging stations for medium and heavy duty vehicles, including with SCE's ChargeReady Transport program. This $356 million program was authorized by the Public Utilities Commission to focus on installing charging infrastructure for medium and heavy duty vehicles. Additionally, the California Energy Commission is evaluating the grid needs, including by looking at wide-scale deployment of electric medium and heavy duty vehicles, and providing estimated grid impacts for utilities to use in the resource planning efforts.[115] These efforts ultimately will be informed by customer demand, and individual warehouse operators will need to determine how charging infrastructure could work for their operations. PR 2305 does not require that any warehouse operator install charging infrastructure.

Response to Comment 40-41

Since the comment was submitted the requirements in PR 2305 have been changed from 'using methods that contemporaneously record the truck trips and that are verifiable" to 'using methods that provide a verifiable and representative record'. As described in the WAIRE Implementation Guidelines included as Appendix A to the Final Staff Report (see section titled Truck Trip Counts for Determining WPCO), this updated method is designed to utilize existing practices by warehouse operators. As indicated by many warehouse operators during site visits and other conversations, trucks are already tracked as a security measure to ensure that goods are not loaded onto the wrong truck and are not stolen. Common information already recorded includes data such as: the trucking company, the license plate number of the truck, truck driver name, and when the truck arrived.

The comment mixes truck counting to determine a warehouse operator's Weighted Annual Truck Trips (WATTs) for determining its WAIRE Points Compliance Obligation (WPCO) with tracking of NZE and ZE truck visits to earn WAIRE Points. At final stringency of PR 2305, if NZE and ZE truck visits are the only compliance option chosen, they may make up about 10-15% of truck visits to a warehouse. Methods that can be used to track NZE or ZE truck visits is also included in the WAIRE Implementation Guidelines in the NZE/ZE Truck Visits part of the WAIRE Menu section.

For multi-tenant warehouse operators, they are expected to have the same security procedures as operators who are single tenants in a warehouse. Truck counting to determine an operator's

[115] https://efiling.energy.ca.gov/getdocument.aspx?tn=236237 (AB 2127 Report), https://efiling.energy.ca.gov/getdocument.aspx?tn=237268 (Integrated Energy Policy Report)

WATTs does not require a check-in facility, and no trucks are expected to back up into the streets that weren't already doing so without PR 2305. Truck counting is designed to use a warehouse operators existing practices as much as possible. If additional data is needed, simple forms could be filled out by truck drivers, or trucking companies, to supply the requisite information for tracking NZE or ZE truck visits.

Response to Comment 40-42

South Coast AQMD Staff is recommending a stringency of 0.0025 WAIRE Points per WATT, which was a result of a thorough and extensive analysis of 19 WAIRE Menu compliance scenarios (see Final Staff Report, pp. 59-72). These scenarios provided an estimate of the range of potential costs and emissions reductions from implementation of PR 2305. Additional supporting analysis was included in the Socioeconomic Impact Assessment, including a warehouse relocation study. There is no mathematical equation governing the entire process, nor is an overarching governing equation required. The totality of the impact of the proposed rule has been considered for the recommended stringency of 0.0025 WAIRE Points per WATT. Higher and lower stringencies have also been analyzed, including 0.005 WAIRE Points per WATT and 0.0001 WAIRE Points per WATT, as well as another stringency approach that would phase in the stringency over five years from 0.0002 to 0.001.[116]

The benefits of the proposed rule at the recommended stringency include, but are not limited to:

- significant emission reductions of about 1.5 to 3 tons per day of NOx, equal to about a 10-15% reduction (with a similar level of reduction for DPM),
- the encouragement of many facilitating measures to further enhance emission reductions from other programs including CARB rules and the ports' upcoming Clean Truck Program update,
- monetized public health benefits for most compliance scenarios that are about three times higher than the cost of compliance,
- compliance costs that are lower than normal cost increases that the industry experiences routinely in rent hikes (13 of the 19 scenarios analyzed had costs of $0.23/sf/yr or less, which is only about half as much as rents have increased each year for the past decade),
- compliance costs that are well below the level found to potentially result in relocation of warehousing outside of South Coast AQMD (the warehouse relocation study by IEc found that no warehouses would relocate with PR 2305 costs less than $1.50/sf/yr to $1.75/sf/yr, which is about double the level of the highest mitigation fee scenario analyzed showing $0.83/sf/yr at a stringency of 0.0025),
- a market signal for the goods movement industry to encourage adoption of NZE and ZE technologies on a more widespread basis than the unregulated market would provide – and much faster than CARB would require with its existing and proposed regulations,
- satisfying the requirements of control measure MOB-03 in the 2016 AQMP,
- satisfying the commitment in AB 617 Community Emission Reduction Plans, and
- reducing emissions for local communities located closest to warehouses who have experienced disproportionate environmental burdens just by living where they do.

[116] http://www.aqmd.gov/docs/default-source/planning/fbmsm-docs/presentation-slides-10-30-2020.pdf

The other levels of stringency evaluated by Staff would either result in higher compliance costs or lower emission reductions and public health benefits; the proposed stringency of 0.0025 represents an accommodation of those two considerations. A higher stringency of 0.005 results in increased costs, and a greater likelihood that some warehouses could decide to relocate out of the region, albeit with increased emission reductions and public health benefits. The lower stringency of 0.0001 would result in substantially less emission reductions and public health benefits, with lower costs. The Board may use its independent judgment to set the final stringency within the bounds of the analysis contained in the record before it.

Response to Comment 40-43

The comment that the 'impact of the rule on any NOx, PM, and ozone has not even been modelled' is incorrect. Tables 15 and 16 in the Final Staff Report clearly document the range of potential NOx and PM reductions expected from PR 2305. See also Master Response 3. Also, PR 2305 is part of a comprehensive strategy to meet federal and state air quality standards, and the 2016 AQMP includes a robust modeling analysis that determines how that strategy will achieve those standards. Consistent with all rules adopted by South Coast AQMD and CARB that are part of the State Implementation Plan (SIP), individual rule analyses as a practical matter evaluate emission reductions and detailed ozone and other secondary pollutant modeling is conducted in AQMPs or other SIP submittals.

Response to Comment 40-44

The commenter is confusing emission reductions from the previous comment with concentrations in this comment. Emissions are the mass of a pollutant that is emitted from a source during a set period, measured as tons per day for most emission reduction discussions for PR 2305. Concentrations are the mass of a pollutant measured relative to another mass, measured as parts per billion in the case of air quality standards for ozone. Predicted future emissions (or emission reductions) of a pollutant are based on expected activity levels multiplied by an emissions rate (for example grams per mile of vehicle travel multiplied by vehicle miles travelled). Predicted concentrations require significantly greater levels of detail, including meteorology, analysis of chemical reactions in the air, location of emissions, nature of the emissions source (for example tall, skinny stacks compared to wide areas), etc.

The determination of ozone, NOx, and DPM concentrations is not possible with the flexibility provided by PR 2305. Emission reductions could occur from a variety of activities, at different times of day, in different geographic locations, etc. This level of analysis is beyond the scope required to determine the potential impacts of a proposed rule like PR 2305. Instead, the 2016 AQMP includes the detailed analysis described above, and considers all potential emission reduction strategies to predict future pollutant concentrations, including for ozone, PM, and NOx.[117] Due to the extensive analysis included in the 2016 AQMP, each measure included in the control strategy is tracked by its emission reductions, not by its concentration reduction.

[117] DPM concentration reductions can be similarly modeled, but those analyses are typically limited to site specific health risk assessments (e.g., included as part of some CEQA analyses for warehouse development projects), or in the regional MATES study prepared by South Coast AQMD that evaluates toxic health risks across the entire region.

Therefore, it is not inconsistent for the Final Staff Report to say that the estimated emission reductions from PR 2305 is anticipated to be about 1.5 to 3 tons per day (as shown in Table 15 in the Final Staff Report), whereas the potential NOx and subsequent ozone concentrations have not been modeled. PR 2305 will contribute to ozone concentration reductions to the extent that it's NOx emission reductions are a component of the overall control strategy evaluated in the 2016 AQMP.

Response to Comment 40-45

The comment incorrectly characterizes what was stated in the Preliminary Draft Staff Report (PDSR). The actual sentence states, "With about 4,000 warehouse operators and dozens of options available for compliance, it is not possible to determine the precise cost or emissions impact of PR 2305 and PR 316." (page 59 of the PDSR)

As stated in the comment, emission reductions have instead been calculated using a bounding analysis. The purpose of a bounding analysis is to bracket the range of potential outcomes that can occur. Any hybrid of actions that might occur will be contained within the bounding scenario analysis included in the Final Staff Report. PR 2305 is designed to have a multitude of compliance options (implementing any of the 32 WAIRE Menu actions, implementing an approved Custom WAIRE Plan, paying the optional mitigation fee, or a combination of all or some of these options) so that warehouse owners and operators have the flexibility to decide what compliance options work best for their specific warehouses. Since there are so many options for compliance and thousands of warehouse operators, the most reasonable approach is to determine the potential bounds of what PR 2305 and PR 316 would impose. See also Response to Comment 43-2.

Response to Comment 40-46

See Response to Comment Letter 43.

Response to Comment 40-47

See Response to Comment 40-45. The cost analysis is based on the same assumptions used for the bounding analysis conducted for emission reductions. The statement that this analysis provides 'no information as to what the actual costs of PR 2305 will be' is incorrect. The range of potential costs of PR 2305 are included in Table 20 of the Final Staff Report and the resulting socioeconomic impacts are analyzed and described in the Socioeconomic Impact Assessment.

Response to Comment 40-48

The concern about SIP credit does not consider the full range of options normally available to fold emission reductions into the SIP inventory. These options are discussed in Appendix D of the Final Staff Report. As an example, the indirect source rule adopted by San Joaquin Valley Air District was approved into the SIP by EPA, but the approval did not include any 'SIP credit' for emission reductions. However, the emission reductions achieved by their rule are included as part of normal updates to the mobile source emissions inventory in regular updates by CARB. This is likely the primary process by which SIP creditable emissions reductions would be accounted for with PR 2305 as well. Other prospective SIP creditable emission reductions methods may be possible too with the WAIRE Mitigation Program once funds are received and

the program has been established. All measures that can be quantified at this time have been included in the emission reduction analysis included in the Final Staff Report. As shown in Appendix D of the Final Staff Report, there are additional unquantifiable measures that could overlap in the future, including mitigation funding, the ports updated Clean Truck Program, and future CARB regulations. These measures have the potential to receive prospective SIP credit on their own. However if PR 2305 is in place, it has the potential to enhance those measures to achieve additional emission reductions.

As an example, incentive funding programs currently provide about $65,000 for a NZE Class 8 truck purchase. If PR 2305 is adopted, the interest in NZE trucks is expected to increase. Incentive funding will still be available, but the potential amount offered could be lowered, thus incentivizing more trucks. Prospective SIP credit may be claimed for all trucks incentivized by that program, however the reason that more trucks were incentivized would be due to the market conditions brought about by PR 2305. Ultimately, what is important is that emission reductions occur, and SIP credit assigned to PR 2305 or another program is ultimately the same. As shown in Table 15 of the Final Staff Report, based on the best information available, PR 2305 is expected to result in about 1.5 to 3 tons per day of NOx reductions that will be credited in the SIP.

Response to Comment 40-49

Per the scenario analysis (Final Staff Report pp. 62-63), implementing PR 2305 is estimated to result in approximately 1.5-3 tons per day NOx emission reductions beyond emission reductions resulting from CARB regulations (CARB's Advanced Clean Trucks, Low NOx Omnibus, and Heavy Duty I/M rules), which is 10-15% reductions from baseline of both NOx and PM. Please see Master Response 4 for an explanation of emission reductions from warehouse ISR. Emission reductions from rule compliance are based on a bounding analysis of 19 scenarios of rule compliance, designed to show a range of potential compliance outcomes. The scenarios were developed to show potential impacts from scenarios of all WAIRE Menu actions, and the use of the mitigation fee option (Final Staff Report, pp. 59-60). Installing solar energy systems reduces regional emissions associated with warehouses and thus helps fulfill the main purpose of the rule. While installing filters does not reduce pollution, it reduces exposure to remaining emissions and thus provides public health benefits, which is a legitimate goal for a WAIRE menu option.

Response to Comment 40-50

Solar panels are a source of electricity that does not produce NOx, unlike natural gas fueled power plants. Therefore, solar panels would reduce NOx by reducing the power that needs to be produced by NOx emitting power plants. See Response to Comments 43-26 for additional discussion of solar panels. Air filters are a mitigation measure that provides a public health benefit, albeit less than from direct emission reductions. This measure reduces the concentration and exposure to particulate pollution indoors, including particulate pollution caused by trucks travelling to warehouses. Air filters are expected to be chosen rarely as a compliance option to earn WAIRE Points due to their higher cost relative to other compliance

options as shown in Table 20 of the Final Staff Report. See Response to Comment 40-51 for solar panel SIP credit explanation.

Response to Comment 40-51

Air filters would not result in any emission reductions and would not achieve SIP creditable emission reductions under any program. Solar panels have the ability to reduce the reliance on natural gas fueled powerplants. The powerplants emit NOx, and any reduction in their use and emissions has the potential to be SIP creditable. Those SIP creditable emission reductions could be obtained through a number of ways, including emissions inventory updates, stationary source requirements, or through later SIP crediting actions that account for activities put in place due to PR 2305.

Use and installation of solar panels and air filters are discussed in several places in the Final Staff Report, including in the WAIRE Program Implementation Guidelines (Final Staff Report, Appendix A, p. 102), which is provided to help warehouse owners and operators understand how to comply with PR 2305 and PR 316. PR 2305 is designed to have a multitude of compliance options (implementing any of the 32 WAIRE Menu actions, implementing an approved Custom WAIRE Plan, paying the optional mitigation fee, or a combination of all or some of these options) so that warehouse owners and operators have the flexibility to decide what compliance options work best for their specific warehouses. Per analysis completed by South Coast AQMD Staff in the Final Staff Report (Final Staff Report, Appendix C, p. 143), out of the estimated 2,902 warehouses expected to be required to earn WAIRE Points under PR 2305, 214 already have solar panels installed. However, warehouse owners or operators do not necessarily have to install solar panels on their warehouse roof to earn WAIRE points; solar panels can be located anywhere on warehouse property to earn WAIRE points. Additionally, solar panels have become lighter, more efficient, and more flexible with recent technological advancements, reducing installation cost and allowing them to be installed in more applications (Final Staff Report, Appendix B, pp. 136-137).

Response to Comment 40-52

Costs of installing and using air filters and air filtration systems were analyzed as part of the scenario bounding analysis in the Final Staff Report, which had an annual average cost of $0.77 per square foot and $0.79 per square foot, respectively (Final Staff Report, p. 72). These costs were within the range of costs of all the WAIRE Menu actions or mitigation fee, and are one of the more expensive options. The WAIRE Points cited by the commenter appear to be inadvertently flipped. A warehouse operator would earn 51 WAIRE Points for every 200 filters installed, or about one WAIRE Point for every four filters installed. While air filters may be among the more expensive options, they could be selected by a facility that does not want to use the truck related options or pay a mitigation fee, or who prefers to provide a tangible public benefit in the neighborhood.

Response to Comment 40-53

Information on the proposed rules' documents and hearing date has been updated since this comment letter was dated. Per guidance from South Coast AQMD's Governing Board, the proposed rules' hearing date is now May 7, 2021. The first draft of the Socioeconomic Impact Assessment and the first draft of the Staff Report (which contains the comparative analysis)

was available on March 3, 2021, and second draft of both available on April 7, 2021 (accessible here: http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/facility-based-mobile-source-measures). The March 3, 2021 release date would have been 30 days before the previously anticipated hearing date of April 2, 2021, and the April 7, 2021 release date is also 30 days before the current hearing date of May 7, 2021. Rule language for PR 2305 and PR 316, and emissions and scenarios calculations have also been released on these dates as well. The WAIRE Program Implementation Guidelines have been released to the public on March 3, 2021 and April 7, 2021, as well (they are found within the Staff Report, Appendix A).

Response to Comment 40-54

The only remaining records that have yet to be produced as part of the public records requests are the requests for 'all records of communications, including without limitation internal e-mail communications…' This is a broad catch-all request that takes time to gather, review, and produce, and these records are not anticipated to affect the ability to review and provide comment on the proposed rule. All other records, data, calculations, and files included in the request have been produced.

Response to Comment 40-55

All responses to comments received on the Draft Environmental Assessment will be included in the Final Environmental Assessment, as required by CEQA.

Response to Comment 40-56

South Coast AQMD's Governing Board has been given adequate updates during the proposed rules' development. As discussed in Response to Comment 44-53, South Coast AQMD Governing Board (along with the general public) have received relevant rule documents in a timely manner, at least 30-days ahead of scheduled hearing dates. In addition, since May 2018 there have been seven Mobile Source Committee briefings, three Governing Board Updates, one Public Workshop, one Community Meeting, and 12 working group meetings. Following the set hearing vote of the Board on March 5, 2021, an extra month was provided before the Board will consider the proposed rule, now scheduled for May 7, 2021.

Response to Comment 40-57

Again, thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention.

Response to Comment Letter 41 - SoCal Edison - March 2, 2021

Response to Comment 41-1

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention.

Response to Comment 41-2

South Coast AQMD Staff appreciates the efforts of SCE to assist in the transition to transportation electrification as it has a critical role to play in the electric ecosystem in our region.

Response to Comment 41-3

The comment is correct that AB 617 Community Steering Committees have looked to PR 2305 as an important strategy to assist in meeting their communities' emission reduction needs. Community Emission Reduction Plans that have been approved for four different AB 617 communities have included the development of a warehouse Indirect Source Rule as an action, and PR 2305 would fulfill that commitment.

Response to Comment 41-4

SCE's Charge Ready Transport (CRT) and other electrification programs will serve as welcome measures to assist warehouse operators and owners to comply with PR 2305 if it is approved. Staff appreciates the feedback that SCE has provided during the development of PR 2305 on the details of these programs so that the proposed rule can work most effectively.

Response to Comment 41-5

The data sharing with companies such as SCE have helped in the development of the warehouse ISR, as information on the costs and the processes required to install ZE charging infrastructure is considered. As stated in previous comment responses there is a lot of work necessary to prepare for California's zero emissions future in the way of charger availability and grid electrical supply. PR 2305 in addition to reducing emissions toward the goal of attaining the federal ozone standards is a facilitative measure that will result in early compliance of other regulations for emission reductions. PR 2305 also supports California's zero emissions future by including the installation of ZE infrastructure, acquisition of ZE trucks, and the installation of solar panel systems on the WAIRE Menu. Throughout the rule development process, South Coast AQMD Staff has followed the CEC and CPUC activities to bring attention to planning ahead and anticipating more ZE vehicles plugging in to charge which would cause a significant draw on the existing grid.

In addition to the milestones mentioned in the comment, PR 2305 requires warehouse operators to prepare a one-time Initial Site Information Report (ISIR) the first year that they are at a warehouse and need to earn WAIRE Points. This ISIR requires early reporting from the warehouse operator that includes details about the site, including the number of existing charging stations, as well as initial advance planning for how they anticipate earning the required number of WAIRE Points for their first compliance period. This will serve as another important advance planning approach that can assist the operators and utilities as they plan for charging station installations and solar panel installations.

Response to Comment 41-6

Data submitted to South Coast AQMD would be public information unless specifically designated as trade secret or confidential by a warehouse owner or operator, and confirmed through South Coast AQMD's Guidelines for Implementing the California Public Records Act.[118] If PR 2305 is approved, South Coast AQMD plans to develop a portal that will provide the public, and utilities, information about warehouse operator compliance. The development of that portal will include a public process and the commenter is encouraged to provide feedback on specific information you are interested in seeing at that time.

Response to Comment 41-7

Thank you for your comments and interest in the warehouse ISR.

[118] http://www.aqmd.gov/docs/default-source/default-document-library/Guidelines/pra-guidelines.pdf

Response to Comment Letter 42 - Southwest Carpenters – 3/1/2021

Response to Comment 42-1

During the March 5, 2021 South Coast AQMD Board Meeting, the Board decided to delay the public hearing for PR 2305 by 30 days, postponing the public hearing until May 7, 2021. Additionally, a recent revision to the PR 2305 rule language was released on April 7, 2021 which delayed the rule implementation schedule by six months. South Coast AQMD Staff has prepared a Socioeconomic Impact Assessment (SIA) which analyzes the economic impacts of PR 2305. See the SIA and Master Responses 5 and 6 for a response to the concerns about economic impact and uncertainty.

Response to Comment 42-2

South Coast AQMD Staff agree that even during the COVID-19 pandemic the warehousing industry has grown. The increased warehousing activity has resulted in further decline of public health in the communities surrounding warehouses. See the response to Comment 42-1 and Master Response 4 for the response to concerns about the economy and the warehousing industry.

Response to Comment 42-3

As stated in Comment 42-1, the public hearing was delayed 30 days from the originally scheduled public hearing to allow more time to evaluate PR 2305. Thank you for your comments and interest in the warehouse indirect source rule.

Response to Comment Letter 43 – Ramboll – 3/2/2021

Response to Comment 43-1

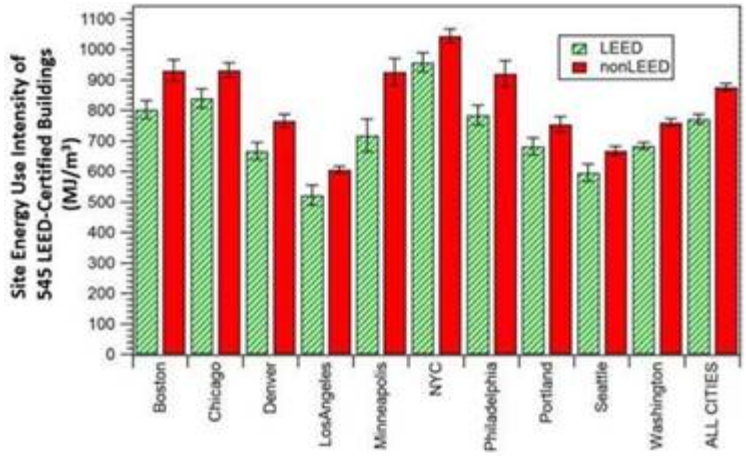
Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention.

Response to Comment 43-2

As stated in the PR 2305 rule language the purpose of this rule is to reduce local and regional emissions of nitrogen oxides and particulate matter, and to facilitate local and regional emission reductions associated with warehouses, in order to assist in meeting state and federal air quality standards for ozone and fine particulate matter. Please see Master Response 3 regarding PR 2305 emission reductions.

Table 15 of the Final Staff Report presents the result of the scenario bounding analysis in which all 2,902 warehouses would comply with a single action from the menu from 2022 through 2031. In Table 15, only scenarios 15 and 16 have 0 ton/day NOx emission reductions in years 2023 and 2031. Scenarios 15 and 16 are filter system installation and filter purchases which only reduce exposure to particulate matter. These two scenarios are among the most expensive options and it is highly unlikely that all warehouses choose these two high-cost menu items for compliance every single year. No single scenario in this bounding analysis is expected to occur. Rather, they present a bounding analysis of possible compliance outcomes and in reality, a hybrid of all scenarios (or other compliance approaches encompassed within the range of scenarios analyzed) is expected to occur and individual warehouses are expected to use different compliance options in a given year.

This analytical approach and resulting uncertainty in precise results is expected, especially when looking at other similar programs. Two examples include LEED and San Bernardino County's GHG plan which are both based on menu-based points systems. Below is a graph from a study that evaluated the performance of LEED certified buildings, with ranges between cities and within cities.[119] This difference in performance reflects the different ways in which buildings comply with LEED using its menu-based points system.



[119] Energy and Greenhouse Gas Savings for LEED-Certified U.S. Office Buildings, Energies, Jan. 2021. https://www.mdpi.com/1996-1073/14/3/749

In addition, San Bernardino County's Greenhouse Gas Plan states, "…the precise amount of GHG emissions reductions cannot be estimated for new development on a measure by measure basis. Rather, the analysis examined feasible scenarios of reductions that would result from new development utilizing different reduction strategies…"[120]

The bounding analysis shows the most impact any one compliance option could create; actual rule compliance for each compliance option will be within the impact shown in the bounding analysis (Final Staff Report, pp. 62-63). Per the scenario analysis, implementing PR 2305 is estimated to result in approximately 1.5-3 tons per day NOx emission reductions beyond emission reductions resulting from CARB regulations (CARB's Advanced Clean Trucks, Low NOx Omnibus, and Heavy Duty I/M rules), with some scenarios showing potentially higher reductions.

Response to Comment 43-3

Please refer to Master Response 2d regarding the technology availability of NZE and ZE trucks. Regarding Scenario 5 (ZE Class 8 Visits), in order to allow for the technology phase-in of ZE trucks, for the first compliance year (i.e., 2022), facilities are only assumed to comply through paying the mitigation fee, and are not assumed to have any ZE Class 8 visits until 2023. The emission reductions in 2023 is therefore a combination of ZE Class 8 visits as well as reductions from mitigation fees paid in 2022 (assuming $100,000/ton consistent with Carl Moyer funding program cost-effectiveness) which resulted in 5.1 tons per day NOx emission reductions.

The commenter is correct that the emission reductions shown in 2031 from Scenario 7 are much higher than other scenarios, as this scenario is a bounding analysis to show the highest costs expected for mitigation fees (Scenario 7 results in about $0.83/sf/yr). If all warehouses pay the mitigation fee in this worst-case cost scenario, annual average costs would be about $670 million. This level of funding in the WAIRE Mitigation Program would result in a substantial turnover of trucks, and much higher public health benefits with emission reductions up to about 20 tons per day. However, because warehouse operators are expected to find ways to reduce their costs, it is expected that they would earn points from these incentivized trucks. A more realistic scenario showing the interaction between a mitigation fee-only scenario and the WAIRE Mitigation Program was modeled and included in the Final Staff Report (Scenario 7a). If warehouse operators earn points from visits from trucks incentivized by the WAIRE Mitigation Program, costs could be as low as $0.14/sf/yr, similar to the costs warehouse operators would face if they took actions themselves to get NZE or ZE trucks to visit their facilities, with emission reductions of about 2.7 tons per day.

Response to Comment 43-4

Staff has taken comments in this letter into consideration and updated the calculation methodology for discounting impacts from CARB's regulation.[121] Emission rates used for the calculation reflect impacts from CARB's Heavy Duty I/M program using factors from CARB's Mobile Emissions Toolkit for Analysis (META) for South Coast ("Parameters" Tab, in PR 2305 Draft Scenario Calculations_v3). The impact from CARB's Advanced Clean Truck

[120] http://www.sbcounty.gov/Uploads/lus/GreenhouseGas/FinalGHGFull.pdf#page=181
[121] All spreadsheets are available for download at: www.aqmd.gov/fbmsm

(ACT) regulation is accounted for by considering the approximate number of ZE truck visits that each facility would receive as part of the baseline truck fleet with ACT in place. Warehouse operators were assumed to earn WAIRE Points from those ZE truck visits that would go towards their WAIRE Point Compliance Obligation (WPCO), even if they did not take any actions to cause those visits to occur. Any subsequent action taken would therefore be surplus and beyond CARB's ACT rule. Impacts from CARB's CA Low NOx Omnibus are accounted for in the PR 2305 Draft Baseline Emission Inventory. Because PR 2305 does not provide WAIRE Points for Low NOx Omnibus trucks, and emission reductions from NZE or ZE truck visits would be surplus.

Response to Comment 43-5

The comment states that substantial evidence has not been provided to show that PR 2305 will result in emissions reductions 'despite enormous costs'. The analysis included in the Final Staff Report, supporting appendices, and spreadsheets constitute a thorough and robust analysis and provides the evidentiary support to estimate the potential impacts of the rule. Further, the costs associated with implementing PR 2305 are almost entirely due to implementing lower emissions technologies. If the commenter's assertion that emission reductions are already going to occur with CARB rules were correct, then the costs associated with PR 2305 would also be substantially lower than shown in the Final Staff Report and Socioeconomic Impact Assessment (SIA) because those costs would already be included in the baseline (as costs attributable to CARB rules rather than PR 2305). The detailed calculations and analysis included in the Final Staff Report and SIA demonstrate that the comment's premise is incorrect, and additional emission reductions and costs are expected due to PR 2305. Please refer to Master Responses 3 and 8.

Response to Comment 43-6

Please refer to Master Response 3. Currently, South Coast AQMD's jurisdiction is classified as being in extreme nonattainment status for the federal National Ambient Air Quality Standards (NAAQS) ozone standards, and serious nonattainment for the federal fine Particulate Matter ($PM_{2.5}$) standards. As stated in Chapter 1 of the Final Staff Report, NOx is the primary pollutant that needs to be reduced to meet federal air quality standards as it is a precursor to ozone and fine PM. The AQMD's Scientific, Technical & Modeling Peer Review Advisory Group Meeting (STMPR) presentation on Jan 27, 2021 emphasized the significance of NOx emission reductions to attain federal ozone standards. At this meeting, South Coast AQMD Staff presented a modeling analysis for the early COVID-19 shelter-in-place period that occurred in spring 2020. The modeling analysis indicated that a marginal amount of NOx reductions in some instances can bring a temporary ozone increase due to the diminishing NOx titration of ozone. However, a significant amount of NOx reductions overcome the NOx disbenefit and will lower ambient ozone level, and are in fact the only pathway that can achieve federal air quality standards throughout the South Coast AQMD. As discussed during the STMPR meeting, NOx strategy is identified as the only viable path to attain the 75 and 70 parts per billion (ppb) NAAQS in South Coast Air Basin.

The cited article's finding, by Parrish et al (2107a)[122], is based on using least squares fitting method to fit Ozone Design Values (ODV) from six air basins (South Coast, San Diego, South Central Coast, North Central Coast, Mojave Desert, and San Joaquin Valley) to an exponential function with a constant positive offset. The approximate 35 years required to reach the new NAAQS of 70 ppb in the Los Angeles area is based on the derived exponential formula assuming: a) the U.S. background remains constant and b) the previous rate of exponential decrease of the anthropogenic ozone enhancements into the future is maintained. The authors have acknowledged that the derived exponential equation provides robust description of past changes, however, there is no guarantee that future evolution would necessarily follow the same functional form and the use of the equation can only provide a guide for future thought. The fact that one study that does not use EPA-required modeling methods predicts a long timeframe required to meet NAAQS does not justify waiting to implement legally mandated measures to reduce NOx. The Clean Air Act requires the adoption of a plan to attain the national ambient air quality standards, and if the study is correct, there would be even greater need for the reductions to be obtained from PR 2305 and other strategies. Furthermore, the same author [Parrish et al (2017b)], later in another article states, "Reducing the Nation's emissions of ozone precursors is the only effective tool available to improve local and regional air quality over the U.S. Emission reduction efforts over multiple decades have yielded dramatic improvement in ozone air quality, but many regions still do not meet the NAAQS. The extent of further reductions necessary for a given region to reach the standard is not quantitatively known, but the reversal of the long-term increase in baseline ozone entering the U.S. from the Pacific will certainly ease the difficulty of achieving further reductions in ozone concentrations." [123] In this article Parrish et al., (2017b) indicate that background ozone concentrations are not constant, and the increasing trend in background ozone concentrations (resulting in the estimate of ~62 ppb ozone in the future in the first article, about 89% of the 70 ppb standard) ended in the early to mid-2000s, and the background concentrations have begun to decrease (with recent measured ozone around 35 ppb and declining in the second article) thus making achieving U.S. air quality goals easier than predicted in the article cited by the commenter. As further discussed in the article, recent analyses of satellite data showed that the decade-long increase in NOx emissions in China has ended and that those emissions are now decreasing; this emission change may be at least partially responsible for the observed background ozone decrease.

The fact that author has shown in a separate article that the background ozone concentration is not constant and in fact decreasing makes the first assumption made in reaching the 35-year time-frame analysis not accurate. While control strategies from earlier AQMPs and SIPs have lowered ozone level successfully, they have also shifted the ratio of NOx and VOC emissions that contribute to ozone formation. This change in the ozone formation regime also undermines a second assumption made in the Parrish et al. (2017a) analysis – that the previous rate of exponential decrease in anthropogenic ozone is not constant. The approach cited in Parrish et at (2017a) did not consider the decreasing background ozone trend nor incorporate the changes in ozone chemistry.

[122] https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1002/2016JD026329
[123] https://agupubs.onlinelibrary.wiley.com/doi/full/10.1002/2017GL074960

A more accurate method of predicting ozone levels would quantitatively evaluate the changes in VOC and NOx emission levels along with using up to date estimates of background ozone. This much more detailed and robust analysis is what was conducted as part of the 2016 AQMP. Because of this detailed analysis, which follows EPA's prescribed methods, EPA approved the modeled attainment demonstration in the 2016 AQMP, which is fundamentally based on a NOx reduction strategy. With EPA's approval, South Coast AQMD and CARB are required to carry out the control strategies in the 2016 AQMP. Therefore, due to the best scientific analysis, and the now legal mandate to carry out the 2016 AQMP, PR 2305 has been designed to achieve additional NOx reductions. No one rule can achieve air quality standard, but PR 2305 is part of the larger comprehensive strategy to meet those goals. The cost-effectiveness of PR 2305 is discussed in the Socioeconomic Impact Assessment and in Table 23 of the Final Staff Report.

Response to Comment 43-7

The commenter is correct that a new version of EMFAC was released in January 2021, and the technical documentation describing how the EMFAC2021 calculates emissions was released by CARB on March 26, 2021, after the First Draft Staff Report was released.[124] However, this version of EMFAC is not yet approved by U.S. Environmental Protection Agency (EPA). South Coast AQMD typically does not use versions of EMFAC that are not approved by U.S. EPA, as there could be updates to the model before final approval. For example, the development of the 2022 AQMP will use EMFAC2017 because approval of EMFAC2021 is not anticipated before the 2022 AQMP is due to U.S. EPA. The latest version approved by U.S. EPA is EMFAC2017 which has been used in this analysis. Further, post-processing of the EMFAC2017 model output was conducted following methods developed by CARB to include recent regulations, including CARB's Advanced Clean Trucks rule, Low NOx Omnibus rule, and the Heavy Duty I/M rule. These enhancements were developed in CARB's META tool as part of its development of its draft Mobile Source Strategy.

Response to Comment 43-8

AQMD staff is aware of the new adjustments to the newly released EMFAC2021 model. See Response to Comments 43-7. Staff has accounted for emission reductions from CARB's ACT, Low NOx Omnibus regulations and Heavy-Duty I&M Program using estimates provided by CARB that were developed in their version of Mobile Emissions Toolkit for Analysis (META) for South Coast as part of their Mobile Source Strategy development.[125] Staff has accounted for the abovementioned regulations in the baseline emission inventory as well as scenario calculations using emission reductions provided in META. Importantly, EMFAC2021 does not account for the Heavy Duty I&M program. However, it has been included in the PR 2305 scenario calculations and baseline emission inventory development because detailed estimates of its expected effects have been developed by CARB, and the regulation is sufficiently developed both in regulatory concept and per statutory requirement (SB 210 (2019), Health and Safety Code 44150 et seq.). If the Heavy Duty I/M program is not included in the analysis, then the baseline emissions inventory and the PR 2305 emission reductions would be higher at the same level of implementation and costs. By comprehensively accounting for these

[124] A subsequent version was released on April 30, 2021, further illustrating that the model is not yet final. https://content.govdelivery.com/accounts/CARB/bulletins/2d48287
[125] https://arb.ca.gov/emfac/meta/

regulations, the analysis included in the Final Staff Report has ensured that no double counting of emission reductions has occurred.

Response to Comment 43-9

See Response to Comments 43-7 and 43-8. While EMFAC2021 does include updated methods (like every new version of EMFAC), these updates have not yet been approved by EPA. The analysis included in the Final Staff Report uses the most recent EPA-approved version of EMFAC, and then uses CARB methods to post-process the output to estimate the effect of their recent regulations. This analytical approach provides a robust and thorough analysis of expected emission reductions from PR 2305.

Response to Comment 43-10

The South Coast Air Basin version of CARB's META Tool was provided to the commenter on February 5th, 2021. Additional emission calculation spreadsheets are available at www.aqmd.gov/fbmsm, and methods are additionally described in the Final Staff Report. The methods used by CARB to prepare the META tool are available in the Draft Mobile Source Strategy[126] and in the spreadsheet provided to the commenter.

Response to Comment 43-11

South Coast AQMD received a Public Records Act request from Snell and Wilmer on behalf of NAIOP, seeking this information and South Coast version of META, was provided on February 5th, 2021. Staff has used the HD I/M factors provided in CARB's META Tool for South Coast. Further analysis of how Staff implemented the Heavy Duty I/M factors to truck emission rate calculations can be found in Draft Truck Emission Rate Calculations spreadsheet available on South Coast AQMD's website.[127]

Response to Comment 43-12

The final approval for Advanced Clean Fleet (ACF) and Zero-Emission Drayage Trucks are not anticipated until late 2022. Moreover, the goals set by the executive order (EO)N-79-20 are not regulations or requirements on fleets but are instead directions for state agencies to pursue those goals, if feasible. Although the most recent concept for the ACF regulation includes a goal to get 100% of the drayage fleet to be zero emissions by 2037,[128] it is unclear if the proposed concept will result in any actual emission reductions in the 10-year period evaluated as part of the PR 2305 analysis. The current concept for drayage trucks in ACF prevents new non-ZE trucks from entering the drayage registry after 2023. Because the drayage market is composed of a significant fraction of used trucks,[129] there will be a significant cost differential between a new ZE truck, and an existing diesel truck. The most likely outcome is that used diesel trucks in the registry will be used as long as possible [up to 18 years per the requirements

[126] https://ww2.arb.ca.gov/sites/default/files/2020-11/Draft_2020_Mobile_Source_Strategy.pdf
[127] www.aqmd.gov/fbmsm

[128] Slide 18 at http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/carb-epa-presentations---hd-trucks-03-24-21.pdf
[129] Ibid, Slide 15. See also https://cleanairactionplan.org/documents/final-drayage-truck-feasibility-assessment.pdf/

of SB 1 (2017)] to avoid the cost of purchasing a new ZE truck. As occurred during the previous drayage rule, short distance dray-offs will be the most likely mechanism of compliance. In this case, that would mean that the oldest diesel drayage trucks would shorten their trips out of the port to avoid racking up miles and hitting the 800,000 mile threshold for turnover. Diesel trucks would then be able to continue the drayage trip to its ultimate destination. This approach will ensure that the dirtiest trucks continue to call at the port for as long as possible, all while a ZE regulation is in place. There is no proposal we are aware of that would address how to enforce the optimistic emission reductions envisioned during the working group meetings. This outcome is entirely foreseeable given the recent history described above.[130]

It is also unclear how the goals in the Ports Clean Air Action Plan are going to be met as no implementation date has been set, and no plan has been adopted as to how the $10 per TEU will be used to subsidize the purchase of ZE/ NZE trucks. Given these limitations, it is speculative to determine precisely how much emission reductions the ports' anticipated new Clean Truck Program will achieve relative to PR 2305. However, using the following broad assumptions, the emission reductions at PR 2305 warehouses from a fully implemented Clean Truck Program (CTP) could be about 1-2%. Once the CTP is in place, it could raise about $90 million per year.[131] If those funds are spent on NZE trucks, at most it may turn over about 6% of the drayage fleet per year. That could be less because newer NZE trucks will be competing against lower cost used diesel trucks. The turnover could also be significantly lower if the ports focus their funding on ZE trucks, which are expected to be much more expensive than NZE trucks early in the program. About 65% of imported containers that do not go to an on-dock or off-dock rail yard could be assumed to go to a warehouse. Many warehouses that receive imported containers close to the ports are smaller than 100,000 sf and therefore not covered by PR 2305. Using the ratio of drayage activity compared to other Class 8 truck activity from EMFAC and the ratios above, a maximum of about 5% of all trips to PR 2305 warehouse are drayage trips coming from the ports. Using the 6% replacement rate for NZE trucks, and the 5% of trips, the maximum emission reductions from the CTP by 2031 would be about 1-2%. PR 2305 is estimated to provide about a 10-15% reduction, and this 1-2% estimate would be a subset of the total reductions. Because the emission reductions are a subset, the costs for these trucks would also be a subset and attributable to the port program rather than to PR 2305, and the cost-effectiveness of PR 2305 is not expected to materially change.

Finally, PR 2305 could enhance the emission reduction potential of the CTP. Because the CTP only applies at the ports, as a standalone program it is foreseeable that it would result in dray-offs, similar to what was described for the ACF drayage concept. If PR 2305 is in place, then it is much more likely that a NZE or ZE truck that picks up a load at the ports will take that load all the way to a warehouse so that the warehouse operator can earn WAIRE Points, rather than a short trip to a nearby facility to transfer the load to a diesel truck.

Response to Comment 43-13

[130] http://www.caclutchandgear.com/carb-cracking-down-on-port-freight-loophole/, https://www.freightwaves.com/news/l-a-port-tries-to-close-truck-program-loopholes,
[131] https://www.portoflosangeles.org/references/news_022720_clean_truck_rate

The commenter is correct that truck trip lengths will vary by warehouse, and for each truck trip. However, obtaining actual warehouse truck trip lengths is not feasible in a universe of 2,902 warehouses, thousands of trucks, and millions of truck miles. Some trip lengths may be longer, and some may be shorter; therefore an average truck trip length is the most representative of all the trips occurring in the basin, especially in relation to a rule analysis that evaluates a broad swath of the trucking activity in the basin like PR 2305.[132]

Further, based on Staff interviews with industry participants, many trucking companies indicated that they consider information about their vehicle miles traveled data and where they travel as business confidential, and do not want to disclose that to warehouse operators (who may be competitors). Further, some trucks carry goods to multiple warehouses on a single route, and assigning the mileage to each warehouse is impractical. Because of this, assigning specific differential mileage by warehouse is not a viable approach. Therefore, the use of average truck trip lengths is the most reasonable approach when considering the impacts of PR 2305.

Response to Comment 43-14

Using the trip lengths from the 2016 RTP is consistent with the 2016 AQMP analysis and with EMFAC2017, which are both used in the Final Staff Report. New trip lengths have not yet been determined using results from the 2020 RTP as those are prepared during the development of the subsequent AQMP, and not made final until after that AQMP's approval. In this case it will be the 2022 AQMP that is expected to be approved next year. The average trip lengths used in the analysis in the Final Staff Report are also representative of what is expected for warehousing activity based on conversations with individual warehouse operators as well as the range of trip lengths used in CEQA analyses reviewed by Staff for new warehouse projects. As an example, Class 8 trucks are assumed to travel 39.9 miles per trip in the analysis conducted in the Final Staff Report, which is based on modeling conducted for the 2016 RTP and the 2016 AQMP, and typical trip lengths used in warehouse CEQA documents is 40 miles. The enhancement the commenter suggests for passenger vehicle trips would not affect the emission reduction analysis because no scenario assumed emission reductions from employee cars.

Response to Comment 43-15

The internalization rate used in the Final Staff Report is the best available information, and the commenter did not provide any specific alternative data source that could be used. The commenter's claim that the internalization constant (i.e., the truck trips between warehouses) is applicable only to drayage is also incorrect. The rate is applicable to imported goods, whose first trip is a drayage trip coming from the port.[133] However the study evaluates where the goods go after the first drayage trip as well, which is how the percentage of trips between warehouses is actually determined. In conversation with SCAG staff about this approach, they

[132] Using average trip lengths is common practice when calculating potential emission reductions of control measures, including the use of standard software like CalEEMod (http://www.caleemod.com/), and in SIP measures (https://www.arb.ca.gov/planning/sip/imp2016sip/finalreport.pdf).
[133] A drayage trip is one which has an origin or destination at the port.

concurred that the use of the internalization rate from their study is reasonable, and they are unaware of other sources of information which could be used.[134]

Response to Comment 43-16

For the analysis of yard truck emissions staff has used proprietary data purchased from Powersys which is considered confidential. The information that is not business confidential and the calculations have been provided in the spreadsheets available at www.aqmd.gov/fbmsm.

Response to Comment 43-17

The requested data was provided to the commenter on February 5th, 2021. Some of the information provided as part of the business survey is considered business confidential, and aggregated results were provided. This data is considered the most reliable information available as it is specific to warehouses in the South Coast AQMD. Therefore the analysis conducted using this data is not arbitrary. The data included in the public release on the website was limited to warehouses >200,000 sf due to the focus of that study on larger warehouses. The original dataset included smaller facilities too, which is the data that was used in the analysis in the Final Staff Report.

Response to Comment 43-18

As mentioned in Final Staff Report Chapter 1 Table 2, the TRU calculations are based on CARB methods available on their website.[135] These are the best available estimates of emissions from this category of equipment, and are not arbitrary to include as part of the PR 2305 analysis. The comment states that unspecified details are not available, however the spreadsheet calculations that are used to support the Final Staff Report analysis includes all detailed calculations used in the analysis, based on CARB's methodology. The comment then refers to yard trucks at the end, but it is not clear if this is a typographic error since the rest of the comment is about TRUs. Regardless, detailed yard truck calculations have been performed and are documented and included in the Final Staff Report in Appendix B.

Response to Comment 43-19

The errors in the emission rate calculations noted by the commenter have been updated in the Final Staff Report and are included in the spreadsheets available at www.aqmd.gov/fbmsm.

The updated calculations have been included with other updates Staff has made appropriate corrections in the baseline emissions inventory and updated the 2019 NOx and DPM emissions in the Draft Staff Report released on March 3rd, 2021.

Response to Comment 43-20

[134] Personal communication with Annie Nam, SCAG Goods Movement and Transportation Finance Manager, April 2021.
[135] https://ww2.arb.ca.gov/our-work/programs/transport-refrigeration-unit/tru-meetings-workshops, https://ww2.arb.ca.gov/sites/default/files/classic//cc/cold-storage/documents/hra_emissioninventory2019.pdf

TRU emission calculations for cold storage warehouses in the baseline emission inventory have been updated based in part on this comment and in part to more accurately reflect the proportion of warehouses that are expected to be cold storage relative to non-cold storage. This update used a linear regression and data from two SCAG studies.[136] Details of the updated calculation can be found in PR 2305 Draft Baseline Emissions Inventory, "Cold Storage" tab available at www.aqmd.gov/fbmsm.

Response to Comment 43-21

The analysis conducted for the baseline inventory and the scenario calculations is as consistent as possible, but necessarily differs because different activities are expected to occur with and without the rule. Both the baseline and scenario calculation analyses utilize EMFAC2017 as a base, and both account for recent CARB regulatory activity including Advanced Clean Trucks, Low NOx Omnibus, and Heavy Duty I/M.[137]

Some updates have been included in the most recent scenario analysis to ensure that recent CARB regulations are appropriately analyzed. However, because these three rules will not be treated the same under PR 2305, the method of including them is different. For example, trucks that comply with ACT would earn WAIRE Points, but trucks that meet the Low NOx Omnibus standards or that comply with the Heavy Duty I/M program would not earn Points. In the scenario analysis, the benefit from ACT is first determined by assigning WAIRE Points to truck visits from ACT trucks. This reduces a warehouse operators WAIRE Points Compliance Obligation. Then the remaining actions needed by the warehouse operator for each scenario is calculated, and the resulting emissions benefit are determined. In contrast, in the baseline emissions inventory, the emissions reductions from ACT are directly accounted for without calculating any Points.

Response to Comment 43-22

See Response to Comments 43-9 to 43-15 as the same responses apply to both the scenario calculations and the baseline emissions inventory.

Response to Comment 43-23

The baseline emissions inventory focused on the most significant sources of emissions related to warehouses. The emissions from providing power to warehouses does not materially affect those estimates, but an estimate is included in this response for completeness. An estimated

[136] https://scag.ca.gov/sites/main/files/file-attachments/task4_understandingfacilityoperations.pdf?1604268216, https://scag.ca.gov/sites/main/files/file-attachments/task2_facilityinventory.pdf?1604268149

[137] The analysis that was conducted for Heavy Duty I/M is conservative, in that the emission reductions from that program may be overstated by CARB. To the extent that they are the emission reductions due to PR 2305 would be greater. Examples include uncertainty whether the proposed lower emission rates anticipated for that program will apply equally to in-state vs. out-of-state trucks (which make up about 22% of PR 2305 emissions), whether the program will achieve its full emission reduction potential early during its implementation (e.g., in 2023), and whether pre-2014 trucks without on-board diagnostics (OBD) systems will achieve the same reductions as later trucks with OBD systems. For example, see comment letter from SCAQMD to CARB on their Draft Proposed Heavy-Duty Vehicle Inspection and Maintenance Program, 4/13/21.

750.9 million square feet of non-cold storage and 8.3 million square feet of cold storage warehousing will be subject to PR 2305 WAIRE Points requirements. Using information from the U.S. Energy Information Administration, these two types of warehouses use about 5.8 and 28.8 kWh/sf/yr.[138] This results in total energy usage of about 4.6 MWh/yr. Using the NOx emission rate for South Coast AQMD power plants of 0.087 lb/MWh[139] and the approximate 45% of power produced by natural gas power plants compared to all other sources (which predominantly do not emit NOx in South Coast AQMD),[140] the total NOx emissions from electricity use at warehouses is about 0.2 tons per day. This is <1% of total baseline emissions from PR 2305 warehouses in 2019. The NOx reductions from solar panels used to earn WAIRE Points in Scenario 11 results in 1.1 tons per day of emission reductions. The additional emission reductions achieved from this scenario are related to the use of mitigation fees that operators pay to make up any shortfall if they cannot earn enough WAIRE Points from solar. The solar panels installed in this scenario would more than offset the power plant related emissions from warehouses, but would still be substantially less than the total baseline emissions from PR 2305.

Response to Comment 43-24

The scenario calculations in the Final Staff Report have been updated, in part to address this comment and provide a more conservative treatment of CARB regulations relative to PR 2305. The results of that analysis is included in the Final Staff Report in Tables 15 and 16. For a discussion of how CARB's proposed Advanced Clean Fleets and the Ports' anticipated Clean Truck Program update would interact with PR 2305, see Response to Comments 43-12.

The updated scenario calculations account for points generated by CARB's ACT ZE trucks visiting the warehouses considered in PR 2305. Points earned from those ZE truck visits are subtracted from each facilities' WPCO and therefore, any actions taken and emission reductions achieved under each scenario would be considered above and beyond CARB's regulations. The Low NOx Omnibus regulation is accounted for in the baseline emissions inventory,[141] but was not included in any scenario calculations as trucks that only meet the requirements of Low NOx Omnibus would not earn WAIRE Points. Trucks that meet the NZE definition in PR 2305 would earn WAIRE Points and the Low NOx Omnibus requirements, and several scenarios are included for this technology.

Response to Comment 43-25

While this comment refers to NZE trucks, those trucks are not required by any CARB regulation. However, the point remains as applied to ZE trucks. The scenario calculation analysis has been updated by adding a new scenario, Scenario 19. This scenario looks at visits

[138] https://www.eia.gov/consumption/commercial/data/2012/c&e/cfm/pba4.php
[139] Final Staff Report, Appendix B, Section 7b
[140] https://www.eia.gov/opendata/qb.php?category=3390127
[141] The analysis assumes equal levels of implementation of this regulation across the state. However this is an uncertain outcome as statewide measures do not always occur equally throughout the state, as indicated by the lower levels of light duty ZE passenger car adoption in South Coast AQMD relative to other counties, as shown in Figure 3 of the Final Staff Report.

from the population of ZE trucks from CARB's ACT to warehouses. The updated scenario calculations account for points generated by CARB's ACT ZE trucks visiting the warehouses considered in PR 2305. Points earned from those ZE trucks are subtracted from each facilities' WPCO and therefore, any actions taken and emission reductions achieved under each scenario would be considered above and beyond CARB's regulations.

The updated methodologies have resulted in reduced baseline emissions as well as reduced emission reductions, however the relative reduction of about 10-15% has remained approximately the same between previous versions of the scenario calculations, and the version included in the Final Staff Report.

Response to Comment 43-26

As stated in Response to Comments 43-28, the updated scenario calculations account for points generated by CARB's ACT ZE trucks visiting the warehouses considered in PR 2305. Points earned from those ZE trucks are subtracted from each facilities' WPCO and therefore, any actions taken and emission reductions achieved under each scenario would be considered above and beyond CARB's regulations. The Low NOx Omnibus regulation is accounted for in the baseline emissions inventory,[142] but was not included in any scenario calculations as trucks that only meet the requirements of Low NOx Omnibus would not earn WAIRE Points, as they have higher emissions than the Lowest Optional Low NOx standard specified in PR 2305. Trucks that meet the NZE definition in PR 2305 would earn WAIRE Points and the Low NOx Omnibus requirements, and several scenarios are included for this technology.

Response to Comment 43-27

This comment has been addressed in the updated version of the scenario calculations. Heavy Duty I/M has been considered in both the population of trucks from CARB's regulations as well as the population in the scenario calculations and baseline emissions inventory. NOx and DPM Heavy Duty I/M factors were obtained from CARB's META tool and were applied to EMFAC2017 emission rates.

Response to Comment 43-28

Points earned from CARB's ACT ZE trucks are subtracted from each facilities' WPCO in all scenarios except Scenario 7. Scenario 7 represents an "inefficient" mitigation fee scenario in which warehouse operators would only pay the mitigation fee to comply with the rule, without any attempt to earn any WAIRE Points from CARB's ACT ZE truck visits or any NZE/ ZE truck visits incentivized by those mitigation fees in the WAIRE Mitigation Program. Trucks that only comply with CARB's Low NOx Omnibus and Heavy Duty I/M regulations would not be eligible to earn WAIRE Points.

Response to Comment 43-29

[142] The analysis assumes equal levels of implementation of this regulation across the state. However this is an uncertain outcome as statewide measures do not always occur equally throughout the state, as indicated by the lower levels of light duty ZE passenger car adoption in South Coast AQMD relative to other counties, as shown in Figure 3 of the Final Staff Report.

The mismatch between the compliance year and emission rates has been corrected for Scenario 1 in the updated scenario calculations spreadsheet.[143] Even after the corrections, the rule still shows an emissions reductions of about 1.0 to 3.5 tons per day in the years 2024 through 2027.

Response to Comment 43-30

South Coast AQMD Staff acknowledges that through time the cost of cleaner technologies is expected to decrease and general fleet turnover to cleaner tucks will reduce the fleet mix emission rates. Further, updates to the emissions profiles of the on-road truck fleet, yard truck fleet, etc. may change beyond what has been calculated in the Final Staff Report and its appendices. The Board Resolution therefore includes an assessment of the state of technology for the WAIRE program every 5 years to reevaluate the associated annualized cost and emission reductions from WAIRE Menu options. Updates to the WAIRE Menu may be recommended to the Board at that time, if warranted. Although it is possible that the expected costs and/or emission reductions associated with technologies may change more rapidly than in the next five years, there is also value in maintaining regulatory stability for a period so that warehouse operators can plan ahead to comply with the rule. The commenter is also asking for forecasting costs, whereas Staff is proposing instead to report back to the Board every five years with an analysis of actual costs and then to recommend updates at that time, if necessary.

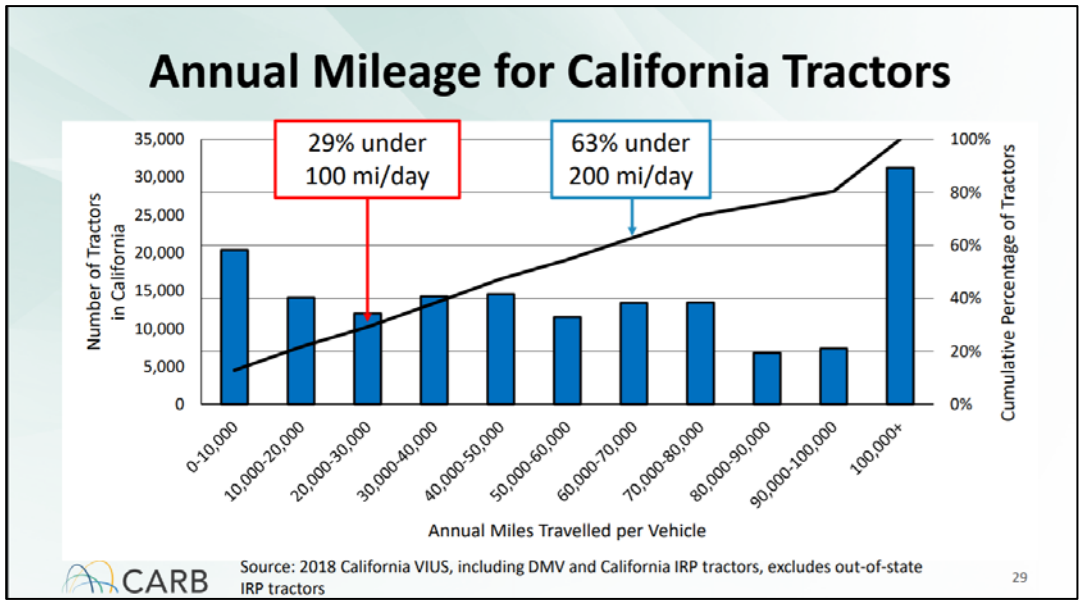
Response to Comment 43-31

While the commenter's concern about charging time and mileage range of battery electric trucks can be true for some cases, it is not necessarily broadly applicable. Because PR2305 does not require 100% turnover of trucks to zero emission trucks, not all trucks will have a duty cycle that requires more than a one-to-one replacement as suggested by the comment. Electric vehicles are advancing technologically very quickly, and the proposed five-year phase-in for PR 2305 allows technology to advance before final stringency is reached. Even at the final phase-in only a fraction of vehicles would choose to comply through zero emission truck options. For example, a 250,000 sf warehouse will have about 41 Class 8 truck visits per day and about 15 Class 2b-7 truck visits per day. They would have a WPCO of about 217 at final stringency. This warehouse operator would only be required to have about 4 Class 8 ZE truck visits per day to earn the required number of WAIRE Points (about 10% of all visits). Importantly, natural gas powered NZE trucks that do not have the same limitations on their duty cycle as ZE trucks are also available, but are ignored by the comment. In this same example, about 5 Class 8 NZE truck visits would be needed per day if that compliance option was chosen. This small fraction of implementation allows warehouse operators that choose to earn WAIRE Points through truck visits to focus on those that best meet the duty cycles and technologies that are suitable for their operations.

The comment includes reference to two studies to argue that more than one electric truck is needed for every diesel truck it replaces. The first study refers to a bus case study. Although buses are heavy duty vehicles, their duty cycle is different than for trucks (slower speeds with lots of stops), and the study can not be used to conclude how many ZE trucks would be needed compared to diesel trucks in the context of warehouses. The second study by the National Center for Sustainable Transportation used several methods to evaluate how ZE Class 8 trucks

[143] www.aqmd.gov/fbmsm

could work for specific cases in southern California. This study used hypothetical modeling to conclude that if a fleet converted mostly (e.g., up to 96%) to battery-electric trucks that more than one ZE truck would be needed for every diesel truck replaced. However, at lower levels of adoption (e.g., 15%), and in future years with more advanced technology (2025 and 2030) the total fleet size is nearly identical. The fleet size was found to not change at all for natural gas hybrid trucks. Importantly, the study also included two case studies with detailed travel data from fleets. These two studies revealed that trucks have a range of distances they travel every day. For both fleets, 22-40% of trucks travel less than 80 miles per day (well within the range of current ZE truck technology). This finding is consistent with more comprehensive data recently presented by CARB.[144]



This chart shows that 29% of all in-state tractors travel less than 100 miles per day. Because PR 2305 would only require about 10% of visits to be from Class 8 ZE trucks, warehouse operators are expected to find the most favorable duty cycles first (e.g., lower mileage) if they choose to use this method to earn WAIRE Points. Based on the data presented in the NCST study mentioned by the commenter and in data presented by CARB, this level of implementation will not require acquiring more ZE trucks than diesel trucks. The cost analysis used in the Final Staff Report and Socioeconomic Impact Assessment therefore provide reasonable estimates of expected outcomes of PR 2305 and PR 316.

Response to Comment 43-32

The commenters assertion that the calculation of annual usage for each technology is arbitrary is incorrect. As shown below, each annual usage estimate is based on methods that are well documented in the WAIRE Menu Technical Report (Appendix B of the Final Staff Report).. The choice of what number to use for each usage is also not important, as the number of WAIRE Points scales up and down equally with the level of implementation. For example, if an operator earns 42 WAIRE Points for dispensing 165,000 kWh of electricity into ZE trucks, they would earn half that amount (21 WAIRE Points) for dispensing half the electricity (82,500 kWh).

[144] https://ww2.arb.ca.gov/sites/default/files/2020-09/200918presentation_ADA.pdf

The annualized metric for charging infrastructure usage was set at 165,000 kWh, equal to about 450 kWh per day, or enough for five separate two hour-long charging events per day on a 50 kW charger, or enough to recharge one truck with a 500 kWh battery.[145] Similar to all other WAIRE Menu items, the related cost, NOx reductions, and Diesel PM reductions were calculated for this level of implementation to determine the number of WAIRE Points that is associated with a usage of 165,000 kWh (see Section 3 from Appendix B of the Final Staff Report).

In order to be consistent with the NOx emission reduction benefits of charging a battery-electric Class 8 truck compared to a conventional Class 8 diesel truck, the equivalent amount of hydrogen a fuel cell Class 8 truck would need was back-calculated (see Section 4 from Appendix B of the Final Staff Report).

The average power draw for trailer TRUs is 7.3 kilowatts[146] based on CARB's Preliminary Cost Document for the Transport Refrigeration Unit Regulation.[147] The 4-hour average daily usage is also based on a 2011 inventory analysis survey by CARB in which it was shown the annual activity of trailer and truck TRUs are in the range of 1360 to 1697 hours per year.[148] A 4-hour daily average usage (about 1460 hours per year) is within this range of usage (see Section 6 from Appendix B of the Final Staff Report).

Response to Comment 43-33

Additional details about the WAIRE Mitigation Program are included in the Final Staff Report and the draft Board Resolution. The details requested by the commenter are not being finalized at the time of rule adoption because the exact design of the program can not yet be determined. A critical missing piece of information is determining what the level of funding will be overall, and how those funds will vary across the South Coast AQMD. As stated in Chapter 2 of the Final Staff Report, funds will be pooled from mitigation fees paid by all warehouses in a Source Receptor Area,[149] and funding will be focused on projects that will reduce emissions in that area. However, it is foreseeable that the funding program could vary each year, or potentially in different geographic areas, depending on the level of funding available. Future program solicitations and project awards will be developed in a public process and must receive South Coast AQMD Governing Board approval in a public meeting before the funding program can proceed. A funding program, once developed, will include details such as the application process, project eligibility and selection criteria, timeline, tracking, and verification. The South Coast AQMD has a long history of implementing various funding programs, including Carl Moyer, Prop. 1B, and the VW Mitigation Fund, and these criteria are regularly a part of the process.

[145] Final Staff Report, Appendix B.
[146] https://ww2.arb.ca.gov/sites/default/files/2020-08/Preliminary%20TRU%20Cost%20Doc%2008202020.pdf
[147] https://ww2.arb.ca.gov/sites/default/files/2020-08/Preliminary%20TRU%20Cost%20Doc%2008202020.pdf
[148] https://ww2.arb.ca.gov/sites/default/files/classic//cc/cold-storage/documents/hra_emissioninventory2019.pdf
[149] Map available here: http://www.aqmd.gov/docs/default-source/default-document-library/map-of-monitoring-areas.pdf

Regarding the cost-effectiveness of the WAIRE Mitigation Program, it is uncertain what will be the exact criteria chosen by the South Coast AQMD Governing Board in each subsequent funding cycle. However, if PR 2305 and/or other concurrent policy actions drive significant interest into the WAIRE Mitigation Program, it is possible that the program could become more cost effective than $100,000 per ton if grants are able to be lowered. Conversely, cost-effectiveness in terms of dollars per ton of pollutant reduced are not traditionally associated with ZE charging and fueling equipment, and cost effectiveness could be higher in some instances. On balance, because current funding programs use a $100,000 per ton threshold, it is reasonable to include that as an estimate in the scenario calculation analysis.

Finally, DPM cost-effectiveness was derived based on DPM emission reduced by replacing a 13-year-old T7 Tractor with a ZE truck consistent with Carl Moyer calculation guidelines. The value of $247,600,000 is not designed to be a criteria used for funding. It is instead a math construct that is used to determine the level of DPM reductions based on an assumed level of incentive funding, and funding being used for NZE trucks at $100,000 per ton of NOx reduction.

Response to Comment 43-34

Thank you for your comments and interest in this rule development.

Response to Comment Letter 44 – California Trucking Association – March 2, 2021

Response to Comment 44-1

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention. As explained below in Response to Comment 44-3, South Coast AQMD (the District) has ample statutory authority for the proposed rules, and they are not preempted by federal law.

Response to Comment 44-2

South Coast AQMD Staff understand that trucking is an important industry to the good movement industry in California. PR 2305 and PR 316 have been developed with industry's concerns have been taken into account.

Response to Comment 44-3

The comment contends that the District lacks statutory authority to adopt an indirect source rule ("ISR") for existing, as opposed to new, indirect sources. In fact, the District's broad regulatory authority includes the authority to adopt ISRs for both new and existing sources. The comment omits several sources of District authority and misconstrues the sources of authority it does cite.

Multiple provisions of the Health and Safety Code ("HSC") give the District authority to adopt rules and regulations for sources of air pollution other than mobile sources as necessary to attain state and federal ambient air quality standards. *See* HSC §§ 40001(a), 40440(a), 40703; *see also id.* § 40000 ("The Legislature finds and declares that local and regional authorities have the primary responsibility for control of air pollution from *all sources*, other than emissions from motor vehicles." (emphasis added)). These provisions are not limited to direct sources, nor are they limited to new as opposed to existing indirect sources. They are sufficient to authorize the District to adopt the proposed rule. Moreover, HSC section 40716 does specifically authorize air districts to adopt rules to reduce or mitigate emissions from "indirect sources," with no limitation on whether the source is existing or new.

The comment contends that the District cannot point to a statute that "expressly" authorizes regulation of existing indirect sources. The argument mistakes the nature of the District's authority. Regulation of indirect sources, both new and existing, comes within the plain meaning of the authorizing statutes just discussed, and in that sense they are authorized by the express terms of the statutes. That such regulations are not *specifically* authorized by these statutes is irrelevant. *Cal. Sch. Bds. Ass'n v. State Bd. of Equalization*, 191 Cal. App. 4th 530, 544 ("[T]he absence of any specific [statutory] provisions regarding the regulation of [an issue] does not mean that such a regulation exceeds statutory authority.'" (alterations in original)). The statutes also do not specifically authorize the District to regulate lead smelters (Rule 1101), pharmaceutical manufacturing facilities (Rule 1103), or fluidized catalytic cracking units (Rule 1105), and yet the District regulates these sources and many more because they are sources of pollutants that impair the District's attainment of ambient standards. The same is true of warehouses—both new and existing. The delegation of regulatory power to a local government, without limiting the mode of exercising that power, implies that the government may select any lawful and reasonable means to exercise that power. *San Diego Gas & Elec. Co. v. San Diego Cty. Air Pollution Control Dist.*, 203 Cal. App. 3d 1132, 1144 (1986). Therefore, since the

Legislature did not specify whether the District was limited to regulating new indirect sources, the District may regulate new sources, existing sources, or both.

The comment points to provisions of the federal Clean Air Act ("CAA") addressing indirect sources, which the comment contends are limited to regulation of new or modified sources. *See* 42 U.S.C. § 7410(a)(5)(A) (CAA section 110). The CAA is irrelevant to the District's authority to adopt the proposed rule. The District's regulatory authority represents an exercise of the State's police power. *Lees v. Bay Area Air Pollution Control Dist.*, 238 Cal. App. 2d 850, 856 (1966). This power is delegated to it by the State Legislature. *Orange Cty. Air Pollution Control Dist. v. Pub. Util. Comm'n.*, 4 Cal. 3d 945, 953 (1971). Thus, the District exercises the *State's* police power as delegated by the Legislature; the CAA is not the source of the District's authority. Indeed, the cited provision of the CAA limits the federal Environmental Protection Agency's ("EPA") ability to require ISRs to be included in a state's state implementation plan ("SIP"); it is not a limit on a state or local government's authority to adopt an ISR under state law.[150] That statute, and EPA's interpretation of it, are thus not relevant to the scope of the District's regulatory authority. The comment points to nothing in California law indicating that the Legislature intended that air districts' authority to regulate indirect sources be limited by the federal CAA.

The comment also cites sections 40716 and 40440(b)(3) of the HSC, but it misinterprets those provisions. Neither provision supports the arguments made.

The comment contends that section 40716 requires any District ISR to both reduce ISR emission and reduce vehicle trips. Not so. In providing that "a district may adopt and implement regulations to accomplish both of the following," it refers to regulations, plural. It provides that districts may adopt regulations that, collectively, serve both of the goals following that phrase. The statute does not demand that each individual regulation serve both of those goals. If the commenter's interpretation were correct, then District rules reducing emissions from areawide sources, which are also authorized by section 40716(a)(1), would likewise be required to reduce the number or length of vehicle trips. CARB defines areawide sources as sources "where the emissions are spread over a wide area, such as consumer products, fireplaces, road dust, and farming operations." CARB, *Emission Inventory Documentation*, <ww2.arb.ca.gov/emission-inventory-documentation>; *see also Cal. Bldg. Indus. Ass'n v. San Joaquin Valley Air Pollution Control Dist.*, 178 Cal. App. 4th 120, 128 (2009) (referring to "area-wide sources of emissions such as fireplaces, wood stoves and landscape equipment"). It would make no sense to demand that rules regulating consumer products or fireplaces also reduce vehicle trips.

The comment also points to HSC section 40440(b)(3), which refers to "provid[ing] for indirect source controls in those areas of the south coast district in which there are high-level, localized concentrations of pollutants or with respect to any new source that will have a significant effect on air quality in the South Coast Air Basin." The comment erroneously assumes that section 40440(b)(3) both provides and limits District authority to regulate indirect sources to areas of localized pollutant concentrations or new sources. But subsection 40440(b) does not grant authority to the District to adopt regulations. Rather, it is a mandate—it identifies particular tasks that the District must undertake using the regulatory authority granted by subsection 40440(a): "The rules and regulations adopted pursuant to subdivision (a) shall do all of the

[150] CAA section 110 also cannot preempt state regulatory authority. Section 116 specifies the provisions in the CAA with preemptive effect, and it does not include section 110. *See* 42 U.S.C. § 7416.

following."[151] Nothing in subsection 40440(b) suggests that it is a limit on the District's authority under 40440(a). Moreover, the comment ignores the fact that these terms in paragraph (b)(3) are missing from section 40716, which contemplates regulations that "[r]educe or mitigate emissions from indirect . . . sources of air pollution" generally, with no limit as to new sources.

Moreover, the comment omits from its quotation of section 40440(b)(3) the first half of the operative language, which includes no reference to new sources, but instead provides for indirect source regulation where there are high localized levels of pollutants. And the fact that the second half specifically refers to new sources shows that indirect source regulation is not inherently limited to new sources, since if it were, the word "new" in the second half would be superfluous.[152]

The comment also erroneously suggests that the District is relying solely on a California Attorney General opinion as a basis for its authority. *See* 76 Ops. Cal. Atty. Gen. 11 (1993). The statutes cited above provide ample authority for the proposed ISR; the opinion has been cited only to show that indirect source measures could be required for already-constructed sources.

Indeed, the comment appears to recognize that the District may regulate existing indirect sources, but suggests that it may do so only for supposedly "traditional" indirect sources such as shopping centers or stadiums. It cites no authority for the proposition that warehouses are somehow a different type of indirect source that can only be regulated when newly constructed.

In sum, nothing in the provisions of the HSC authorizing the District to adopt pollution control regulations limit those regulations to the control of emissions associated with new, as opposed to existing, indirect sources.

Response to Comment 44-4

The comment contends that PR 2305 is preempted by section 209(a) of the federal CAA, which prohibits state or local regulations adopting standards relating to the control of emissions from new motor vehicles. 42 U.S.C. § 7543(a). The argument is based on the premise that the proposed rule in fact imposes a standard for emissions from trucks. That argument is precluded by the Ninth Circuit's decision upholding another ISR program in *National Association of Home Builders v. San Joaquin Valley Unified Air Pollution Control District*, 627 F.3d 730 (9th Cir. 2010) ("*NAHB*"), which the comment relegates to a footnote.

In *NAHB*, the court rejected a CAA preemption claim challenging part of an ISR adopted by the San Joaquin Valley Unified Air Pollution Control District. The ISR required real estate development projects to reduce emissions from construction equipment by specified

[151] This language ("do all of the following"), which tracks that used in section 40716 ("accomplish both of the following"), also confirms the error in the comment's interpretation of the latter section. If the comment were correct, *each* District rule must require best available retrofit control technology (40440(b)(1)), promote cleaner burning fuels (40440(b)(2)), provide for indirect source controls (40440(b)(3)), *and* provide transportation control measures (40440(b)(4)).

[152] Indeed, the definition of "indirect source" in the CAA includes no limitation, express or implied, to new sources. 42 U.S.C. § 7410(a)(5)(C) ("'indirect source' means a facility, building, structure, installation, real property, road, or highway which attracts, or may attract, mobile sources of pollution").

amounts.[153] *Id.* at 732. The plaintiffs contended, like the commenter here, that the San Joaquin ISR was merely "a ruse adopted simply to regulate emissions from . . . vehicles." *Id.* at 734. They argued it did so "because it commands developers to use construction equipment that reduces 'baseline' emissions by particular percentage, on pain of paying fees." *Id.* at 735.

The Ninth Circuit concluded that even if the San Joaquin ISR imposed standards or requirements, they "do not relate to the control of emissions from construction equipment," as necessary to be preempted by Section 209. *Id.* at 736; *see also id.* at 739. Rather, the rule regulated emissions from the *indirect* source: the construction site. *Id.* at 739 ("Because Rule 9510 is targeted at a development site as a whole, its standard or requirement relates to emissions from an indirect source, not from nonroad vehicles or engines."). The court found it "crucial" that the rule was an ISR, which is expressly authorized by the CAA in section 110(a)(5). *Id.* at 736. The court noted that "Emissions from any indirect source come from the direct sources located there; that is precisely what makes an indirect source indirect." *Id.* In other words, indirect source regulation inherently involves indirect regulation of mobile sources: "Every regulation of the emissions from an indirect source, then, will ultimately regulate direct sources." *Id.* The court concluded that NAHB's theory of preemption would have made the CAA's provision for ISRs a nullity, because all ISRs would be preempted by section 209. *Id.*; *see also id.* at 737-38.

In a footnote (fn. 4), the comment attempts to dispose of *NAHB* by arguing that the San Joaquin ISR "considered emissions that were 'site-based,' rather than 'engine- or vehicle-based," (quoting 627 F.3d at 737) while PR 2305, the comment contends, is based solely on emissions from trucks making trips to and from warehouses.[154] The comment misconstrues both *NAHB* and PR 2305. In the quoted language, the court was pointing out that the rule established baseline emissions for a development site based on emissions from all of the construction equipment used at the site, rather than emissions from individual vehicles or engines. 627 F.3d at 737. Here, PR 2305 establishes a warehouse's WAIRE Points Compliance Obligation ("WPCO") based on total truck trips to and from a warehouse. Like the ISR in *NAHB*, it is not based on emissions from individual vehicles.

Furthermore, the comment's implication that PR 2305 targets only truck emissions is mistaken. In fact, the WPCO is not based on truck *emissions*; it is based on truck *trips*. The proposed rule uses truck trips as a proxy for total warehouse emissions when setting the compliance obligation because the number of truck visits is representative of the total activity at, and emissions associated with, a warehouse. Staff Rep. at 27 (truck trips "serve[] as a proxy for *overall* warehouse activity and emissions" (emphasis added)); *id.* at 35 (stating that "[t]rucks delivering or picking up goods from a warehouse are a proxy for total activity and emissions related to a warehouse" and structuring reporting requirements on that basis); *see also id.* at 12 (listing sources of emissions associated with warehouses, including, in addition to trucks, yard trucks, transport refrigeration units, passenger vehicles for warehouse employees, on-site stationary equipment, and power plants supplying warehouses with electricity). Accordingly, the case for preemption of PR 2305 is even weaker than that for the San Joaquin ISR in *NAHB.*

[153] Standards for construction equipment—non-road vehicles and engines—are preempted by another subsection of CAA section 209. 42 U.S.C. § 7543(e). The language is not meaningfully different from that of section 209(a). 42 U.S.C. § 7543(a).

[154] The plaintiffs asserted—and the Ninth Circuit rejected—this very argument in *NAHB.* 627 F.3d at 736-37 (noting that NAHB argued that the San Joaquin ISR "is directed at construction equipment and not the construction site itself").

PR 2305 does not establish a "standard relating to the control of emissions from new motor vehicles or new motor vehicle engines." 42 U.S.C. § 7543(a).

Because *NAHB* is squarely on point and dictates that PR 2305 is not preempted, the remaining arguments in the comment are similarly unavailing. The comment contends that PR 2305 represents a mandate for the purchase of trucks and is thus preempted under *Engine Manufacturers Association v. South Coast Air Quality Management District*, 541 U.S. 246 (2004). On the contrary, PR 2350 does not compel purchases of anything. In any event, the Ninth Circuit in *NAHB* expressly rejected the same argument, on the basis noted above. 627 F.3d at 738-39.

The comment also points to language in EPA's decision approving the San Joaquin ISR for inclusion in California's SIP under the CAA. *See* 76 Fed. Reg. 26,609 (May 9, 2011). EPA's statement is the administrative equivalent of dictum because, citing *NAHB*, EPA recognized that San Joaquin's ISR was *not* preempted. *NAHB* supplies the standard for determining whether PR 2305 is preempted. Applying that standard here, PR 2305 is not preempted.

In any event, EPA observed that the fact the rule provided options for compliance that do not involve any changes to construction equipment as further evidence that the rule was an ISR and not direct regulation of fleets or equipment.

> [A] developer has numerous options to meet the emission reduction obligation. . . , including options that do not involve any changes to construction equipment . . . . The flexibility provided in the rule in meeting the emission reduction obligation . . . provides further evidence that the rule is intended to reduce emissions from construction sites as an indirect source of emissions, rather than to regulate the construction equipment directly, either as a fleet or as individual pieces of equipment.

76 Fed. Reg. at 26,611. The same is true here.

The comment also cites the district court decision in *Metropolitan Taxicab Board of Trade v. City of New York*, 633 F. Supp. 2d 83 (S.D.N.Y. 2009), *aff'd on other grounds*, 615 F.3d 152 (2d Cir. 2010). *Metropolitan Taxicab* is distinguishable because, unlike *NAHB* and unlike PR 2305, it involved direct regulation of the acquisition of motor vehicles, not an ISR. The case involved New York City's adoption of rules governing lease rates for taxis that encouraged the adoption of hybrid taxis. As *NAHB* recognized, "rules that regulate[] emissions from vehicles" are distinct from ISRs, which "target[] emissions, and require[] emission reductions," from an indirect source. 627 F.3d at 739. *Metropolitan Taxicab* did not involve an ISR and cannot show that PR 2305 is preempted by section 209.[155]

The comment also suggests that the "intent" of PR 2305 is to "force" acquisition of low-emission vehicles. The District's "intent" in adopting PR 2305 is irrelevant to the preemption analysis. *See Va. Uranium, Inc. v. Warren*, 139 S. Ct. 1894, 1906-07 (2019) (plurality opn. of Gorsuch, J.); *Puente, Ariz. v. Arpaio*, 821 F.3d 1098, 1106 (9th Cir. 2016) (for preemption, "it does not matter if [a state] passed the [challenged laws] for a good or bad purpose"). Indeed,

[155] The district court decision in *Metropolitan Taxicab* was affirmed on appeal based on preemption under the Energy Policy and Conservation Act, which is inapplicable here. *See* Response to Comment 44-6. The court of appeals thus did not opine on the district court's CAA preemption theory.

the comment cites no case law supporting the contention that the District's intent in adopting PR 2305 is relevant to CAA section 209 preemption. On the contrary, the sole question here is whether the proposed rule adopts a standard relating to the control of new motor vehicle emissions. It does not, as explained above. In any event, the express purpose of the proposed rule is to reduce, and facilitate reductions of, local and regional emissions of NOx and PM associated with warehouses. The proposed rule advances that purpose by providing covered entities flexibility to reduce emissions in a wide variety of ways.

Finally, the comment contends that PR 2305 is in effect a purchase mandate because the cost of other compliance measures is allegedly higher than acquiring low-emission trucks. This argument does not change the fact that, as *NAHB* demonstrates, PR 2305 does not adopt a standard relating to the control of new motor vehicle emissions, regardless of the compliance options provided by the proposed rule. It provides a standard—the WPCO—for emissions from the operation of warehouses, which are indirect sources.

Regardless, the comment's premise—that covered entities are coerced into choosing compliance options involving NZE/ZE trucks because they are allegedly the lowest cost compliance option in the Warehouse Actions and Investments to Reduce Emissions ("WAIRE") Menu—is flawed. Indeed, the California court of appeal rejected a closely similar argument in *California Chamber of Commerce v. State Air Resources Board*, 10 Cal. App. 5th 604 (2017) ("*CalChamber*"). *CalChamber* upheld the auction of greenhouse gas emission allowances under the State's cap-and-trade program against a claim that it imposed an unconstitutional tax. The court rejected the plaintiffs' argument that entities regulated under the cap-and-trade program were compelled to purchase allowances at the auction. The plaintiffs contended that it was impossible for them to remain in business without purchasing allowances, and that "it would be more expensive to buy allowances on the secondary market" than at auction. *Id.* at 643; *see also id.* ("purchasing allowances on the open market will 'be far more expensive' than purchasing them at auction from the Board"). The court noted that the program offered compliance options that did not involve the auction and concluded,

> Although [plaintiff] Morning Star may ultimately make the business decision that it must pay for allowances in order to maintain its operations in California, making the business decision to pay is not the same as being compelled to do so by the state. . . . A number of requirements for businesses, whether taxes, safety regulations, minimum wage statutes, or command-and-control pollution control regulations, might cause a particular business to become unprofitable. This unfortunate reality does not translate into a *compelled* purchase of auction credits.

Id. at 644 (emphasis in original). Similarly here, that other compliance options could be more expensive than options involving NZE/ZE trucks does not make the cheaper options compulsory.

PR 2305 is not meaningfully different from the ISR that the Ninth Circuit upheld in *NAHB*. It is therefore not preempted by CAA section 209(a).

Response to Comment 44-5

The comment asserts that the proposed rules are preempted by the Federal Aviation Administration Authorization Act ("FAAAA") because, the comment alleges, they could increase costs for warehouses and encourage changes to truck routes and services.

The FAAAA does not preempt the proposed rules because they neither compel nor prohibit the provision of a service, and, at most, they could affect prices, routes, or services in a peripheral manner with no significant impact on Congress's deregulatory objectives. The FAAAA preempts state and local laws "related to a price, route, or service of any motor carrier . . . with respect to the transportation of property." 49 U.S.C. § 14501(c)(1). This provision preempts state laws "having a connection with, or reference to" prices, routes, or services. *Rowe v. N.H. Motor Transp. Ass'n*, 552 U.S. 364, 370-71 (2008). A state law has a prohibited "reference to" prices, routes, or services where it "acts immediately and exclusively" upon a price, route, or service, or "the existence of [a price, route, or service] is essential to the law's operation." *Air Transport Ass'n of Am. v. City & Cty. of San Francisco*, 266 F.3d 1064, 1071 (9th Cir. 2001). A state law has a prohibited connection with rates, routes, or services if it binds the carrier to a particular price, route, or service. *Id.* at 1071-72. State laws affecting prices, routes, or services "in only a 'tenuous, remote, or peripheral . . . manner with no significant impact on Congress's deregulatory objectives" are not preempted. *Cal. Trucking Ass'n v. Su*, 903 F.3d 953, 960 (9th Cir. 2018); *Air Transport Ass'n*, 266 F.3d at 1071.

The proposed rules do not mandate or prohibit the provision of any particular service with respect to the transportation of property. Indeed, the proposed rules do not *require* any particular action at all, but instead provide a menu of compliance options, many of which are wholly unrelated to transportation (e.g., installing renewable energy systems on buildings, installing air filters for sensitive receptors, or adopting a custom plan).[156] Although the proposed rules may encourage certain behaviors (e.g., converting to ZE or NZE vehicles or reducing annual truck trips), such encouragement does not bring the proposed rules within the scope of FAAAA preemption. *See Dilts v. Penske Logistics, LLC*, 769 F.3d 637, 647 (9th Cir. 2014) (holding a law is not preempted "just because it shifts incentives and makes it more costly for motor carriers to choose some routes or services relative to others, leading the carriers to . . . make different business decisions"); *see also Bedoya v. Am. Eagle Express, Inc.*, 914 F.3d 812, 825 (3d Cir. 2019) (finding no preemption where a law, among other things, "does not mandate a particular course of action" and "offers carriers various options to comply."). The flexibility of the proposed rules would allow regulated entities to select the most efficient and cost-effective mode of compliance, thereby encouraging innovation in keeping with the deregulatory intent behind the FAAAA. *See Rowe*, 552 U.S. at 371 (describing Congress' goal as to promote competition, "thereby stimulating 'efficiency, innovation, and low prices,' as well as 'variety' and 'quality.'") (quoting *Morales v. Trans World Airlines, Inc.*, 504 U.S. 374, 378 (1992)).

The flexibility and choice built into the proposed rules removes them from the scope of FAAAA preemption for a related reason. Even if, for the sake of argument, a particular method of earning WAIRE points would be preempted by the FAAAA if that method were compelled by a stand-alone regulation, its inclusion in the proposed rules is not preempted because covered entities are not required to select that particular method. Given the presence of valid, non-preempted compliance options, the District may provide covered entities a choice to select

[156] Thus, unlike the rules preempted in *Rowe*, the proposed rules do not "require[ ] carriers to offer a system of services that the market does not now provide" or "freeze into place services that carriers might prefer to discontinue in the future." *See Rowe*, 552 U.S. at 372.

compliance options that would be preempted if independently mandated. *See Ray v. Atl. Richfield Co.*, 435 U.S. 151, 172-73 (holding that, in light of a non-preempted option for compliance, a state law providing an alternative option that would have been preempted if applied on its own was not preempted).

The proposed rules are not preempted merely because they may increase the cost of doing business. *See Dilts*, 769 F.3d at 643, 646 (stating that laws that operate "several steps removed from prices, routes, or services" are not preempted "even if they raise the overall cost of doing business or require a carrier to re-direct or reroute some equipment."). Courts have drawn a distinction between regulation of outputs—e.g., services at a particular price—and regulation of inputs. *Bedoya*, 914 F.3d at 821 (explaining that "[t]he FAAAA's focus on prices, routes, and service[s] shows that the statute is concerned with the industry's production outputs," and not "resource inputs," including "labor, capital, and technology, which may be regulated by various laws."); *S.C. Johnson & Son, Inc. v. Transp. Corp. of Am., Inc.*, 697 F.3d 544, 558 (7th Cir. 2012) (same). Regulation of *inputs* may increase costs of doing business and may be a factor in decisions about routes, prices, and services, but they are generally not preempted. *See, e.g.*, *Dilts*, 769 F.3d at 647 (wage and meal break laws not preempted); *Californians for Safe & Competitive Dump Truck Transp. v. Mendonca*, 152 F.3d 1184, 1189 (9th Cir. 1998) (prevailing wage law not preempted).

Regulations concerning pollution-control technology fall in the category of regulation of resource inputs that are generally not preempted. For example, the Eastern District of California rejected an FAAAA preemption challenge to a CARB rule that required heavy-duty trucks to install filters and upgrade engines to reduce particulate matter emissions. *Cal. Dump Truck Owners Ass'n v. Nichols*, No. 2:11-cv-00384, 2012 WL 273162 at *4-8 (E.D. Cal. Jan. 30, 2012) (concluding that plaintiff had failed to establish a likelihood of success on the merits). The court held that, even though the rule regulated the technology used in trucks, it did not bind motor carriers to a particular route or service, and the effect of any related cost increases on prices or services were too attenuated to trigger preemption. *Id.* at *7-8.

Here, as in *Nichols*, potential compliance options related to low emission trucks do not bind covered entities or motor carriers to a particular route, price, or service, and include compliance options that are completely unrelated to trucks. Moreover, the District's proposed rules are even more remotely related to motor carriers' prices, routes, and services than the rule in *Nichols* because the proposed rules do not *require* covered entities to adopt any particular compliance option. In short, like the rules in *Nichols*, *Dilts*, and *Mendonca*, the proposed rules concern inputs (here, technologies, facilities, equipment, etc.) and lack the prohibited connection to prices, routes, and services.

Response to Comment 44-6

The comment contends that the proposed rule is preempted by the Energy Policy and Conservation Act ("EPCA"), which preempts state and local standards relating to the fuel economy of "automobiles." 49 U.S.C. § 32919(a). EPCA does not preempt the proposed rule because the rule does not address "automobiles," which are defined in the statute to exclude the trucks addressed by PR 2305. The comment overlooks that definition.

EPCA defines "automobile" as "a 4-wheeled vehicle that is propelled by fuel, or by alternative fuel, manufactured primarily for use on public streets, roads, and highways and rated at less than 10,000 pounds gross vehicle weight." 49 U.S.C. § 32901(a)(3). Further, that definition

exempts "work truck[s]," which the statute defines as a vehicle that is "rated at between 8,500 and 10,000 pounds gross vehicle weight; and . . . is not a medium-duty passenger vehicle." 49 U.S.C. § 32901(a)(19). The combination of these two definitions dictates that EPCA's preemptive scope excludes fuel economy standards for all trucks over 8,500 pounds gross vehicle weight. By contrast, the smallest truck referred to by PR 2305 has a minimum weight of 8,501 pounds gross vehicle weight. PR 2305(c)(4). Accordingly, EPCA's preemption provision would be simply irrelevant to the proposed rule even if it could be construed to adopt fuel economy standards.

Even if heavy trucks were covered by EPCA, PR 2305 would not be preempted because it does not adopt fuel economy standards for such trucks. As noted in Response to Comment 44-4 with respect to CAA preemption, PR 2305 does not regulate vehicles; it limits emissions associated with the operation of warehouses. The Ninth Circuit's rationale in *NAHB* applies as well to the comment's EPCA preemption argument.

Response to Comment 44-7

The comment contends that the proposed rule's in-lieu fee imposes an "improper regulatory fee" or a tax without a vote of the people in violation of Article XIII C of the California Constitution. The comment incorrectly applies Article XIII C to PR 2305.

The comment asserts that there are three categories of fees that will not be considered taxes. The cited case, *California Building Industry Association v. San Joaquin Valley Unified Air Pollution Control District*, 178 Cal. App. 4th 120 (2009), provides no support for this assertion. Although the identified categories of fees do not constitute taxes, they are not the *only* charges that are not taxes. *See Cal. Chamber of Commerce v. State Air Res. Bd.*, 10 Cal. App. 5th 604 (2017) ("*CalChamber*").

Extensive responses to the contention that the in-lieu fee imposes a tax are included in Responses to Comments 39-1 through 39-7 submitted by the California Taxpayers Association (Comment Letter 39). As explained there, PR 2305's in-lieu fee is not a tax as defined in Article XIII C, Section 1(e). Because the fee is voluntary, it is not "imposed" on payors, and payors receive a privilege—the ability to avoid implementing measures that would otherwise be required to reduce emissions. *See also CalChamber*, 10 Cal. App. 5th at 640 (charge that was paid voluntarily and in exchange for a regulatory compliance benefit was not a tax).

Response to Comment 44-8

The comment asserts that the goals of the proposed rules are presently infeasible due to a lack of supply of certain ZE vehicles and a lack of infrastructure to support ZE vehicles outside the District. As the commenter states, one of the goals of PR 2305 is to encourage and incentivize the transition to ZE trucks. The proposed rules' Final Staff Report states that one goal is "to provide financial incentives for truck owners to purchase NZE or ZE trucks, or for the installation of fueling and charging infrastructure" (Final Staff Report, p. 6). The proposed rule accomplishes this goal by including the purchase and use of NZE and ZE vehicles on the WAIRE menu, and assigning appropriate WAIRE points to these activities. However, PR 2305 does not require any warehouse owner or operator to buy NZE or ZE trucks. Thus, the rule functions differently than the CARB rule, which imposed a sales mandate.

Most of the WAIRE Menu options are commercially available and are in commercial service with the exception of ZE Class 8 on-road trucks which are in demonstration service but are not yet commercially available. Currently, the WAIRE Menu includes both NZE and ZE on-road trucks because with ZE Class 8 trucks expected in late 2021 or 2022. By allowing NZE technology in part of the WAIRE Menu, NZE can provide at least a 90% reduction in NOx emissions when compared to conventional diesel fueled trucks. South Coast AQMD has funded approximately 1,200 NZE trucks that are in commercial service since 2017. The reduction of diesel fueled trucks can produce emission reductions in the near term which can increase the public health of the communities surrounding the warehouse, as on-road ZE trucks and ZE charging and fueling infrastructure are developed and become widespread and commercially available. Please see Master Response 3 for information on the commercial availability of NZE/ZE technology. Also see Appendix B of PR 2305 and PR 316's Final Staff Report, which contains information on the commercial availability of every technology in the WAIRE Menu.

The Final Staff Report acknowledges that some WAIRE Menu actions are not considered technically feasible today, but will likely become commercialized in the near future. *See, e.g.*, Draft Staff Rep. at 81. In particular, ZE Class 8 trucks are just beginning to be commercialized (*id*.) and are not yet widely available. *Id.* at 214. However, many other ZE trucks are commercially available today, and many more are expected in the next few years. *Id.* at 104-05. As the prevalence of ZE trucks and ZE charging infrastructure develops, the cost of ZE trucks will likely decrease. *Id.* at 301. For this reason as well the goal of encouraging and incentivizing the transition to ZE trucks is feasible. Moreover, the proposed rule provides options that do not involve converting to ZE trucks and are feasible today.

Similarly, the proposed rule does not require any entity to use ZE trucks to carry goods outside the District. PR 2305 includes many options for warehouse owners and operators to accomplish rule compliance: completing actions from the WAIRE menu (which includes many options other than acquiring and using ZE trucks), implementing an approved Custom WAIRE Plan, paying a mitigation fee, or a combination of any of the above three options. If using a ZE truck to deliver goods to or from locations outside the District is impracticable, the operator may select another compliance method, or may use ZE trucks only for more local transport. The availability of ZE truck infrastructure outside of the District does not render the goals of PR 2305 infeasible.

Response to Comment 44-9

The comment contends that the District cannot make the findings required by HSC section 40727. Proposed section 40727 findings and substantial evidence in support are found in the Final Staff Report at page 80. As discussed above in Response to Comment 44-3, the District has ample authority to adopt PR 2305. *See also* Staff Rep. at 18-20, 80.

The Final Staff Report also explains why PR 2305 is necessary. As the comment notes, NOx reductions in the South Coast Air Basin are necessary to meet federal air quality standards for ozone. PR 2305 is one of a suite of rules and tools the District plans to use to meet these federal ozone standards, and thus there is no requirement to show that PR 2305 alone will bring the District into compliance with federal ambient air quality standards. No single rule can possibly accomplish that goal. PR 2305 is part of a larger comprehensive strategy described in the 2016 Air Quality Management Plan that is designed to meet federal and state air quality standards. The 2016 AQMP was adopted by the South Coast AQMD Board, and approved by both CARB and the U.S. EPA.

The Final Staff Report also demonstrates that warehouses are an indirect source of NOx emissions because they attract large volumes of diesel truck trips. *See* Staff Rep. at 13-14, 44.

While the scenario modeling provided in the Final Staff Report and EA indicates that, in some scenarios, the proposed rule would not reduce NOx, these scenarios were developed and analyzed to determine the "bookends" of PR 2305's impacts and benefits. It is not likely that those scenarios would occur, as they would require all warehouse operators in all years to comply with PR 2305 by purchasing or installing filtration systems. If these scenarios did occur, however, they would nonetheless have health and air quality benefits for sensitive, overburdened communities in the District. *See, e.g.*, Staff Rep. at 61-63 (describing scenarios); 25, 138-139, (filters reduce exposure to particulate matter which are linked to health hazards).

PR 2305 and PR 316 facilitate and supplement CARB's Mobile Source Strategy. The proposed rule will achieve NOx reductions before the CARB rules go into effect, as well as emission reductions beyond CARB requirements even after those rules go into effect. Please see Master Response 3 for an explanation of emission reductions from warehouse ISR. The WAIRE Menu includes options that go above and beyond current regulations in order to earn WAIRE Points. Warehouse operators may also decide to take early action ahead of the implementation schedule of EPA or CARB rules and regulation in order to earn WAIRE Points. PR 2305 is anticipated to result in significant reductions at the recommended stringency of 0.0025 WAIRE Points per Weighted Annual Truck Trip ("WATT") phased-in over three years. Based on the analysis of 19 WAIRE Menu scenarios, PR 2305 could achieve NOx reductions in the range of 1.5 – 3 tons per day beyond emission reductions resulting from CARB Rules (CARB's Advanced Clean Trucks, Low NOx Omnibus, and Heavy Duty I/M rules), which represents about a 10-15% reduction beyond baseline for both NOx and PM. While CARB's strategies are targeting dates in 2035 and 2045, PR 2305 could result in reductions as soon as 2022. As stated, the effect of CARB's Advanced Clean Trucks rule on NOx emissions was considered in developing PR 2305 and PR 316. CARB's Advanced Clean Fleets rule cannot be considered in the emissions analysis because the rule has not yet been implemented.

PR 2305 is "clear" because it expressly states what is required of warehouse owners and operators and how compliance can be achieved. PR 2305 does not require operators to determine what is currently required by state and federal law. Warehouse operators and owners can understand their compliance obligation via the Warehouse Points Compliance Obligation (WPCO) equation provided in PR 2305(d)(1)(A). PR 2305 includes many options for warehouse owners and operators to accomplish rule compliance: completing actions from the WAIRE menu, implementing an approved Custom WAIRE Plan, paying a mitigation fee, or a combination of any of the above three options. In order to assist warehouse operators and owners subject to PR 2305 and PR 316, a supplemental guidance document is also available (WAIRE Implementation Guidelines). All WAIRE Menu options and the mitigation fee are actions that go beyond the requirements of EPA, CARB, and the District's other regulations. The District will modify the WAIRE Menu if any items are no longer surplus. The District will also review all Custom WAIRE plans to ensure reductions are surplus, and will provide additional guidance if needed to assist regulated entities in understanding the compliance options going forward.

Response to Comment 44-10

Please refer to the Final EA, Appendix E, Comment Letter 1, for a response to this comment.

Response to Comment 44-11

Please refer to the Final EA, Appendix E, Comment Letter 1, for a response to this comment.

Response to Comment 44-12

Please refer to the Final EA, Appendix E, Comment Letter 1, for a response to this comment.

Response to Comment 44-13

Please refer to the Final EA, Appendix E, Comment Letter 1, for a response to this comment.

Response to Comment 44-14

Please refer to the Final EA, Appendix E, Comment Letter 1, for a response to this comment.

Response to Comment 44-15

Please refer to the Final EA, Appendix E, Comment Letter 1, for a response to this comment.

Response to Comment 44-16

Please refer to the Final EA, Appendix E, Comment Letter 1, for a response to this comment.

Response to Comment 44-17

Please refer to the Final EA, Appendix E, Comment Letter 1, for a response to this comment.

Response to Comment 44-18

Please refer to the Final EA, Appendix E, Comment Letter 1, for a response to this comment.

Response to Comment 44-19

Please refer to the Final EA, Appendix E, Comment Letter 1, for a response to this comment.

Response to Comment 44-20

Please refer to the Final EA, Appendix E, Comment Letter 1, for a response to this comment.

Response to Comment 44-21

Please refer to the Final EA, Appendix E, Comment Letter 1, for a response to this comment.

Response to Comment 44-22

Please refer to the Final EA, Appendix E, Comment Letter 1, for a response to this comment.

Response to Comment 44-23

Please refer to the Final EA, Appendix E, Comment Letter 1, for a response to this comment.

Response to Comment 44-24

Please refer to the Final EA, Appendix E, Comment Letter 1, for a response to this comment.

Response to Comment 44-25

Please refer to the Final EA, Appendix E, Comment Letter 1, for a response to this comment.

Response to Comment 44-26

Please refer to the Final EA, Appendix E, Comment Letter 1, for a response to this comment.

Response to Comment 44-27

Please refer to the Final EA, Appendix E, Comment Letter 1, for a response to this comment.

Response to Comment 44-28

Please refer to the Final EA, Appendix E, Comment Letter 1, for a response to this comment.

Response to Comment 44-29

Please refer to the Final EA, Appendix E, Comment Letter 1, for a response to this comment.

Response to Comment 44-30

Please refer to the Final EA, Appendix E, Comment Letter 1, for a response to this comment.

Response to Comment 44-31

Please refer to the Final EA, Appendix E, Comment Letter 1, for a response to this comment.

Response to Comment 44-32

Thank you for your comments. This is a conclusionary comment and refers to comments made previous in this comment letter, which have been addressed in the response to comments above. No further response is necessary.

Response to Comment Letter 45 - IWLA – 3/1/2021

Response to Comment 45-1

Thank you for your participation in the rule development process, Staff appreciates the time and effort taken to provide your comments on the warehouse ISR.

Response to Comment 45-2

See Master Response 7 for discussion of legal authority.

Response to Comment 45-3

See Master Response 2d for a discussion of available technology on the WAIRE Menu.

Response to Comment 45-4

See Master Response 2a and 2c for a discussion on warehouse operator control of trucks.

Response to Comment 45-5

See Master Response 2b for a discussion on truck engine manufacturing standards.

Response to Comment 45-6

South Coast AQMD Staff is recommending a stringency a 0.0025 WAIRE Points per WATT, which was a result of a thorough and extensive analysis of 19 WAIRE Menu compliance scenarios (see Final Staff Report, pp. 59-72). Additional supporting analysis was included in the Socioeconomic Impact Assessment, including a warehouse relocation study. There is no mathematical equation governing the entire process, nor is an overarching governing equation required. The totality of the impact of the proposed rule has been considered for the recommend stringency of 0.0025 WAIRE Points per WATT. The benefits of the proposed rule at the recommended stringency include, but are not limited to: significant emission reductions of about 1.5 to 3 tons per day of NOx, the encouragement of many facilitating measures to enhance emission reductions from other programs, public health benefits for most compliance scenarios that are about three times higher than the costs, costs on industry that are not out of line with normal cost increases that the industry experiences routinely in rent hikes, a market signal for the goods movement industry to encourage adoption NZE and ZE technologies on a more widespread basis than the unregulated market would provide – and much faster than CARB would require with its regulations, satisfying the requirements of control measure MOB-03 in the 2016 AQMP, satisfying the commitment in AB 617 Community Emission Reduction Plans, and reducing emissions for local communities located closest to warehouses who have experienced disproportionate environmental burdens just by living where they do. Other stringencies have also been analyzed, such as 0.005 WAIRE Points per WATT and 0.0001 WAIRE Points per WATT, and the Board may use its own independent judgement to set the final stringency within the bounds of the analysis contained in the record before them.

Emission reductions have been calculated using a bounding analysis, as is common when evaluating menu-based points systems. See Response to Comments 43-2. PR 2305 is designed to have a multitude of compliance options (implementing any of the 32 WAIRE Menu actions, implementing an approved Custom WAIRE Plan, paying the optional mitigation fee, or a

combination of all or some of these options) so that warehouse owners and operators have the flexibility to decide what compliance options work best for their specific warehouses. Since there are so many options for compliance and thousands of warehouse operators, the most reasonable approach is to determine the potential bounds of what PR 2305 and PR 316 would impose.

Response to Comment 45-7

See Master Response 6 and the Socioeconomic Impact Assessment for a discussion on the jobs impacts of PR 2305.

Response to Comment 45-8

The warehouse industry has grown steadily in the South Coast Air Basin in the past two decades as stated in Chapter 3 of Final Staff Report (page 45) and has shown significant demand in the South Coast AQMD region even in the economic uncertainty due to the COVID-19 pandemic. Demand for goods continues to grow as the goods and logistics industry have continue to grow during the pandemic. The Ports have reported record activity, and the warehouse vacancy rates have consistently remained around 4% even as lease rates continue to increase. See Master Responses 4 and 5 for discussions on the warehousing industry and economic impacts.

With respect to any potential regressive impacts of PR 2305 mentioned in the comment, the potential economic impacts of PR 2305 and PR 316 have been analyzed in the Socioeconomic Impact Assessment. This analysis found that the monetized public health benefits of most compliance scenarios outweighed the potential costs by a ratio of about 3:1, including in 11 of the 13 scenarios with the lowest costs ($\leq$\$0.23/sf). As shown in the 2016 AQMP Socioeconomic Impact Assessment, the benefits of measures that reduce regional pollution (like PR 2305) are focused about 20-25% more in environmental justice communities.[157] Communities within 0.5 miles of a warehouse also have higher environmental burdens than communities farther away (see Figure 4 in the Final Staff Report). A recent study also found that while warehouses "are more likely to be located in neighborhoods with lower median household incomes and higher poverty levels", yet at the same time "the majority of warehouses in Southern California are placed in the areas that online shopping is done the least." PR 2305 is expected to reduce the pollution burden in these communities surrounding warehouses.

Further, the increase in operating costs for these cheapest compliance scenarios would be less half of the approximately \$0.50/sf/yr increase in rental prices that warehouse operators have had to absorb continually over the past decade (see Figure 12 in the Final Staff Report).

Response to Comment 45-9

Southern California is a major gateway for goods coming from Asia and with a significant amount of goods imported through the Port of Los Angeles and Long Beach. Demand for

[157] http://www.aqmd.gov/docs/default-source/clean-air-plans/socioeconomic-analysis/final/sociofinal_030817.pdf, (see Table 6-6)

goods continue to grow during the COVID-19 pandemic, the warehouse vacancy rates remain consistently around 4% even while lease rates continue to increase. The low vacancy rates reflect the high demand for warehouse space and the growth of the warehouse sector, this is strong indication that South Coast AQMD jurisdiction is still highly competitive for warehousing operations. See the Socioeconomic Impact Assessment and Master Responses for discussions on the warehousing industry and economic impacts. In addition, a study commissioned by South Coast AQMD found that the anticipated costs from PR 2305 will not result in any warehouses relocating to any neighboring markets.[158]

Response to Comment 45-10

PR 2305 and PR 316 do not impose a tax, and the mitigation fee is only one of many options available to comply with PR 2305. See Master Response to Comments 1, 5, 6 and the Socioeconomic Impact Assessment (SIA) for a discussion on the potential costs of PR 2305, economic impacts, and impacts on jobs. Additionally, see the response to Comment 39-1 (Comment Letter 39, Response 1) for a discussion of why the proposed rules do not constitute a tax. Finally, a provision has been added into the most recent draft rule that will sunset the rule upon attainment of the federal and state 70 ppb ozone standards. See Master Response to Comments 10 for a discussion of the mitigation fee as a compliance option.

Response to Comment 45-11

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention.

[158] http://www.aqmd.gov/docs/default-source/planning/fbmsm-docs/iec_pr-2305-warehouse-relocation-report-(12-23-20).pdf?sfvrsn=8

Response to Comment Letter 46 – Watson Land Company – March 2, 2021

Response to Comment 46-1

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention. See Master Responses 4 for a discussion on the warehousing industry growth during the COVID-19 pandemic.

Response to Comment 46-2

See Master Responses 4, 5, and Socioeconomic Impact Assessment (SIA) for a discussion on the potential costs of PR 2305 and economic impacts during the COVID-19 pandemic.

Response to Comment 46-3

South Coast AQMD Staff recognizes that PR 2305 will be a new kind of regulation for warehouse operators. PR 2305 includes many flexible options for warehouse owners and operators to accomplish rule compliance: an optional mitigation fee, completing WAIRE menu actions (there are 32 different actions on the WAIRE Menu), implementing an approved Custom WAIRE Plan, or any combination of these three options. South Coast AQMD Staff has included streamlined guidance via the WAIRE Program Implementation Guidelines within the Final Staff Report (see Appendix A) to help warehouse owners and operators understand how to comply with PR 2305 and PR 316. Training and outreach will also be provided if PR 2305 is approved. Please see Master Response 2a for an explanation of rule feasibility.

Response to Comment 46-4

See Master Response 7 for a discussion of South Coast AQMD legal authority.

Response to Comment 46-5

See Master Responses 1, 5, and the Socioeconomic Impact Assessment (SIA) for discussion on the potential costs of PR 2305 and economic impacts.

Response to Comment 46-6

PR 2305 and PR 316 do not impose a tax, and the mitigation fee is one of the flexible options available to comply with PR 2305 and is also not a tax. See Master Responses 7 for a discussion of South Coast AQMD legal authority. Additionally, see the response to Comment 39-1 (Comment Letter 39, Response 1) for a detailed explanation of why the proposed rules, including the mitigation fee option, do not constitute a tax.

Response to Comment 46-7

R 2305 is a part of the targeted strategy to reduce regional and local NOx and PM emissions toward meeting the state and federal ozone standards for 2023 and 2031 and improve public health. The most recent version of the PR 2305 rule language released April 7, 2021 addresses the commenter's concerns regarding rule implementation dates. The first compliance date requiring the submission of the Warehouse Operations Notification is September 1, 2021, an informational report to be submitted by the warehouse owner requiring basic warehouse information including the square footage information on the warehouse, the tenant(s), lease duration, and contact information. The first compliance period for the largest warehouse

operators to earn WAIRE Points begins on January 1, 2022. Warehouses will be phased into PR 2305 based on size over three years and once in, there is a three-year phase-in of the rule stringency.

Response to Comment 46-8

See Master Response 2a through 2c for a discussion on feasibility.

Response to Comment 46-9

See Master Response 2d for a discussion of available technology on the WAIRE Menu.

Response to Comment 46-10

See Master Response 6 and the Socioeconomic Impact Assessment for a discussion on the jobs impacts of PR 2305.

Response to Comment 46-11

Again, thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention.

Response to Comment Letter – 47 - LACI – 3/2/2021

Response to Comment 47-1

Thank you for your participation in the rule development process and support of a warehouse ISR.

Response to Comment 47-2

Staff understands the importance of prioritizing zero emission technology, when available it provides total emission reduction and advances the region toward the state's ZE goal. ZE yard trucks are the only options considered on the WAIRE Menu as ZE yard trucks are commercially available today and have been in commercial service at warehouses for several years. The main purpose of PR 2305 is regional and local reduction of NOx and PM to assist in the goal of meeting the state and federal clean air standards for 2023 and 2031, where the implementation of NZE technology would provide at least a 90% reduction in NOx toward that goal as the state shifts to 100% ZE technology. NZE yard trucks, utilizing renewable natural gas, will be allowed as a Custom WAIRE Plan, though with less points than ZE yard trucks.

Response to Comment 47-3

Acquisition and usage of a ZE charging and fueling infrastructure is included in the WAIRE Menu, with the installation broken down to three milestones. With the installation of ZE infrastructure being a new type project, it has been subject to delays of more than one year to complete installation. Both industry and utility stakeholders provided feedback that a long lead time may be needed to complete a ZE charging infrastructure projects. WAIRE Points may be earned for three milestones that are achieved during a project which are equipment acquisition and purchase, beginning construction, and construction finalization and energization is incorporated into the WAIRE Menu. Most WAIRE Points are earned upon final energization of the project. PR 2305 is a facilitative measure and though the installation of infrastructure does not directly result in emission reductions, it does facilitate reductions from other related rules and regulations and promote usage of ZE trucks and equipment. WAIRE Points are earned for the number of EVSEs purchased so maximizing the size of the ZE charging station does increase the number of EVSE and considers shared construction activity. In the event a warehouse operator wishes to install higher level equipment such as a 500 kW EVSE and need more specialized construction activity, the warehouse operator may propose a Custom WAIRE Plan, which would be able to earn WAIRE Points upon approval.

Response to Comment 47-4

The recommended final stringency is 0.0025 WAIRE Points per WATT, to be phased in over three-years until full stringency is reached. Stringencies were analyzed using 19 WAIRE Menu based scenarios to show emission reductions and costs, considered limits based on the quantity of the available technology and modeled fleet turnover, the IEc Relocation Study, and the Davies Port Study. The 0.0025 WAIRE Points per WATT resulted in significant emission reductions with enough NZE and ZE trucks and equipment available to be implemented and resulting in no warehouse relocations. The significant emission reductions would assist in getting NOx emission reductions toward the ozone attainment goals and address the disproportionate burden of air pollution in the communities neighboring warehouses. South Coast AQMD Staff developed calculations for the WPCO and the WAIRE Menu that are

designed to be equitable and promote the implementation of cleaner technologies to help address the disproportionate impacts of air pollution faced by disadvantaged communities.

Response to Comment 47-5

The mitigation fee is an option that warehouse operators can use to comply with their WPCO, but may be a higher cost option if no other actions are taken, as shown in Table 20 of the Final Staff Report. The mitigation fee of $1,000 per WAIRE Point was analyzed to be within a similar range of cost as the other WAIRE Menu options and is not meant as a way to allow for a "pay-to-pollute" compliance option. There are cheaper options for the warehouse operators to meet their WPCO, the current cost of the mitigation fee may not be the most cost-effective option for warehouse operators. The mitigation fee fund would be tracked to ensure the funds are used to incentivize cleaner technologies in the communities surrounding the warehouses that paid the mitigation fees.

Response to Comment 47-6

South Coast AQMD Staff understand the need for transparency in providing data relevant to enforcement and compliance. Each year staff will be reporting on the effectiveness of the WAIRE Program to the South Coast AQMD Mobile Source Committee to report on the status of the WAIRE Program and seek direction on any adjustments that may be required. A public version of the annual report on the WAIRE Program will be made available for public review. Custom WAIRE Plan submissions would also be released for public review prior to their approval. Finally, staff intends to put information on program compliance on the South Coast AQMD website in a public portal that will be built if PR 2305 is approved.

Response to Comment 47-7

Thank you for your comments and support of PR 2305. We look forward to working with you in the future.

Response to Comment Letter 48 – LAWA – March 2, 2021

Response to Comment 48-1

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention. Staff appreciates the work our two agencies have accomplished together, including with the recent MOU. However, more work is needed to both reduce regional air pollutants like NOx and PM 2.5, and local pollutants like DPM. We note that in the most recent draft Multiple Air Toxics Exposure Study that the area centered on LAX, including many of the warehouses covered by PR 2305, has the highest air toxics cancer risk in the entire South Coast AQMD, based on 2018 data.[159]

Response to Comment 48-2

South Coast AQMD Staff do not intend to change the existing methodology for calculating Weighted Annual Truck Trips (WATTs). See Response to Comments 35-8 and 35-9. In addition, that there are trucks that make multiple stops at warehouses at LAX, there is opportunity for reducing the cost of compliance by working with those trucking companies to transition to NZE or ZE trucks. If one truck is converted to NZE or ZE technology, it could earn WAIRE Points for every warehouse it visits on a single route. This result could make it easier to comply with the rule compared to other warehouses that do not experience this type of activity. This approach is not required however, and other options may be selected by each independent warehouse operator.

Response to Comment 48-3

PR 2305 includes the option for warehouse owners and operators to propose a Custom WAIRE Plan to comply with PR 2305 (see PR 2305, Section (d)(4)). A Custom WAIRE Plan contains actions not included in the existing WAIRE Menu, which warehouse owners and operators can propose to meet their WPCO. In order to achieve WAIRE Points, warehouse owners and operators must show how a proposed Custom WAIRE Plan will achieve quantifiable, verifiable, and real NOx and DPM emission reductions, and meet all the requirements as outlined in PR 2305 Section (d)(4). Thus, a Custom WAIRE Plan provides opportunities to pursue flexible solutions to comply with PR 2305. WAIRE Points may only be earned from approved Custom WAIRE Plans.

Specifically in regards to the Landside Access Modernization Program (LAMP): LAMP or other projects at LAX may be able to earn WAIRE Points as part of a Custom WAIRE Plan if it meets the criteria for Custom WAIRE Plans in PR 2305 and the WAIRE Implementation Guidelines. However, clause (d)(4)(A)(v) requires "Any Custom WAIRE Plan that relies on VMT reduction must demonstrate that these reductions are surplus to what is included in the most recently approved Regional Transportation Plan (RTP) and Air Quality Management Plan (AQMP)." The LAMP project appears to have been included already in the 2020 and the 2016 RTPs, therefore it is not clear how LAX would propose earning any additional WAIRE Points.

Response to Comment 48-4

[159] http://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-v

The proposed rules do not prohibit the use of incentive funding; however, some incentive funding programs may not be able to be used in conjunction with earning WAIRE Points because of the nature of the incentive funding program. In practice, for many state incentive programs this means that NZE/ZE truck acquisitions with incentive funding by warehouse operators or owners cannot be used to comply with PR 2305, thus no WAIRE Points can be earned from these acquisitions. However, because PR 2305 requires use of those trucks at specific locations to reduce local emissions, the use of incentivized trucks is not prohibited by incentive programs with a program like PR 2305. Warehouse operators will therefore not be required to determine if a NZE or ZE truck that visits their warehouse is incentivized, and will not be required to determine if any usage is surplus. FAA grant administrators should be consulted to evaluate how the VALE program and the Zero Emission Vehicle grants could work within the context of PR 2305, including the various flexibilities it provides for banking and transferring WAIRE Points, the separation of earning WAIRE Points for acquisition and usage, and the ability to earn WAIRE Points through a Custom WAIRE Plan.[160] While incentive programs are a critical strategy to reduce emissions, LAX has apparently not been able to use them in the context of warehouses at their airport, therefore there is no apparent conflict between PR 2305 and LAX's pursuit of FAA funding.

Response to Comment 48-5

Please see Master Response 7 for the South Coast AQMD's legal authority. The comment contends that PR 2305 is preempted by the Airline Deregulation Act ("ADA"). Courts apply the same preemption analysis under the ADA that they apply under the Federal Aviation Administration Authorization Act ("FAAAA"). Ward v. United Airlines, Inc., 986 F.3d 1234, 1243 n.2 (9th Cir. 2021). The District has responded to other comments contending that PR 2305 is preempted by the FAAAA, and those responses apply fully here. See Responses to Comments 44-4, 106-1, 106-2.

Response to Comment 48-6

In the context of PR 2305, section (d)(1), "may be used" means floor area that has nothing inherent in its design or function that could prohibit it being used for warehousing activities, even if it is not being used for warehousing activities at the moment. This is meant to prevent circumvention of PR 2305 as temporary physical limitations or self-imposed administrative control of warehousing space can easily be removed at any time by the warehouse operator to adjust to the demands of additional or seasonal changes. The warehousing industry is dynamic and could adjust the warehouse square footage to accommodate increased demand or seasonal changes for goods storage or movement needs. For example, the operator of a warehouse in South Coast AQMD's jurisdiction that has 120,000 square feet of floor area will be required to earn WAIRE Points under PR 2305, unless there is something inherent in the design or function of at least 21,000 square feet of floor area that prohibits it from being used for warehousing activities (such as manufacturing equipment that is built into the building), which would reduce

[160] Staff found a VALE grant for ground power from five years ago in 2016, but the electric bus project mentioned by the commenter is not listed as one of the grants provided by FAA's VALE, ZEV, or Airport Improvement programs. https://www.faa.gov/airports/environmental/vale/media/VALE-grant-summary.pdf, https://www.faa.gov/airports/environmental/zero_emissions_vehicles/media/Summary-ZEV-Airport-Projects-Contacts-2015-2020.pdf, https://www.faa.gov/airports/aip/grant_histories/lookup/

the floor area for warehousing activities to 99,000 square feet, which is less than the 100,000 square-foot threshold.

Additional clarification has been added to (d)(1) since this comment was made that also addresses the comment. It now states: "Only warehouse operators in buildings with greater than or equal to 100,000 square feet of floor area that may be used for warehousing activities and who operate at least 50,000 square feet of the warehouse for warehousing activities are required to earn WAIRE Points."

Response to Comment 48-7

South Coast AQMD Staff appreciates your support of the South Coast AQMD's air quality goals, and welcomes your feedback on cargo operations and PR 2305 and PR 316's development.

Response to Comment 48-8

Again, thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention.

Response to Comment Letter 49 - Earthjustice – 3/2/2021

Response to Comment 49-1

Thank you for your participation in the rule development process.

Response to Comment 49-2

South Coast AQMD staff's recommended stringency is 0.0025 WAIRE Points per WATT phased in over three-years. The recommended stringency was determined considering the analysis of 19 WAIRE Menu based scenarios that looked at emission reductions and costs, the potential for limited availability of WARIE Menu options at higher stringencies, the warehouse relocation study commissioned by South Coast AQMD, and the ports' study on the Clean Truck Rate program. The stringency factor of 0.0025 WAIRE Points per WATT is expected to result in significant emission reductions and no warehouse relocations. The emission reductions from PR 2305 would help address the disproportionate burden of air pollution in the communities neighboring warehouses and reduce emissions. See also Response to Comment 40-42.

Response to Comment 49-3

South Coast AQMD Staff understands the importance of prioritizing ZE technology. Currently, the WAIRE Menu includes both NZE and ZE on-road trucks because Class 8 on-road ZE trucks are not yet well established and are expected to cost significantly more than NZE trucks in the near term, for marginally better benefit. By allowing NZE technology in part of the WAIRE Menu, NZE can provide at least a 90% reduction in NOx emissions and 100% reduction in DPM when compared to conventional diesel fueled trucks. The reduction of diesel fueled trucks can produce emission reductions in the near term which can improve the public health of the communities surrounding the warehouses, as Class 8 on-road ZE trucks and ZE charging and fueling infrastructure are developed and become widespread and commercially available.

ZE technology implementation can indeed lead to creation of new jobs in some industries as stated by the commenter and discussed in the Socioeconomic Impact Assessment. The WAIRE Mitigation Program will also include requirements that mitigation funding spent on ZE charging infrastructure use a skilled and trained workforce to ensure that the equipment is installed properly and can be reliably used.

Response to Comment 49-4

The mitigation fee of $1,000 per WAIRE Point was analyzed to be within a similar range of cost as the other WAIRE Menu options and is not intended to be a "pay-to-pollute" compliance option. Because there are cheaper options for the warehouse operators to meet their WPCO, the current cost of the mitigation fee may not be the most cost-effective option for warehouse operators. Each warehouse operator will make decisions on which WAIRE Menu options to pursue, based on their specific situation and circumstances. The mitigation fee fund would be tracked to ensure the funds are used to incentivize cleaner technologies in the communities surrounding the warehouses that paid the mitigation fees.

Response to Comment 49-5

South Coast AQMD Staff understand the need for transparency in providing data relevant to enforcement and compliance. Each year staff will be reporting on the effectiveness of the WAIRE Program to the South Coast AQMD Mobile Source Committee to report on the status of the WAIRE Program and seek direction on any adjustments that may be required. A public version of the annual report on the WAIRE Program will be made available for public review. Custom WAIRE Plan submissions would also be released for public review prior to their approval. Finally, staff intends to put information on program compliance on the South Coast AQMD website in a public portal that will be built if PR 2305 is approved.

Some of the requested data in the comment will not be reported by warehouse operators, including the trucking companies services each warehouse, the fuel type and truck class of every truck visiting a warehouse, and the truck routes to and from each facility. These parameters are not needed to determine an operator's WPCO. However some of this information may be reported for some of the WAIRE Menu compliance options, or as part of a Custom WAIRE Plan.

Response to Comment 49-6

South Coast AQMD Staff understands the impact of air pollution on communities near warehouses is an important consideration. At this time, PR 2305 is expected to go before the South Coast AQMD Governing Board's for its consideration on May 7, 2021.

Response to Comment 49-7

Thank you for your comments and support of PR 2305. We look forward to working with you in the future.

Response to Comment Letter 50 - Bizfed – 3/2/2021

Response to Comment 50-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention. See Master Response 4 for a discussion on the growth of warehousing industry during the COVID-19 pandemic.

Response to Comment 50-2

PR 2305 is a part of the targeted strategy to reduce region and local NOx and PM emissions to meet the state and federal ozone standards for 2023 and 2031 and improve public health. Failure to meet federal ozone standards in a timely manner could result in EPA imposing economic sanctions on the region.

We note also that the warehouse industry is thriving during the COVID-19 pandemic. The goods movement industry is growing in Southern California because of the record cargo volumes enjoyed by the busiest port complex in the nation, a developed transportation system, and a large employee pool.

The most recent version of the PR 2305 rule language released April 7, 2021 addresses the commenter's concerns regarding rule implementation dates. The first compliance date requiring the submission of the Warehouse Operations Notification is September 1, 2021, an informational report to be submitted by the warehouse owner requiring basic warehouse information including the square footage information on the warehouse, the tenant(s), lease duration, and contact information. The first compliance period for the largest warehouse operators to earn WAIRE Points begins on January 1, 2022. Warehouses will be phased into PR 2305 based on size over three years and once in, there is a three-year phase-in of the rule stringency. See Master Response 4 for a discussion on the warehousing industry's growth during the COVID-19 pandemic.

Response to Comment 50-3

The potential cost stated by the commenter is inaccurate, as the potential cost ranges are significantly lower. See Master Responses 1, 5, and Socioeconomic Impact Assessment for a discussion on the potential costs of PR 2305 and economic impacts.

Response to Comment 50-4

See Master Responses 2a through 2c for discussions on feasibility.

Response to Comment 50-5

See Master Response 2d for a discussion of available technology on the WAIRE Menu.

Response to Comment 50-6

See the Socioeconomic Impact Assessment and Master Responses 4 for discussions on the warehousing industry and economic impacts.

Response to Comment 50-7

See Master Responses 4, 5, 6, and the Socioeconomic Impact Assessment for discussions on jobs and economic uncertainty related to goods movement during the COVID-19 pandemic.

Response to Comment 50-8

See Master Response 6 and the Socioeconomic Impact Assessment for a discussion on the jobs impacts of PR 2305.

Response to Comment 50-9

See Master Response 7 and Responses to Comment Letters 39, 40, and 44 for discussion of South Coast AQMD legal authority.

Response to Comment 50-10

Thank you for your interest in the warehouse ISR and your comments. This letter and responses will be available for review by South Coast AQMD Governing Board members.

Response to Comment Letter 51 – CCAir – March 2, 2021

Response to Comment 51-1

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention. PR 2305 is designed to reduce regional and local NOx and PM reductions to assist in attainment of the federal and state air quality standards and reduce disproportionate impacts on the communities surrounding warehouses.

Response to Comment 51-2

South Coast AQMD Staff is recommending a stringency a 0.0025 WAIRE Points per WATT. See Response to Comment 40-42. The South Coast AQMD Governing Board may consider the adoption of a higher stringency at the May 7, 2021 hearing, if they choose.

Response to Comment 51-3

Impacts of air pollution on communities surrounding warehouses are considered in the structure of the WAIRE Points themselves. WAIRE Points for each WAIRE Menu action were determined by calculating the NOx emission reductions (which affects regional air pollution) as well as Diesel PM emission reductions (which affects regional and local air pollution), and the cost. Further, all warehouse operators must take actions themselves that reduce emissions or facilitate emission and/or exposure reductions in the communities near their warehouses. PR 2305 is meant to reduce pollution burdens in communities near warehouses; those living within 0.5 miles of a PR 2305 warehouse rank in the 85th percentile according to CalEnviroScreen, whereas the average community in South Coast AQMD is ranked in the 61st percentile (see Figure 4 of the Final Staff Report for a map; also see pp. 16-17). Because of the high overlap between the locations of warehouses and communities with pollution burdens, the most practical approach to reduce these cumulative impacts is to ensure that all warehouse operators take actions to benefit their local communities.

Response to Comment 51-4

Neither the transferability of points in PR 2305, nor the mitigation fee, can be used as a loophole for compliance. WAIRE Points may only be transferred or banked to a future year if there is overcompliance and extra WAIRE Points were earned. In order to ensure that any limited transferring of WAIRE Points that may occur under PR 2305 does not disproportionally affect local communities, any WAIRE Points transferred from a different location are discounted by the number of WAIRE Points associated with local benefits from diesel PM reductions (PR 2305, section (d)(6)(A)), and see Table 3 of PR 2305 for specific point discounts per WAIRE Menu action), since localized emission reductions from PR 2305 should benefit the communities where they were created. The intent of PR 2305's limited transfer provision was to allow warehouse operators that operate multiple warehouses to be able to implement larger scale projects at one of their warehouses at one time rather than little projects at each site, ultimately improving the flexibility and efficacy of PR 2305.

The mitigation fee is an option warehouse operators can use that provides extra flexibility in PR 2305. The mitigation fee of $1,000 per WAIRE Point was analyzed to be within a similar range of cost as the other WAIRE Menu options and is not meant to allow for a "pay-to-pollute" compliance option. Over the 10-year period analyzed, there are less expensive options

for the warehouse operators to meet their WPCO (Final Staff Report, pp. 63-72 and Table 20), and warehouse operators are expected to gravitate towards the least expensive option of compliance for their operations. The mitigation fees would be collected into the WAIRE Mitigation Program, from which funds will provide incentives toward projects that reduce emissions or that facilitate emission reductions, such as the purchase of NZE and ZE trucks and ZE charging and fueling infrastructure (these actions are the same as those included in the WAIRE Menu). The mitigation fee funds would be tracked to ensure the funds are used in the communities surrounding the warehouses that paid the mitigation fees. Projects funded by the WAIRE Mitigation Program will be approved annually or more often by the South Coast AQMD Governing Board and will follow the policies described in the Board Resolution that accompanies PR 2305 as well as subsequent requirements set out by the Board (Final Staff Report, p. 107).

Response to Comment 51-5

Any mitigation fees paid for the proposed rules would be collected into the WAIRE Mitigation Program, from which funds will provide incentives to projects that reduce emissions or that facilitate emission reductions from warehouses, such as the purchase of NZE and ZE trucks and ZE charging and fueling infrastructure. Additional WAIRE Mitigation Program requirements will be developed in future Board actions, including during program solicitations and project awards.

Response to Comment 51-6

The scenario analysis included in the Final Staff Report determines there will be about 1.5 to 3 tons per day of NOx emission reductions resulting from implementation of PR 2305 and PR 316 beyond those gained from CARB regulations. Further, if PR 2305 is approved, it can ensure that the emission reductions projected to occur in South Coast AQMD from statewide rules actually occur in our region instead of in other regions. PR 2305 is complementary to existing CARB regulations and is meant to motivate early compliance of the CARB regulations, in order to get emission reductions sooner than CARB's 2037 attainment goals, and to achieve additional reductions beyond what CARB rules would do. See Master Response 9 for a discussion on overlap with CARB regulations, and Master Response 4 for an explanation of emission reductions from warehouse ISR. CARB's existing regulations have been considered in the Final Staff Report of PR 2305 and PR 316; PR 2305's expected emission reductions (Final Staff Report pp. 61-63) and comparative similarity to other existing regulations (Final Staff Report pp. 80-85, and Appendix D) has been analyzed.

Response to Comment 51-7

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention.

Response to Comment Letter 52 – CBPA – March 2, 2021

Response to Comment 52-1

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention.

Response to Comment 52-2

See the Socioeconomic Impact Assessment and Master Responses 1, 2a, 3, and 8 for discussions on costs, feasibility, emission reductions, and concerns about PR 2305 being duplicative. Additionally, see the WAIRE Implementation Guidelines (Appendix A of the Final Staff Report) for a warehouse operator's guide to complying with PR 2305.

Response to Comment 52-3

See Master Response 8 for a discussion of recent and upcoming CARB regulations, and how PR 2305 is not duplicative with their efforts.

Response to Comment 52-4

See the Socioeconomic Impact Assessment and Master Responses 1 and 5 for discussions on costs and economic impacts. See Master Response 3 and 8 for discussions of air quality benefits from PR 2305 and how PR 2305 is not duplicative with CARB's efforts.

Response to Comment 52-5

Thank you for your interest in the warehouse ISR and for bringing your comments to our attention.

Response to Comment Letter 53 - Disneyland Resort – 2/22/2021

Response to Comment 53-1

The definition of electric charger provided in PR 2305 was revised and states that the electric charging station for vehicles can operate at 208 Volts or greater but does not limit the usage to heavy-duty vehicles. Electric chargers installed to charge employee personal vehicles can earn WAIRE Points but with the 208 Volts or greater definition the installed electric chargers must be a minimum Level 2 charger.

Response to Comment 53-2

Electric forklifts are not included in the WAIRE Menu therefore the electric forklifts, the electric forklift chargers, and any usage related to the electric forklifts cannot earn WAIRE Points.

Response to Comment Letter 54 -NDRC – 03/03/2021

Response to Comment 54-1

Thank you for your participation in the rule development process and your comments in support of a warehouse ISR.

Response to Comment 54-2

South Coast AQMD staff appreciates the support in reducing emissions.

Response to Comment 54-3

PR 2305 would be the first air quality regulation to address indirect source emissions associated with the warehousing industry in the South Coast AQMD jurisdiction. The warehousing industry has been present in the region for decades and has been steadily growing along with air pollution associated with warehouse operations. As proposed, PR 2305 would result in significant reductions of 1.5-3.0 tpd of NOx reductions which is approximately 10%-15% of the baseline NOx emissions associated with warehouses. A similar percentage reduction is expected for PM 2.5. See Response to Comment 40-42 and the Final Staff Report pages 58-59.

Response to Comment 54-4

PR 2305 would contribute to the shift to cleaner technology to replace conventional diesel engines. PR 2305 is designed to reduce regional and local NOx and PM emissions to help attain the federal and state ozone standards. Both NZE and ZE technology is available to provide immediate emission reductions toward the 2023 and 2031 goals. The implementation of PR 2305 provides WAIRE Points incentives to transition to ZE technology which provide air quality benefits and can create high quality jobs in the emerging ZE technology field. See Master Response 6 and the Socioeconomic Impact Assessment for additional discussion on jobs.

Response to Comment 54-5

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention.

Response to Comment Letter 55 - Maersk – 3/2/2021

Response to Comment 55-1

Thank you for your participation in the rule development process.

Response to Comment 55-2

Staff appreciates the time and effort take to provide your comments on the warehouse ISR. It is not clear from the comment which letter is also incorporated into this comment. Staff believes the letter in question is Comment Letter 57, and responses have been provided to that letter.

Response to Comment 55-3

See Master Response to Comment 7 for discussion on legal authority and Master Response to Comment 8 for a discussion of CARB rules relative to PR 2305.

Response to Comment 55-4

See Master Responses 3 and 8 for discussions on air quality benefit and concerns about regulatory overlap.

Response to Comment 55-5

See Master Responses 1 and 2 for discussions on the costs and feasibility. The metrics, management, and reporting included in PR 2305 are necessary to ensure that it is enforceable. There are no CARB rules that currently overlap with PR 2305 and place requirements on warehouse operators. PR 2305 reporting has also been structured to take advantage of common industry practice in data collection that already occurs (e.g., tracking basic truck data for security purposes), and updates have been made to PR 2305 (d)(1)(B) and further described in the WAIRE Implementation Guidelines to minimize administrative burden on warehouse operators.

Response to Comment 55-6

See Master Responses 1 and 2 for discussions on the costs and feasibility of PR 2305. In addition, PR 2305 has been designed to provide flexibility so that warehouse operators can identify the most cost-effective approach for their operations, rather than prescribe a specific approach that could result in the uneven costs described in the comment. The WAIRE Menu has also been designed specifically to remove complexity, by removing the need for every warehouse operator to conduct extensive calculations to determine how to comply with the rule, and allowing warehouse operators to pick and choose options as they see fit, and knowing instantly how much their choice contributes to their compliance obligation.

Response to Comment 55-7

The concerns raised in this comment have been thoroughly addressed in the Final Staff Report and Socioeconomic Impact Assessment. See also Master Response to Comments 7 for discussion of legal authority, 8 for a discussion of CARB regulations in relation to PR 2305, and 3 for a discussion of emission reductions. Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention.

Response to Comment Letter 56 – MFLS – March 3, 2021

Response to Comment 56-1

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention.

Response to Comment 56-2

See the Socioeconomic Impact Assessment and Master Responses 1, 2a, and 8 for discussions on the costs, feasibility, and concerns about duplicative effort.

Response to Comment 56-3

See Master Response 4, 5 and the Socioeconomic Impact Assessment for discussions on the goods movement industry and economic impacts.

Response to Comment 56-4

See Master Response 6 for a discussion on jobs.

Response to Comment 56-5

See Master Response 9 for a discussion on the need for more actions to clean California's goods supply chain.

Response to Comment 56-6

See Master Responses 7 and 8 for discussions on legal authority and concerns about duplicative effort.

Response to Comment 56-7

See the Socioeconomic Impact Assessment and Master Responses 1, 2a, 3, 7, and 8 for discussions on costs, feasibility, air quality benefit, legal authority, and concerns on duplicative effort.

Response to Comment 56-8

See Master Responses 3 and 10 for a discussions on air quality benefits and concerns regarding the mitigation fee.

Response to Comment 56-9

See the Socioeconomic Impact Assessment and Master Responses 1, 3, 7, and 8 for discussions on cost, air quality benefit, legal authority, and concerns about duplicative effort.

Response to Comment Letter 57 – CTA Group – March 3, 2021

Response to Comment 57-1

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention.

Response to Comment 57-2

See the Socioeconomic Impact Assessment and Master Responses 1, 2a, 3, 8, and 10 for discussions on the costs, feasibility, air quality benefit, concerns about duplicative effort, and concerns about the mitigation fee.

Response to Comment 57-3

See Master Responses 4, 5 and the Socioeconomic Impact Assessment for discussions on the goods movement industry and economic impacts.

Response to Comment 57-4

See the Socioeconomic Impact Assessment and Master Response 6 for a discussion on jobs.

Response to Comment 57-5

See Master Response 9 for a discussion on the need for more actions to clean California's goods supply chain.

Response to Comment 57-6

See Master Response 8 for a discussion of CARB regulation in relation to PR 2305.

Response to Comment 57-7

See the Socioeconomic Impact Assessment and Master Responses 1, 2a, 3, 7, and 8 for discussions on costs, feasibility, air quality benefit, legal authority, and concerns on duplicative effort.

Response to Comment 57-8

See the Socioeconomic Impact Assessment and Master Responses 1, 3, and 8 for discussions on cost, air quality benefit, and concerns about duplicative effort.

Response to Comment 57-9

See the Socioeconomic Impact Assessment and Master Responses 1, 3, 7, and 8 for discussions on cost, air quality benefit, legal authority, and concerns about duplicative effort.

Response to Comment 57-10

Thank you for your interest in the warehouse ISR and for your comments.

Response to Comment Letter 58 - CRA – 3/1/2021

Response to Comment 58-1

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention. See the Socioeconomic Impact Assessment and Master Responses 1, 4, and 6 for discussions on costs, economic impact, and jobs.

Response to Comment 58-2

See Master Response 3, 8 ,and 9 for discussions on air quality benefit and the need for more actions to clean California's goods supply chain.

Response to Comment 58-3

See the Socioeconomic Impact Assessment and Master Responses 1, 2a, and 2c for discussions on costs and feasibility.

Response to Comment 58-4

Since the submission of the Comment Letter, PR 2305 rule language has changed the compliance period six months to start January 1, 2022 for the first phase of warehouses that are at least 250,000 square feet. The commenter also incorrectly states that zero and near zero emission fleets will not be available until the 2025 to 2030 period. First, absent additional regulations there is no anticipation for widely available adoption of NZE or ZE trucks until the 2030s or later. However PR 2305 will provide incentives for greater use of NZE and ZE vehicles, in the near term. Second, NZE trucks are commercially available today with South Coast AQMD providing funding for more than 1,200 trucks in the past few years, and ZE trucks are becoming available commercially this year, and into next year, with smaller ZE trucks expected to be more readily available first.[161] While these trucks are more expensive than conventional diesel technology, truck manufacturers are willing and able to make them if there is market demand. The warehousing industry has a critical role in shaping that market demand. See the Socioeconomic Impact Assessment and Master Responses 1 and 2 for additional discussions on cost and technology availability.

Response to Comment 58-5

Since the submission of the Comment Letter, PR 2305 rule language has changed the compliance period six months to start January 1, 2022 for the first phase of warehouses that are at least 250,000 square feet. See the WAIRE Implementation Guidelines in Appendix A of the Final Staff Report for more details on potential methods to record truck trip counts. These methods are designed to allow use of current industry practice to record truck trip data at warehouses (e.g., data already collected for security purposes).

Response to Comment 58-6

See Master Responses 4, 5, and 6 for discussions on economic impacts and jobs.

Response to Comment 58-7

[161] https://globaldrivetozero.org/tools/zero-emission-technology-inventory/

Thank you for your interest in the warehouse ISR and your comments.

Response to Comment Letter 59 – Disneyland Resort – 3/2/2021

*An email on 3/4/2021, the commenter requested the comments submitted on 3/2/2021 be disregarded. The comments are maintained in the record but will not receive a response as requested by the commenter. No further action is required.

Response to Comment Letter 60 - Riverside 350 – 3/4/2021

Response to Comment 60-1

South Coast AQMD staff agrees that improving air quality is imperative for public health especially during the COVID-19 pandemic. PR 2305 seeks to get much needed regional NOx reductions toward the goal of attaining the federal ozone standard and local DPM reductions to improve public health in local communities living near warehouses.

Response to Comment 60-2

The warehouse ISR is a new regulatory approach for an industry that has not previously been regulated by South Coast AQMD. Even during the COVID-19 pandemic the goods movement industry is growing because of the record cargo volumes enjoyed by the busiest port complex in the nation, a developed transportation system, and a large employee pool. PR 2305 is expected to reduce NOx emissions by ~1.5-3.0 tons per day which is ~10-15% of the baseline emissions. The estimated significant emission reductions are beyond the reductions that current CARB regulations are expected to gain, while PR 2305 will help also facilitate early reductions from CARB regulations.

Response to Comment 60-3

PR 2305 includes both ZE and NZE trucks, which allows warehouse operators the flexibility to implement actions that work within their operations. PR 2305 also includes ZE charging and fueling infrastructure, which will be a critical component to accelerating the market for ZE trucks. As stated by the commenter, the construction of this infrastructure can provide good quality jobs. See additional discussion in the Socioeconomic Impact Assessment.

Response to Comment 60-4

Thank you for your comments and participation in the development process for the warehouse ISR.

Response to Comment Letter 61 - Disneyland Resort – 3/4/2021

Response to Comment 61-1

South Coast AQMD Staff did receive the commenters emails dated 2/22/2021 and 3/2/2021. As requested on the email dated 3/4/2021, previous emails sent on 3/2/2021 will be disregarded but will remain part of the record. Below are responses to the updated comments submitted on 3/4/2021.

Response to Comment 61-2

CARB did not establish the Optional Low NOx Standards for heavy-duty engines until 2013, with the lowest standard equaling 0.02 g/bhp-hr. Staff is not aware of any trucks manufactured before this date that would meet the Optional Low NOx Standard. The best resource to verify if your own trucks meet the Optional Low NOx Standard is by finding the CARB Executive Order for the engine in question and verify the it meets the 0.02 g/hp-hr emission standard.[162] In order to take credit for an NZE truck trip from a 3rd party it would be the warehouse operator's responsibility to determine whether the truck meets that standard. Additional information is provided in the WAIRE Implementation Guidelines.

Response to Comment 61-3

South Coast AQMD does not endorse any particular product or manufacturer. The Final Staff Report and the WAIRE Implementation Guidelines provide more detail on the various methods to collect truck trip data or identify NZE or ZE truck trips. Existing security cameras currently operating at your facility may work, if someone were able to go through the footage to identify the types and number of trucks that enter to deliver or pick up goods. Depending on the quality of the video someone may also be able to identify the truck by the license plate to later verify whether the truck is NZE or ZE with the truck fleet operator or similar method.

Response to Comment 61-4

The most recent draft of PR 2305 includes a low activity exemption. Facilities with a calculated WPCO <10 would not be required to earn WAIRE Points and may only have to provide limited reporting.

Response to Comment 61-5

The VMT is only reported in the Initial Site Information Report (ISIR) to gather information and is not used in the Annual WAIRE Report. The VMT that must be reported in the ISIR is only for trucks owned or leased by the warehouse operator for that warehouse.

Response to Comment 61-6

The definition of a truck trip involves entering or exiting warehouse site to deliver or pick up goods for later distribution to other locations. Based on the comment, it appears that the truck activity described is not related to this and could just be for overnight parking of a truck that is unrelated to the warehouse. In this case, the truck activity would not be considered a truck trip

[162] https://ww3.arb.ca.gov/msprog/onroad/cert/cert.php

for PR 2305. A truck that leaves empty and returns with goods for the warehouse would be included in any truck trip calculations (and vice versa).

Response to Comment 61-7

A warehouse owner can transfer WAIRE Points to the warehouse operator that are earned from the purchase and installation of solar panels during the compliance period. Installations that occur prior to adoption of PR 2305 would not earn WAIRE Points. WAIRE Points for usage of pre-existing solar panels would earn WAIRE Points, and there are no requirements for who retains ownership or control of the panels.

Response to Comment 61-8

The first report due on September 1, 2021 is the Warehouse Operations Notification (WON) which is the responsibility of the warehouse owner. In that report the warehouse owner will state the tenants of the building (as named in the lease). There is no requirement on the warehouse owner to determine the tenant's status to another business or corporate entity.

The parent company information of a warehouse operator also does not need to be reported except potentially if exemptions are claimed by the operator in PR 2305 (e)(2)(A)(ii) or (g)(1).

Response to Comment Letter 62 - Los Angeles Area Chamber of Commerce – 3/4/2021

Response to Comment 62-1

Thank you for your participation in the rule development process and bringing your comments to our attention. See the Socioeconomic Impact Assessment and Master Responses 1, 2a, 4, and 5 for discussions on the cost, feasibility, economic impacts, and current economic state.

Response to Comment 62-2

See Master Response 4 for a discussion on the growth of the warehousing industry during the COVID-19 pandemic.

Response to Comment 62-3

See Master Response 9 for a discussion on the need for more actions to clean California's goods supply chain.

Response to Comment 62-4

See Master Response to Comments 2.

Response to Comment 62-5

Thank you for your comments and interest in PR 3205.

Response to Comment Letter 63 – WECA – March 4, 2021

Response to Comment 63-1

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention. See Master Response to Comments 4.

Response to Comment 63-2

Since the submission of the comment letter, a revised version of the PR 2305 was released on April 7, 2021 which updated the compliance dates. The first report required to be submitted by the warehouse owners is now due September 1, 2021. The compliance periods were delayed six months, starting on January 1, 2022 though only the first phase of warehouses (≥250,000 square feet) would be required to earn WAIRE Points for the first compliance period. See Master Responses 4 and 5 for discussions on the growth of the warehousing industry during the COVID-19 pandemic and economic impacts.

Response to Comment 63-3

See the Socioeconomic Impact Assessment and Master Response 1 and 4 for discussions on the costs and economic impacts.

Response to Comment 63-4

See Master Responses 2a, 2b, and 2c for discussions on feasibility, warehouse operator control of trucks, and truck engine emission standards.

Response to Comment 63-5

See Master Response 2d for a discussion on technology availability.

Response to Comment 63-6

See the Socioeconomic Impact Assessment and Master Responses 1, 4, and 5 for discussions on costs, economic impact, and uncertainty in the economy.

Response to Comment 63-7

See the Socioeconomic Impact Assessment and Master Response 6 for a discussion on jobs.

Response to Comment 63-8

See Master Response 7 for legal authority.

Response to Comment 63-9

Thank you for your interest in the warehouse ISR and for your comments. The comments are part of the record and will be available for South Coast AQMD Board Member review.

Response to Comment Letter 64 - Viewsonic – 3/4/2021

Response to Comment 64-1

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention. South Coast AQMD Staff agree that the warehousing industry is growing to adapt to the needs of customers even during the COVID-19 pandemic. As the warehousing industry grows so does the disproportionate burden of air pollution on the communities surrounding the warehouses.

Since the submission of the comment letter, a revised version of the PR 2305 was released on April 7, 2021 which updated the compliance dates. The first report required to be submitted by the warehouse owners is now due September 1, 2021. The compliance periods were delayed six months, starting on January 1, 2022 though only the first phase of warehouses (≥250,000 square feet) would be required to earn WAIRE Points for the first compliance period. See Master Responses 4 and 5 for discussions on the growth of the warehousing industry during the COVID-19 pandemic and economic impacts.

Response to Comment 64-2

See the Socioeconomic Impact Assessment and Master Response 1 and 4 for discussions on the costs and economic impacts.

Response to Comment 64-3

See Master Responses 2a, 2b, and 2c for discussions on feasibility, warehouse operator control of trucks, and truck engine emission standards.

Response to Comment 64-4

See Master Response 2d for a discussion on technology availability.

Response to Comment 64-5

See Master Response 4 for a discussion on the warehousing industry role in goods movement.

Response to Comment 64-6

See the Socioeconomic Impact Assessment and Master Responses 5 and 6 for discussions on economic uncertainty and jobs.

Response to Comment 64-7

See the Socioeconomic Impact Assessment and Master Response 6 for a discussion on jobs.

Response to Comment 64-8

See Master Response 7 for a discussion on legal authority.

Response to Comment 64-9

Thank you for your interest in the warehouse ISR and for bringing your comments to our attention.

Response to Comment Letter 65 - Earthjustice – 3/5/2021

Response to Comment 65-1

Thank you for your participation in the rule development process and your comments in support of a warehouse ISR. During the set hearing held on March 5, 2021, a motion was made and approved to postpone the public hearing to allow more time to study PR 2305, which now has an approved hearing date of May 7, 2021.

Response to Comment 65-2

South Coast AQMD staff agree that the warehousing industry has continued to grow even during the COVID-19 pandemic which increases the healthcare costs for the disproportionately burdened communities surrounding the warehouses. See the Socioeconomic Impact Assessment and Master Response 4 for discussions on the economic analysis of the potential healthcare benefits and the growth of the warehousing industry.

Response to Comment 65-3

South Coast AQMD Staff agree that PR 2305 would result in significant regional and local emission reductions toward attaining air quality standards. PR 2305 would fulfill part of the 2016 AQMP strategy to reduce emissions in the goods movement industry. Adoption of PR 2305 would facilitate the transition to cleaner transportation which could create high quality jobs for a skilled and trained workforce in the ZE technology sector. See the Socioeconomic Impact Assessment and Master Response 6 for a discussion on jobs.

Response to Comment 65-4

Thank you for your interest in the warehouse ISR and your comments.

Response to Comment Letter 66 - OCBC – 3/3/2021

Response to Comment 66-1

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention.

Response to Comment 66-2

See the Socioeconomic Impact Assessment and Master Responses 1, 2a, 3, 8, and 10 for discussions on the costs, feasibility, air quality benefit, concerns about duplicative effort, and concerns about the mitigation fee.

Response to Comment 66-3

See Master Responses 4, 5 and the Socioeconomic Impact Assessment for discussions on the goods movement industry and economic impacts.

Response to Comment 66-4

See the Socioeconomic Impact Assessment and Master Response 6 for a discussion on jobs.

Response to Comment 66-5

See Master Response 9 for a discussion on the need for more actions to clean California's goods supply chain.

Response to Comment 66-6

See Master Response 7 for a discussion on legal authority.

Response to Comment 66-7

See the Socioeconomic Impact Assessment and Master Responses 1, 2a, 3, 7, and 8 for discussions on costs, feasibility, air quality benefit, legal authority, and concerns on duplicative effort.

Response to Comment 66-8

See the Socioeconomic Impact Assessment and Master Responses 1, 3, and 8 for discussions on cost, air quality benefit, and concerns about duplicative effort.

Response to Comment 66-9

See the Socioeconomic Impact Assessment and Master Responses 1, 3, 7, and 8 for discussions on cost, air quality benefit, legal authority, and concerns about duplicative effort.

Response to Comment 66-10

Thank you for your interest in the warehouse ISR and for your comments.

Response to Comment Letter 67 - Multicultural Business Alliance – 3/6/2021

Response to Comment 67-1

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention. South Coast AQMD Staff agree that the warehousing industry is growing to adapt to the needs of customers even during the COVID-19 pandemic. As the warehousing industry grows so does the disproportionate burden of air pollution on the communities surrounding the warehouses.

Response to Comment 67-2

Since the submission of the comment letter, a revised version of the PR 2305 was released on April 7, 2021 which updated the compliance dates. The first report required to be submitted by the warehouse owners is now due September 1, 2021. The compliance periods were delayed six months, starting on January 1, 2022 though only the first phase of warehouses (≥250,000 square feet) would be required to earn WAIRE Points for the first compliance period. See Master Responses 4 and 5 for discussions on the growth of the warehousing industry during the COVID-19 pandemic and economic impacts.

Response to Comment 67-3

See the Socioeconomic Impact Assessment and Master Response 1 and 4 for discussions on the costs and economic impacts.

Response to Comment 67-4

See Master Responses 2a, 2b, and 2c for discussions on feasibility, warehouse operator control of trucks, and truck engine emission standards.

Response to Comment 67-5

See Master Response 2d for a discussion on technology availability.

Response to Comment 67-6

See Master Response 4 for a discussion on the warehousing industry role in goods movement.

Response to Comment 67-7

See the Socioeconomic Impact Assessment and Master Responses 5 and 6 for discussions on economic uncertainty and jobs.

Response to Comment 67-8

See the Socioeconomic Impact Assessment and Master Response 6 for a discussion on jobs.

Response to Comment 67-9

See Master Response 7 for a discussion on legal authority.

Response to Comment 67-10

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention.

Response to Comment Letter 68 - TTU – 3/8/2021

Response to Comment 68-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention.

Response to Comment 68-2

See the Socioeconomic Impact Assessment and Master Responses 1, 2a, 8, and 10 for discussions on the costs, feasibility, concerns about duplicative effort, and the mitigation fee.

Response to Comment 68-3

See Master Response 4, 5 and the Socioeconomic Impact Assessment for discussions on the goods movement industry and economic impacts.

Response to Comment 68-4

See Master Response 6 and the Socioeconomic Impact Assessment for a discussion on jobs.

Response to Comment 68-5

See Master Response 9 for a discussion on the need for more actions to clean California's goods supply chain.

Response to Comment 68-6

See the Socioeconomic Impact Assessment and Master Responses 1, 3, 7 and 8 for discussions on costs, air quality benefit, legal authority and concerns about duplicative effort.

Response to Comment 68-7

See Socioeconomic Impact Assessment and Master Responses 1, 3, 8, and 10 for discussions on costs, air quality benefit, concerns on duplicative efforts, and concerns on the mitigation fee. Additionally, see the responses to Comment Letter 39 for discussions on why PR 2305 is not a tax.

Response to Comment Letter 69 - General Motors – 03/12/2021

Response to Comment 69-1

Thank you for your participation in the rule development process and your comments in support of a warehouse ISR.

Response to Comment 69-2

South Coast AQMD staff appreciates General Motor's strategy to sell only electric vehicle in the light duty portfolio by 2035 and achieving carbon neutrality by 2040. These actions are important in assisting South Coast AQMD with its efforts toward meeting air quality standards and California's goal of all ZE vehicles by 2045.

Response to Comment 69-3

South Coast AQMD Staff agrees that PR 2305 will play an important role in facilitating and encourage the transition to ZE technologies. PR 2305 will provide additional motivation in the installation and use of ZE infrastructures to support the increased demand for ZE trucks in support California's ZE transportation goals.

Response to Comment 69-4

South Coast AQMD staff appreciates GMs support, willingness to coordinate with its partners, and statements toward the recommended approach of PR 2305. Thank you for your interest in the warehouse ISR and your comments.

Response to Comment Letter 70 – OrangeEV – March 16, 2021

Response to Comment 70-1

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention.

Response to Comment 70-2

South Coast AQMD Staff agrees that the inclusion of ZE technology in PR 2305's WAIRE Menu is important for meeting the South Coast Air Basin's ozone attainment goals for 2023, 2031, and 2037 as well as California's goals of all ZE by 2045. Currently, the WAIRE Menu includes both NZE and ZE on-road trucks because Class 8 on-road ZE trucks are in demonstration service but are not commercially available today. By allowing NZE technology in part of the WAIRE Menu, NZE can provide at least a 90% reduction in NOx emissions when compared to conventional diesel fueled trucks, and 100% DPM reduction. The reduction of diesel fueled trucks can produce emission reductions in the near term which can improve the public health of the communities surrounding the warehouses, as Class 8 on-road ZE trucks, ZE charging and fueling infrastructure continue to develop and become widespread. NZE yard trucks fueled by renewable fuels have also been added as a compliance option within a Custom WAIRE Plan in order to increase the options that warehouse operators have to comply with the rule.

Response to Comment 70-3

South Coast AQMD Staff agrees that PR 2305 can play an important role in addressing air pollution emissions from warehouses impacting environmental justice communities. PR 2305 has considered the impacts of warehouse operations on local communities, including the AB617 communities. South Coast AQMD Staff has been engaged with the AB617 Community Steering Committees, and has continued to update those committees on the progress of the warehouse ISR. In addition, staff held a community workshop to better explain an overview of the PR 2305 and how it could benefit the local communities.

Response to Comment 70-4

South Coast AQMD Staff recognizes that OrangeEV's ZE yard trucks have been commercially available and in commercial service for several years. The WAIRE Menu only includes ZE yard trucks, however, acquisition and/or usage of NZE yard trucks using renewable fuels may earn WAIRE Points when submitted as a Custom WAIRE Plan. NZE technology provides at least a 90% reduction in NOx emissions and 100% reduction in DPM which can provide immediate emission reductions toward the 2023 and 2031 ozone attainment goals.

Response to Comment 70-5

Thank you for your interest in the warehouse ISR development process and your comments.

Response to Comment Letter 71 – RDS – March 12, 2021

Response to Comment 71-1

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention. South Coast AQMD Staff appreciate RDS' feedback on a successful transition to ZE cargo handling equipment including the ZE yard trucks (also called spotters).

Response to Comment 71-2

South Coast AQMD Staff appreciates RDS' initiative converting diesel yard spotters with new electric units as it assists in reducing emissions toward the attainment of the 2023 and 2031 ozone attainment standards.

Response to Comment 71-3

South Coast AQMD Staff appreciates RDS' efforts transitioning to zero emission yard spotters that have resulted in reducing emissions, increasing driver safety, minimizing noise, and reducing in-use vibrations, and are purchasing zero emission yard spotters for the RDS facility in Bloomington. The incorporation of cleaner technology assist in South Coast AQMD's goal for emission reductions and helps in the transition away from high emitting diesel engines.

Response to Comment 71-4

Thank you for your interest in the warehouse ISR and for providing valuable feedback on RDS' transition to ZE technology.

Response to Comment Letter 72 – Exemplis – 03/15/2021

Response to Comment 72-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention. South Coast AQMD Staff hope the material emailed to Exemplis was useful in learning more about PR 2305. See the Socioeconomic Impact Assessment and Master Response 6 for a discussion on jobs.

Response to Comment Letter 73 – Lee & Associates Commercial Real Estate Services– March 3, 2021

Response to Comment 73-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention. See Master Response 4 for a discussion on the warehousing industry during the COVID-19 pandemic.

Response to Comment 73-2

PR 2305 is a part of the targeted strategy to reduce regional and local NOx and PM emission reductions to help meet the federal ozone standards for 2023 and 2031 and improve public health. The most recent version of the PR 2305 rule language released April 7, 2021 addresses the commenter's concerns regarding rule implementation dates. The first compliance date requiring the submission of the Warehouse Operations Notification is September 1, 2021, an informational report to be submitted by the warehouse owner requiring basic warehouse information including the square footage information on the warehouse, the tenant(s), lease duration, and contact information. The first compliance period for the largest warehouse operators to earn WAIRE Points begins on January 1, 2022. Warehouses will be phased into PR 2305 based on size over three years and once in, there is a three-year phase-in of the rule stringency. See also Master Response 4.

Response to Comment 73-3

The potential costs stated by the commenter are inaccurate as potential cost ranges are significantly lower. The warehousing industry has in fact experienced significant growth during the COVID-19 pandemic. See Master Responses 1, 5, and Socioeconomic Impact Assessment for a discussion on the potential costs of PR 2305 and economic impacts.

Response to Comment 73-4

See Master Response 2a through 2c for a discussion on feasibility.

Response to Comment 73-5

See Master Response 2d for a discussion of available technology on the WAIRE Menu.

Response to Comment 73-6

See the Socioeconomic Impact Assessment and Master Responses 4 and 5 for discussions on economic uncertainty related to goods movement during the COVID-19 pandemic.

Response to Comment 73-7

See Master Response 6 and the Socioeconomic Impact Assessment for a discussion on the jobs impacts of PR 2305.

Response to Comment 73-8

See Master Response 7 and Response to Comment Letters 39, 40, and 44 for discussion of South Coast AQMD legal authority.

Response to Comment 73-9

Thank you for your interest in the warehouse ISR and your comments. This letter and responses will be available for review by South Coast AQMD Governing Board members.

Response to Comment Letter 74 – KLK Vineyard – March 3, 2021

Response to Comment 74-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention. See Master Response 4 for a discussion on the warehousing industry during the COVID-19 pandemic.

Response to Comment 74-2

PR 2305 is a part of the targeted strategy to reduce regional and local NOx and PM reductions toward meeting the federal ozone standards for 2023 and 2031 and improve public health. The most recent version of the PR 2305 rule language released April 7, 2021 addresses the commenter's concerns regarding rule implementation dates. The first compliance date requiring the submission of the Warehouse Operations Notification is September 1, 2021. This is an informational report to be submitted by the warehouse owner requiring basic warehouse information including the square footage information on the warehouse, the tenant(s), lease duration, and contact information. The first compliance period for the largest warehouse operators to earn WAIRE Points begins on January 1, 2022. Warehouses will be phased into PR 2305 based on size over three years and once in, there is a three-year phase-in of the rule stringency. See also Master Response 4.

Response to Comment 74-3

The potential costs stated by the commenter are inaccurate as potential cost ranges are significantly lower. The commenter did not mention that the growth of the warehousing industry during the COVID-19 pandemic. See Master Responses 1, 5, and Socioeconomic Impact Assessment for a discussion on the potential costs of PR 2305 and economic impacts.

Response to Comment 74-4

See Master Response 2a through 2c for a discussion on feasibility.

Response to Comment 74-5

See Master Response 2d for a discussion of available technology on the WAIRE Menu.

Response to Comment 74-6

See the Socioeconomic Impact Assessment and Master Responses 4 and 5 for discussions on economic uncertainty related to goods movement during the COVID-19 pandemic.

Response to Comment 74-7

See Master Response 6 and the Socioeconomic Impact Assessment for a discussion on the jobs impacts of PR 2305.

Response to Comment 74-8

See Master Response 7 and Response to Comment Letters 39, 40, and 44 for discussion of South Coast AQMD legal authority.

Response to Comment 74-9

Thank you for your interest in the warehouse ISR and your comments. This letter and responses will be available for review by South Coast AQMD Governing Board members.

Response to Comment Letter 75 - Howard Industrial Partners – 3/16/2021

Response to Comment 75-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention. See the Socioeconomic Impact Assessment and Master Responses 1, 2a, 3, and 7 for discussions on costs, feasibility, air quality benefits, and legal authority.

Response to Comment 75-2

See the Socioeconomic Impact Assessment and Master Responses 4 and 6 for discussions on the growth of the warehousing industry during the COVID-19 pandemic and jobs.

Response to Comment 75-3

The warehousing industry has grown in the last decades, but so has the disproportionate impacts of air pollution on the disadvantaged communities surrounding the warehouses. See the Socioeconomic Impact Assessment and Master Responses 2a, 4, and 5 for discussions on feasibility and the warehousing industry impacts on the economy.

Response to Comment 75-4

See Master Responses 8 and 9 for discussions on concerns about duplicative regulations and actions needed to clean up the goods supply chain.

Response to Comment 75-5

Thank you for your interest in the warehouse ISR and your comments.

Response to Comment Letter 76 – Bryan Bradford – March 17, 2021

Response to Comment 76-1

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention.

Response to Comment 76-2

South Coast AQMD Staff appreciate your comments and sharing a resident's perspective on the warehousing industry. During the development of PR 2305 and PR 316 the costs, jobs, and potential for warehouse relocation were all considered. See the Socioeconomic Impact Assessment and Master Responses 1and 6 for discussions on the costs, health benefit, and jobs.

Response to Comment 76-3

Thank you for your comments and support of the warehouse ISR.

Response to Comment Letter 77 - Rockefeller Group – 3/17/2021

Response to Comment 77-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention. See Master Response 4 for a discussion on the warehousing industry during the COVID-19 pandemic.

Response to Comment 77-2

PR 2305 is a part of the targeted strategy to reduce regional and local NOx and PM reductions toward meeting the federal ozone standards for 2023 and 2031 and improve public health. The most recent version of the PR 2305 rule language released April 7, 2021 addresses the commenter's concerns regarding rule implementation dates. The first compliance date requiring the submission of the Warehouse Operations Notification is September 1, 2021, an informational report to be submitted by the warehouse owner requiring basic warehouse information including the square footage information on the warehouse, the tenant(s), lease duration, and contact information. The first compliance period for the largest warehouse operators to earn WAIRE Points begins on January 1, 2022. Warehouses will be phased into PR 2305 based on size over three years and once in, there is a three-year phase-in of the rule stringency. See Master Response 4 for a discussion on the warehousing industry's growth during the COVID-19 pandemic.

Response to Comment 77-3

The potential cost stated by the commenter are inaccurate, as the potential cost ranges are significantly lower. The commenter did not mention the growth of the warehousing industry during the COVID-19 pandemic. See Master Responses 1, 5, and Socioeconomic Impact Assessment for a discussion on the potential costs of PR 2305 and economic impacts.

Response to Comment 77-4

See Master Responses 2a through 2c for discussions on feasibility.

Response to Comment 77-5

See Master Response 2d for a discussion of available technology on the WAIRE Menu.

Response to Comment 77-6

See the Socioeconomic Impact Assessment and Master Responses 4 for discussions on the warehousing industry and economic impacts.

Response to Comment 77-7

See Master Responses 4 and 5 for discussions on economic uncertainty related to goods movement during the COVID-19 pandemic.

Response to Comment 77-8

See Master Response 6 and the Socioeconomic Impact Assessment for a discussion on the jobs impacts of PR 2305.

Response to Comment 77-9

See Master Response 7 and Responses to Comment Letters 39, 40, and 44 for discussion of South Coast AQMD legal authority.

Response to Comment 77-10

Thank you for your interest in the warehouse ISR and your comments. This letter and responses will be available for review by South Coast AQMD Governing Board members.

Response to Comment Letter 78 - Pacific Industries – 3/19/2021

Response to Comment 78-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention. PR 2305 offers a flexible program that allows warehouse operators to choose to comply with 32 WAIRE Menu options, a Custom WAIRE Plan, or an optional mitigation fee and is not a tax. See Master Response 4 and Response to Comment Letter 39 for discussions on the growth of warehousing industry during the COVID-19 pandemic and the reasons PR 2305 is not a tax.

Response to Comment 78-2

PR 2305 is a part of the targeted strategy to reduce regional and local NOx and PM emissions to meet the federal ozone standards for 2023 and 2031 and improve public health. The most recent version of the PR 2305 rule language released April 7, 2021 addresses the commenter's concerns regarding rule implementation dates. The first compliance date requiring the submission of the Warehouse Operations Notification is September 1, 2021, an informational report to be submitted by the warehouse owner requiring basic warehouse information including the square footage information on the warehouse, the tenant(s), lease duration, and contact information. The first compliance period for the largest warehouse operators to earn WAIRE Points begins on January 1, 2022. Warehouses will be phased into PR 2305 based on size over three years and once in, there is a three-year phase-in of the rule stringency. See Master Response 4 for a discussion on the warehousing industry's growth during the COVID-19 pandemic.

Response to Comment 78-3

See Master Responses 3 and 7 for discussions on the air quality benefits from reducing emissions from warehouse operations and legal authority.

Response to Comment 78-4

The commenter is incorrect in the statements provided, PR 2305 does not impose a tax and the stated costs are inaccurate. See the Socioeconomic Impact Assessment and Master Responses 1 and 6 for discussions on the costs and jobs and Response to Comment Letter 39 for an explanation of why Rule 2305 is not a tax.

Response to Comment 78-5

See Master Responses 2a, 2b, 2c, and 2d for discussions on feasibility, truck engine standards, warehouse operators that own or operate fleets, and technology availability.

Response to Comment 78-6

See Master Response 4 for a discussion on the growth of warehousing industry which increases the disproportionate burden of air pollution on the disadvantaged communities surrounding the warehouses.

Response to Comment 78-7

See Master Responses 3 and 5 for discussions on the air quality benefit of PR 2305 and the economic uncertainty during the COVID-19 pandemic.

Response to Comment 78-8

See the Socioeconomic Impact Assessment and Master Response 6 for a discussion on jobs.

Response to Comment 78-9

See Master Response 7 for legal authority.

Response to Comment 78-10

Thank you for your interest in the warehouse ISR and your comments. This letter and responses will be available for review by South Coast AQMD Governing Board members.

Response to Comment Letter 79 – Warland – March 19, 2021

Response to Comment 79-1

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention.

Response to Comment 79-2

The comment that South Coast AQMD does not have the legal authority to adopt PR 2305 is incorrect. See Master Response to Comments 7 and Response to Comments 44-2. The South Coast AQMD is indeed governed by Health and Safety Code 40400, but not exclusively. The comment ignores the many other statutes that grant authority to South Coast AQMD. Nothing in Section 40440(b)(3) indicates that it is intended to impose a limitation on the South Coast AQMD's indirect source authority.

Response to Comment 79-3

PR 2305 and PR 316 do not impose a tax, and the mitigation fee is not a tax. See Master Response 7 and Response to Comment Letter 39 for discussions on legal authority and the reasons PR 2305 is not a tax.

Response to Comment 79-4

See the Socioeconomic Impact Assessment and Master Response 1 for a discussion on costs.

Response to Comment 79-5

See the Socioeconomic Impact Assessment (SIA) and Master Response 6 for a discussion on jobs and economic impacts. The SIA provides a comprehensive analysis of potential economic impacts of PR 2305, and includes a study of the potential for warehouse relocation in response to PR 2305. The study found that warehouses would not relocate out of the South Coast AQMD region with the costs that are expected from PR 2305.

Response to Comment 79-6

The commenter is incorrect as the PR 2305 offers nearly three dozen flexible options for compliance along with a Custom WAIRE Plan option,an optional mitigation fee, and a combination thereof. Additionally, all of the WAIRE Menu options with the exception of ZE Class 8 on-road trucks are commercially available and have been in commercial service for several years, with ZE Class 8 on-road trucks expected in late 2021 or 2022. See Master Responses 2a and 2d for discussions on feasibility and technology availability. The comment that near-zero emission trucks with a gross vehicle weight rating of greater than 33,001 pounds are not currently commercially available is incorrect. These natural gas-fueled trucks have been available commercially for several years, and the engine manufacturers and truck dealers have stated that there are no limitations on how many of these can be sold today relative to diesel trucks. South Coast AQMD has also funded more than 1,200 of these trucks in the past several years.

The comment states that details about charging infrastructure have not been provided in the Final Staff Report. With about 2,902 warehouse that are expected to earn WAIRE Points, it is not possible to determine how or whether charging infrastructure would be installed at every

individual site. Warehouse operators would need to determine many factors before moving forward with any charging station project, including the size of the charging station that is appropriate for their operations, where on their site is most appropriate, what the requirements are from the local utility and building department, how many plugs are needed, etc. Utility programs are available to assist warehouse operators and owners in developing these site-specific plans.[163] No warehouse operator is required to install a charging station however, and they may choose another option that makes sense for their operations.

Response to Comment 79-7

PR 2305 is designed to have a multitude of compliance options (implementing any combination of the 32 WAIRE Menu actions, implementing an approved Custom WAIRE Plan, paying the optional mitigation fee, or a combination of all or some of these options) so that warehouse owners and operators have the flexibility to decide what compliance options work best for their specific warehouses. Since there are so many options for compliance and thousands of warehouse operators, the most reasonable approach is to determine the potential bounds of what PR 2305 and PR 316 would impose. Warehouse operators are expected to gravitate towards lower cost options, however if they determine that a higher cost option is the path they choose to pursue (e.g., due to corporate sustainability goals), they are allowed to do so. See also Response to Comment 43-2.

South Coast AQMD Staff used a bounding analysis approach. Cost and emission reductions from rule compliance (the impact of the rule) are based on an analysis of 19 scenarios of rule compliance, designed to show a range of potential compliance outcomes. The scenarios were developed to show potential impacts from scenarios of WAIRE Menu actions including the use of the mitigation fee option. The bounding analysis approach assumed all 2,902 warehouses use one single scenario approach from 2022 through 2031 which present unlikely extreme cases to see the full extent of potential emission and cost impacts. In reality, a hybrid of all scenarios (or other compliance approaches encompassed within the range of scenarios analyzed) is expected to occur. By analyzing the most extreme possible compliance outcomes, the bounding analysis shows the most impact any one compliance option could create; actual rule compliance for each compliance option will be within the impact shown in the bounding analysis (Final Staff Report, pp. 59-61).

Response to Comment 79-8

There are no requirements and no ability for warehouse owners or operators to obtain any credits, or to obtain SIP credit under PR 2305. There is a discussion of potential approaches that South Coast AQMD may take to determine what level of emission reductions can be credited towards the SIP in Appendix D of the Final Staff Report. See also Response to Comment 40-48. Another type of credit discussed in the Final Staff Report are Low Carbon Fuel Standard credits, which is a CARB program that can reduce the cost of electricity for transportation fuels.[164] Warehouse operators who install ZE charging or fueling infrastructure

[163] Example: https://crt.sce.com/overview

[164] Information about CARB's program is available here: https://ww2.arb.ca.gov/our-work/programs/low-carbon-fuel-standard

or who use those stations may be able to earn credits and generate revenue from that program. PR 2305 does not limit any activity with respect to the LCFS program.

Response to Comment 79-9

South Coast AQMD Staff has included the WAIRE Program Implementation Guidelines within the Appendix A of the Final Staff Report (pp. 87-110) to help warehouse owners and operators understand how to comply with PR 2305 and PR 316. The metrics for earning WAIRE Points are also clearly outlined in the WAIRE Menu (Table 3 of PR 2305). Warehouse operators may choose from the flexible compliance options of 32 actions and investments offered in the WAIRE Menu, propose a Custom WAIRE Plan, or the optional mitigation fee, however, it is not required that warehouse owners or operators pay the optional mitigation fee for rule compliance. See Master Responses 2 and 10 for discussions on feasibility and the mitigation fee.

Response to Comment 79-10

See the Socioeconomic Impact Assessment and Master Responses 2, 5, 7 and 10 for discussions on feasibility, economic impacts, legal authority, and the mitigation fee. Thank you for your interest in the warehouse ISR and comments.

Response to Comment Letter 80-GRID – 3/18/2021

Response to Comment 80-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention.

Response to Comment 80-2

The comment correctly states that installation and usage of solar panel systems at warehouses can earn WAIRE Points and that the use of solar panels reduces the reliance on fossil fuel powerplants (including natural gas fueled powerplants in South Coast AQMD's jurisdiction), which would reduce emissions.

Response to Comment 80-3

South Coast AQMD staff appreciates the workforce support and training provided by the commenter.

Response to Comment 80-4

Thank you for your comments and interest in the warehouse ISR.

Response to Comment Letter 81 – PLG – March 23, 2021

Response to Comment 81-1

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention. We also appreciate the opportunity provided for continued discussion after this letter was submitted.

Response to Comment 81-2

See the Socioeconomic Impact Assessment and Master Responses 2a, 2c, and 6 for discussions on feasibility for warehouse operators that do not own or operate truck fleets and jobs. Many warehouses do contract with truck fleets, and others like yourselves may also own and operate trucks. Warehouse operators that do not have the ability to contract with truck fleets have other compliance options available to them.

Response to Comment 81-3

PR 2305 offers flexibility in a warehouse operator being able to choose from a combination of 32 WAIRE Menu options, a Custom WAIRE Plan, an optional mitigation fee which is not a tax, or a combination of all. See the responses to Comment Letter 39 for discussions on why PR 2305 is not a tax. As an example, during subsequent conversation with the commenter there were other potential options identified in the WAIRE Menu that would work for their specific operation that could be used for compliance without any need for paying the optional mitigation fee, such as yard trucks, charging stations, or acquiring NZE trucks themselves in their own fleet.

Response to Comment 81-4

As discussed above in Response to Comment 81-3, the proposed rules do not impose a tax. For an understanding of emissions from warehouses, South Coast AQMD Staff has included an estimated baseline emissions inventory of NOx and diesel PM in 2019, 2023, and 2031 for the 2,902 warehouses expected to be required to earn WAIRE Points under PR 2305 (Final Staff Report, pp. 47-52). The ~45 tons per day of NOx in 2019 from warehouses in are almost as large as all stationary sources in South Coast AQMD (which are about 48 tons per day).[165] The South Coast AQMD's jurisdiction is currently classified as being in extreme nonattainment status for the federal NAAQS ozone standards, and serious nonattainment for the federal fine Particulate Matter (PM 2.5) standards (Final Staff Report, p. 7). Additional actions are needed beyond current conditions to reach attainment status. See Figure 1 and Figure 2 of the Final Staff Report for a summary of baseline emission conditions and control strategies for reaching attainment. See Master Response 9 for a discussion on the actions needed to clean up California's goods supply chain.

Response to Comment 81-5

While the maximum cost that warehouse operators would be expected to incur is about $0.83/sq. ft./yr, or approximately $670 million per year, 13 out of 19 scenarios analyzed had costs of $0.23/sf/yr or less. This is expected to result in <1% of an operator's total operating

[165] http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/appendix-iii.pdf

cost, and would be less than the normal increases that the warehouse industry faces every year just from increasing rents. See the Socioeconomic Impact Assessment and Master Response 1, 4, and 5 for discussions on the costs, the growth of the warehousing industry, and economic impacts during the COVID-19 pandemic.

Response to Comment 81-6

See the Socioeconomic Impact Assessment and Master Response 6 for a discussion on jobs.

Response to Comment 81-7

See the Socioeconomic Impact Assessment and Master Responses 4 and 6 for discussions on the growth of the warehousing industry during the COVID-19 pandemic and jobs. As stated in previous responses, PR 2305 offers flexibility by offering 32 WAIRE Menu options, a Custom WAIRE Plan, or an optional mitigation fee which is therefore not a tax as described in the responses to Comment Letter 39.

Response to Comment 81-8

See Master Responses 2a and 2d for discussions on feasibility for warehouse operators that do not control fleets and technology availability. In addition, there is no penalty for warehouse operators who have already installed solar or EV charging improvements. PR 2305 is structured so that warehouse operators can earn WAIRE Points for the use of that previously installed equipment.

Response to Comment 81-9

Thank you for your comments and interest in the warehouse ISR.

Response to Comment Letter –82-Dart – 3/24/2021

Response to Comment 82-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention

Response to Comment 82-2

See Master Response 3, 7 and 8 for discussions on air quality benefit, legal authority, and concerns on duplicative effort.

Response to Comment 82-3

See the Socioeconomic Impact Assessment and Master Responses 1, 3, 4, and 7 for discussions on costs, air quality benefit, the growth of warehousing industry, and legal authority. Additionally, see responses to Comment Letter 39 for discussions on why PR 2305 does not constitute a tax. In addition, a sunset date has been added to PR 2305 after this comment was provided. The options to comply with PR 2305 are not arbitrary, as each compliance option addresses emissions associated with warehouses. The flexible approach built into PR 2305 (including a menu with 32 options, a custom plan approach, and a mitigation fee) addresses the concerns raised by industry stakeholders during the rulemaking process. PR 2305 does not impose any taxes (see Response to Comment Letter 39), nor does it regulate the trucking industry as PR 2305 is applicable to warehouse operators. Potential economic impacts of PR 2305 are described in the Socioeconomic Impact Assessment, including the monetized public health benefits that are estimated to be about three times higher than the compliance costs for the rule for most scenarios analyzed.

Response to Comment 82-4

Thank you for your comments and interest in the warehouse ISR. The comment letter and response will be available for review by South Coast AQMD Board Members.

Response to Comment Letter –83_ Operon Group – 3/17/2021

Response to Comment 83-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention. See Master Response 4 for a discussion on the growth of warehousing industry during the COVID-19 pandemic.

Response to Comment 83-2

PR 2305 is a part of the targeted strategy to reduce regional and local NOx and PM emissions to meet the federal ozone standards for 2023 and 2031 and improve public health. The most recent version of the PR 2305 rule language released April 7, 2021 addresses the commenter's concerns regarding rule implementation dates. The first compliance date requiring the submission of the Warehouse Operations Notification is September 1, 2021, an informational report to be submitted by the warehouse owner requiring basic warehouse information including the square footage information on the warehouse, the tenant(s), lease duration, and contact information. The first compliance period for the largest warehouse operators to earn WAIRE Points begins on January 1, 2022. Warehouses will be phased into PR 2305 based on size over three years and once in, there is a three-year phase-in of the rule stringency. See Master Response 4 for a discussion on the warehousing industry's growth during the COVID-19 pandemic.

Response to Comment 83-3

The potential costs stated by the commenter are inaccurate, as the potential cost ranges are significantly lower. The commenter did not mention the growth of the warehousing industry during the COVID-19 pandemic. See Master Responses 1, 5, and Socioeconomic Impact Assessment for a discussion on the potential costs of PR 2305 and economic impacts.

Response to Comment 83-4

See Master Responses 2a through 2c for discussions on feasibility.

Response to Comment 83-5

See Master Response 2d for a discussion of available technology on the WAIRE Menu.

Response to Comment 83-6

See the Socioeconomic Impact Assessment and Master Responses 4 for discussions on the warehousing industry and economic impacts.

Response to Comment 83-7

See Master Responses 4, 5, 6, and the Socioeconomic Impact Assessment for discussions on jobs and economic uncertainty related to goods movement during the COVID-19 pandemic.

Response to Comment 83-8

See Master Response 6 and the Socioeconomic Impact Assessment for a discussion on the jobs impacts of PR 2305.

Response to Comment 83-9

See Master Response 7 and Responses to Comment Letters 39, 40, and 44 for discussion of South Coast AQMD legal authority.

Response to Comment 83-10

Thank you for your interest in the warehouse ISR and your comments. This letter and responses will be available for review by South Coast AQMD Governing Board members.

Response to Comment Letter 84 – Tech Data – March 29, 2021

Response to Comment 84-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention. See Master Response 4 for a discussion on the growth of warehousing industry during the COVID-19 pandemic.

Response to Comment 84-2

PR 2305 is a part of the targeted strategy to reduce regional and local NOx and PM emissions to meet the federal ozone standards for 2023 and 2031 and improve public health. The most recent version of the PR 2305 rule language released April 7, 2021 addresses the commenter's concerns regarding rule implementation dates. The first compliance date requiring the submission of the Warehouse Operations Notification is September 1, 2021, an informational report to be submitted by the warehouse owner requiring basic warehouse information including the square footage information on the warehouse, the tenant(s), lease duration, and contact information. The first compliance period for the largest warehouse operators to earn WAIRE Points begins on January 1, 2022. Warehouses will be phased into PR 2305 based on size over three years and once in, there is a three-year phase-in of the rule stringency. See Master Response 4 for a discussion on the warehousing industry's growth during the COVID-19 pandemic.

Response to Comment 84-3

The potential costs stated by the commenter are inaccurate, as the potential cost ranges are significantly lower. The commenter did not mention the growth of the warehousing industry during the COVID-19 pandemic. See Master Responses 1, 5, and Socioeconomic Impact Assessment for a discussion on the potential costs of PR 2305 and economic impacts.

Response to Comment 84-4

See Master Responses 2a through 2c for discussions on feasibility.

Response to Comment 84-5

See Master Response 2d for a discussion of available technology on the WAIRE Menu.

Response to Comment 84-6

See the Socioeconomic Impact Assessment and Master Responses 4 and 5 for discussions on the warehousing industry and economic impacts.

Response to Comment 84-7

See Master Responses 4, 5, 6, and the Socioeconomic Impact Assessment for discussions on jobs and economic uncertainty related to goods movement during the COVID-19 pandemic.

Response to Comment 84-8

See Master Response 7 and Responses to Comment Letters 39, 40, and 44 for discussion of South Coast AQMD legal authority.

Response to Comment 84-9

Thank you for your interest in the warehouse ISR and your comments. This letter and responses will be available for review by South Coast AQMD Governing Board members.

Response to Comment Letter 85 - BOMA – 3/8/2021

Response to Comment 85-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention.

Response to Comment 85-2

See Master Response 3 and 4 for discussions on air quality benefits and the growth of warehousing industry during the COVID-19 pandemic.

Response to Comment 85-3

PR 2305 is a part of the targeted strategy to reduce regional and local NOx and PM emissions to meet the federal ozone standards for 2023 and 2031 and improve public health. The most recent version of the PR 2305 rule language released April 7, 2021 addresses the commenter's concerns regarding rule implementation dates. The first compliance date requiring the submission of the Warehouse Operations Notification is September 1, 2021, an informational report to be submitted by the warehouse owner requiring basic warehouse information including the square footage information on the warehouse, the tenant(s), lease duration, and contact information. The first compliance period for the largest warehouse operators to earn WAIRE Points begins on January 1, 2022. Warehouses will be phased into PR 2305 based on size over three years and once in, there is a three-year phase-in of the rule stringency. See Master Response 4 for a discussion on the warehousing industry's growth during the COVID-19 pandemic.

Response to Comment 85-4

The potential costs stated by the commenter are inaccurate, as the potential cost ranges are significantly lower. The commenter did not mention the growth of the warehousing industry during the COVID-19 pandemic. See Master Responses 1, 5, and Socioeconomic Impact Assessment for a discussion on the potential costs of PR 2305 and economic impacts.

Response to Comment 85-5

See Master Responses 2a through 2c for discussions on feasibility.

Response to Comment 85-6

See Master Response 2d for a discussion of available technology on the WAIRE Menu.

Response to Comment 85-7

See the Socioeconomic Impact Assessment and Master Responses 4 for discussions on the warehousing industry and economic impacts.

Response to Comment 85-8

See Master Responses 4, 5, 6, and the Socioeconomic Impact Assessment for discussions on jobs and economic uncertainty related to goods movement during the COVID-19 pandemic.

Response to Comment 85-9

See Master Responses 4, 5, 6, and the Socioeconomic Impact Assessment for discussions on jobs and economic uncertainty related to goods movement during the COVID-19 pandemic.

Response to Comment 85-10

The opinion expressed by the commenter about increasing costs tied to increasing numbers of installations is contrary to how the market has behaved in the past, and is expected to continue to behave in the future. As an example, there have been many technology advancements in recent years in solar panels that have made them lighter, more efficient, and more flexible which allows for them to be installed in more applications that have led to a decrease in overall installation costs. According to a report released by the National Renewable Energy Laboratory, the reduction in installation cost in solar panels and improvements in operation, system design and technology have resulted in significant cost reduction in the sector, all while solar installations have increased.[166] Regardless, the potential economic impacts of PR 2305 and PR 316 have been evaluated in the Socioeconomic Impact Assessment and in the Final Staff Report.

The WAIRE Menu offer different options of compliance to offer flexibility to warehouse operators that best suits their business needs. To comply with PR 2305, warehouse operators can choose to implement up to 32 different WAIRE menu actions, a Custom WAIRE Plan, pay the optional mitigation fee, or a combination of the three. Currently, only about 214 of the potential 3,320 warehouses subject to PR 2305 have existing solar panels installed. See Master Response 2a and 2c for discussions on other flexibility options of PR 2305.

Response to Comment 85-11

See Master Response 7 and Responses to Comment Letters 39, 40, and 44 for discussion of South Coast AQMD legal authority.

Response to Comment 85-12

Thank you for your interest in the warehouse ISR and your comments. This letter and responses will be available for review by South Coast AQMD Governing Board members.

[166] https://www.nrel.gov/docs/fy19osti/72399.pdf

Response to Comment Letter 86 - Cypress – 4/2/2021

Response to Comment 86-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention. The public hearing was postponed and will now take place on May 7, 2021.

Response to Comment 86-2

South Coast AQMD Staff understand the City of Cypress' concern over impacts to the warehousing industry. South Coast AQMD continues to have the worst ozone in the country, and we must meet federal ozone attainment standards by 2023 and 2031 or the region could be subject to substantial sanctions. Additionally, this poor air quality causes serious health issues, especially in the communities surrounding warehouses that are heavily impacted by the disproportionate burden of air pollution due to warehouse operations. PR 2305 offers a flexible menu-based points system that offers 32 WAIRE Menu options utilizing cleaner technology, a Custom WAIRE Plan, or an optional mitigation fee. See the Socioeconomic Impact Assessment (SIA) and Master Responses 1, 2a, 2c, 3, 5, and 10 for discussions on costs, feasibility, air quality benefits, economic impacts, and the mitigation fee. The analysis in the SIA found that the public health benefits from PR 2305 are about three times higher than the compliance costs for most scenarios modeled.

Response to Comment 86-3

The potential economic impacts of PR 2305 have been evaluated in the Socioeconomic Impact Assessment. In addition, South Coast AQMD commissioned a study to evaluate if warehouses would relocate with PR 2305, and had the study go through third party peer review. The study determined that no warehouses would relocate with the anticipated compliance costs from PR 2305 and PR 316.

Response to Comment 86-4

Thank you for your interest in the warehouse ISR and your comments.

Response to Comment Letter 87 – XO Vision – April 8, 2021

Response to Comment 87-1

We believe that the commenter is incorrect, PR 2305 is not a tax, and is certainly not a property tax. PR 2305 offers flexibility by offering warehouse operators 32 options on the WAIRE Menu, the ability to implement a Custom WAIRE Plan specific to their operations, or pay an optional mitigation fee in lieu of completing the other actions. See the Socioeconomic Impact Assessment and Master Responses 1, 5, and 7 for discussions on costs, economic impact and legal authority. Additionally, see the responses to Comment Letter 39 for discussions on why PR 2305 is not a tax.

Response to Comment 87-2

See the Socioeconomic Impact Assessment and Master Responses 1, 3, 4, 5, and 6 for discussions on costs, air quality benefits, the growth of the warehousing industry, economic impacts, and jobs.

Response to Comment 87-3

See Master Response 7 and Responses to Comment Letters 39, 40, and 44 for discussion of South Coast AQMD legal authority.

Response to Comment 87-4

In the most recent revision to PR 2305 released on April 7, 2021 a sunset provision was added to the rule language. PR 2305 will begin to sunset upon U.S. EPA finding that all air basins within South Coast AQMD have attained the 2015 National Ambient Air Quality Standard (NAAQS) for ozone (i.e., 70 parts per billion), and when California Air Resources Board (CARB) has determined that South Coast AQMD has met the state ozone standard (also 70 parts per billion).

Response to Comment 87-5

See Master Response 3 for a discussion on air quality benefits and the strategy to meet air quality standards. The Final Staff Report provides details on the methodology used to develop the WAIRE Menu based on costs and emission reductions. Appendix A of the Final Staff Report includes the WAIRE Program Implementation Guidelines which provides guidance for warehouse operators to comply with PR 2305.

Response to Comment 87-6

See Master Response 3 for a discussion on the air quality benefits and the strategies to meet attainment of state and federal air quality standards.

Response to Comment 87-7

As stated in previous responses PR 2305 is not a tax as it offers flexibility in 32 WAIRE Menu options, a Custom WAIRE Plan, or an optional mitigation fee. See the Socioeconomic Impact Assessment and Master Responses 1 and 10 for discussions on costs and the mitigation fee. Additionally, see the responses to Comment Letter 39 for discussions on why PR 2305 is not a tax.

Response to Comment 87-8

See the Socioeconomic Impact Assessment and Master Responses 4 and 5 for discussions on the growth of the warehousing industry during the COVID-19 pandemic and economic impacts. Thank you for your comments and your interest in the warehouse ISR.

Response to Comment Letter 88 – Zippyshell – April 9, 2021

Response to Comment 88-1

We believe that the commenter is incorrect, PR 2305 is not a tax. PR 2305 offers flexibility by offering warehouse operators 32 options on the WAIRE Menu, the ability to implement a Custom WAIRE Plan specific to their operations, or pay an optional mitigation fee in lieu of completing the other actions. See the Socioeconomic Impact Assessment and Master Responses 1, 5, and 7 for discussions on costs, economic impact and legal authority. Additionally, see the responses to Comment Letter 39 for discussions on why PR 2305 is not a tax.

Response to Comment 88-2

See the Socioeconomic Impact Assessment and Master Responses 1, 3, 4, 5, and 6 for discussions on costs, air quality benefits, the growth of the warehousing industry, economic impacts, and jobs.

Response to Comment 88-3

In the most recent revision to PR 2305 released on April 7, 2021 a sunset provision was added to the rule language. PR 2305 will begin to sunset upon U.S. EPA finding that all air basins within South Coast AQMD have attained the 2015 National Ambient Air Quality Standard (NAAQS) for ozone (i.e., 70 parts per billion), and when California Air Resources Board (CARB) has determined that South Coast AQMD has met the state ozone standard (also 70 parts per billion). As stated in previous responses PR 2305 is not a tax as it offers flexibility in 32 WAIRE Menu options, a Custom WAIRE Plan, or an optional mitigation fee. See the Socioeconomic Impact Assessment, Master Response 1, 3,7, 10, and responses to Comment Letters 40, and 44 for discussions on costs, air quality strategy, the mitigation fee, and legal authority. Additionally, see the responses to Comment Letter 39 for discussions on why PR 2305 is not a tax.

Response to Comment 88-4

See the Socioeconomic Impact Assessment and Master Responses 4 and 5 for discussions on the growth of the warehousing industry during the COVID-19 pandemic and economic impacts. Thank you for your comments and your interest in the warehouse ISR.

Response to Comment Letter 89 - Bob Khalsa - 4/7/2021

Response to Comment 89-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention.

Response to Comment 89-2

PR 2305 is a part of the targeted strategy to reduce regional and local NOx and PM toward meeting the federal ozone standards for 2023 and 2031 and improve public health. See Master Response 3 and 4 for a discussion on the NOx emission reduction strategy, air quality benefits, and the growth of the warehousing industry during the COVID-19 pandemic.

Response to Comment 89-3

See Master Responses 1, 5, and Socioeconomic Impact Assessment for a discussion on the potential costs of PR 2305 and economic impacts.

Response to Comment 89-4

See Master Responses 2a, 2c, and 2d for discussions on feasibility and technology availability.

Response to Comment 89-5

See the Socioeconomic Impact Assessment and Master Responses 4 for discussions on the warehousing industry and economic impacts.

Response to Comment 89-6

See Master Response 6, and the Socioeconomic Impact Assessment for a discussion on jobs.

Response to Comment 89-7

PR 2305 is not a tax. See responses to Comment Letter 39 for discussions on why PR 2305 is not a tax.

Response to Comment 89-8

See Master Responses 1,3 and the Socioeconomic Impact Assessment for discussions on the NOx strategy, air quality benefits, and costs. The monetized public health benefits of the rule are expected to be about three times the compliance costs of the rule for most scenarios that were analyzed.

Response to Comment Letter 90 – Silver Spur – April 9, 2021

Response to Comment 90-1

We believe that the commenter is incorrect, PR 2305 is not a tax. PR 2305 offers flexibility by offering warehouse operators 32 options on the WAIRE Menu, the ability to implement a Custom WAIRE Plan specific to their operations, or pay an optional mitigation fee in lieu of completing the other actions. See the Socioeconomic Impact Assessment and Master Responses 1, 5, and 7 for discussions on costs, economic impact and legal authority. Additionally, see the responses to Comment Letter 39 for discussions on why PR 2305 is not a tax.

Response to Comment 90-2

See the Socioeconomic Impact Assessment and Master Responses 1, 3, 4, 5, and 6 for discussions on costs, air quality benefits, the growth of the warehousing industry, economic impacts and jobs.

Response to Comment 90-3

See Master Response 7 and Responses to Comment Letters 39, 40, and 44 for discussion of South Coast AQMD legal authority.

Response to Comment 90-4

In the most recent revision to PR 2305 released on April 7, 2021 a sunset provision was added to the rule language. PR 2305 will begin to sunset upon U.S. EPA finding that all air basins within South Coast AQMD have attained the 2015 National Ambient Air Quality Standard (NAAQS) for ozone (i.e., 70 parts per billion), and when California Air Resources Board (CARB) has determined that South Coast AQMD has met the state ozone standard (also 70 parts per billion).

Response to Comment 90-5

See Master Response 3 for a discussion on air quality benefits and the strategy to meet air quality standards. The Final Staff Report provides details on the methodology used to develop the WAIRE Menu based on costs and emission reductions. Appendix A of the Final Staff Report is the WAIRE Program Implementation Guidelines which provides guidance for warehouse operators to comply with PR 2305. The options to comply with PR 2305 are not arbitrary, as each compliance option addresses emissions associated with warehouses. Flexibility has been added to PR 2305 to address the concerns raised by industry stakeholders during the rulemaking process, however there are no credit provisions within the rule.

Response to Comment 90-6

See Master Response 3 for a discussion on the air quality benefits and the strategies to meet attainment of state and federal air quality standards.

Response to Comment 90-7

As stated in previous responses PR 2305 is not a tax as it offers flexibility in 32 WAIRE Menu options, a Custom WAIRE Plan, or an optional mitigation fee. See the Socioeconomic Impact Assessment and Master Responses 1 and 10 for discussions on costs and the mitigation fee.

Additionally, see the responses to Comment Letter 39 for discussions on why PR 2305 is not a tax.

Response to Comment 90-8

See the Socioeconomic Impact Assessment and Master Responses 4 and 5 for discussions on the growth of the warehousing industry during the COVID-19 pandemic and economic impacts. Thank you for your comments and your interest in the warehouse ISR.

Response to Comment Letter 91 - Three Way Logistics - 4/9/2021

Response to Comment 91-1

We believe that the commenter is incorrect, PR 2305 is not a tax. PR 2305 offers flexibility by offering warehouse operators 32 options on the WAIRE Menu, the ability to implement a Custom WAIRE Plan specific to their operations, or pay an optional mitigation fee in lieu of completing the other actions. See the Socioeconomic Impact Assessment and Master Responses 1, 5, and 7 for discussions on costs, economic impact and legal authority. Additionally, see the responses to Comment Letter 39 for discussions on why PR 2305 is not a tax.

Response to Comment 91-2

See the Socioeconomic Impact Assessment and Master Responses 1, 3, 4, 5, and 6 for discussions on costs, air quality benefits, the growth of the warehousing industry, economic impacts, and jobs.

Response to Comment 91-3

In the most recent revision to PR 2305 released on April 7, 2021 a sunset provision was added to the rule language. PR 2305 will begin to sunset upon U.S. EPA finding that all air basins within South Coast AQMD have attained the 2015 National Ambient Air Quality Standard (NAAQS) for ozone (i.e., 70 parts per billion), and when California Air Resources Board (CARB) has determined that South Coast AQMD has met the state ozone standard (also 70 parts per billion). As stated in previous responses PR 2305 is not a tax as it offers flexibility in 32 WAIRE Menu options, a Custom WAIRE Plan, or an optional mitigation fee. See the Socioeconomic Impact Assessment, Master Response 1, 3,7, 10, and responses to Comment Letters 40, and 44 for discussions on costs, air quality strategy, the mitigation fee, and legal authority. Additionally, see the responses to Comment Letter 39 for discussions on why PR 2305 is not a tax.

Response to Comment 91-4

See the Socioeconomic Impact Assessment and Master Responses 4 and 5 for discussions on the growth of the warehousing industry during the COVID-19 pandemic and economic impacts. Thank you for your comments and your interest in the warehouse ISR.

Response to Comment Letter 92 – SVF Flow Controls – April 9, 2021

Response to Comment 92-1

We believe that the commenter is incorrect, PR 2305 is not a tax. PR 2305 offers flexibility by offering warehouse operators 32 options on the WAIRE Menu, the ability to implement a Custom WAIRE Plan specific to their operations, or pay an optional mitigation fee in lieu of completing the other actions. See the Socioeconomic Impact Assessment and Master Responses 1, 5, and 7 for discussions on costs, economic impact and legal authority. Additionally, see the responses to Comment Letter 39 for discussions on why PR 2305 is not a tax.

Response to Comment 92-2

See the Socioeconomic Impact Assessment and Master Responses 1, 3, 4, 5, and 6 for discussions on costs, air quality benefits, the growth of the warehousing industry, economic impacts, and jobs.

Response to Comment 92-3

See Master Response 7 and Responses to Comment Letters 39, 40, and 44 for discussion of South Coast AQMD legal authority.

Response to Comment 92-4

In the most recent revision to PR 2305 released on April 7, 2021 a sunset provision was added to the rule language. PR 2305 will begin to sunset upon U.S. EPA finding that all air basins within South Coast AQMD have attained the 2015 National Ambient Air Quality Standard (NAAQS) for ozone (i.e., 70 parts per billion), and when California Air Resources Board (CARB) has determined that South Coast AQMD has met the state ozone standard (also 70 parts per billion).

Response to Comment 92-5

See Master Response 3 for a discussion on air quality benefits and the strategy to meet air quality standards. The Final Staff Report provides details on the methodology used to develop the WAIRE Menu based on costs and emission reductions. Appendix A of the Final Staff Report is the WAIRE Program Implementation Guidelines which provides guidance for warehouse operators to comply with PR 2305. The options to comply with PR 2305 are not arbitrary, as each compliance option addresses emissions associated with warehouses. Flexibility has been added to PR 2305 to address the concerns raised by industry stakeholders during the rulemaking process, however there are no credit provisions within the rule.

Response to Comment 92-6

See Master Response 3 for a discussion on the air quality benefits and the strategies to meet attainment of state and federal air quality standards.

Response to Comment 92-7

As stated in previous responses PR 2305 is not a tax as it offers flexibility in 32 WAIRE Menu options, a Custom WAIRE Plan, or an optional mitigation fee. See the Socioeconomic Impact Assessment and Master Responses 1 and 10 for discussions on costs and the mitigation fee.

Additionally, see the responses to Comment Letter 39 for discussions on why PR 2305 is not a tax.

Response to Comment 92-8

See the Socioeconomic Impact Assessment and Master Responses 4 and 5 for discussions on the growth of the warehousing industry during the COVID-19 pandemic and economic impacts. Thank you for your comments and your interest in the warehouse ISR.

Response to Comment Letter –93_WestRock - 4/14/2021

Response to Comment 93-1

Thank you for your participation in the warehouse ISR development process, and bringing your comments to our attention. See Master Responses 1, 4, and the Socioeconomic Impact Assessment for discussions on costs and the growth of the warehousing industry in the last several years. Based on the information in this comment and in information available online and in our records, it is not clear if the commenter is mistaken about the cost of the rule, or if the commenter's warehouses have much higher truck trip rates than average. If the commenter's warehouses had average truck trip rates, the highest cost they would potentially face if they only pay the mitigation fee would be about $715,000 spread across all three warehouses. Because of the phase in of PR 2305, they would pay less in earlier years, for an average of about $625,000 over ten years. This very conservative scenario assumes that the warehouse operator would never try to earn WAIRE Points from the trucks incentivized from the WAIRE Mitigation Program. Most of the compliance scenarios analyzed for PR 2305 would cost less than one third of the mitigation fee costs mentioned above.

Response to Comment 93-2

South Coast AQMD staff agrees that the warehouse industry is an essential part of the goods movement system especially during the response to the COVID-19 pandemic. The ongoing COVID-19 pandemic has increased the demand for goods movements in our basin resulting in record activity at the San Pedro Bay Ports and continued low vacancy rates of 4% for warehouses even as lease rates increase annually. The increasing warehouse activity also increases public health risks in disproportionately impacted communities surrounding warehouses. PR 2305 will help address these emission impacts and address the public health issues in the disadvantaged communities. See the Master Responses 4, 5, 6, and the Socioeconomic Impact Assessment for discussions on the growth of the warehousing industry during the COVID-19 pandemic, economic impacts, and jobs.

Response to Comment 93-3

See Master Responses 2a, 2c, and 3 for discussions on feasibility of complying with PR 2305 for warehouse operators that do not own or operate fleets, emission reduction strategy, and air quality benefits. In addition, the commenter may have additional flexibility as they apparently contract directly with several trucking companies. Other warehouse operators have been able to take advantage of these direct relationships to ensure that the trucking companies they hire use at least some lower emission trucks.

Response to Comment 93-4

Thank you for your comments and interest in the warehouse ISR.

Response to Comment Letter 94 – CHBC – April 15, 2021

Response to Comment 94-1

Thank you for your participation in the rule development process and your support of PR 2305. South Coast AQMD staff's recommended stringency is 0.0025 WAIRE Points per WATT phased in over three-years. The recommended stringency was determined considering the analysis of 19 WAIRE Menu based scenarios that looked at emission reductions and costs, the potential for limited availability of WAIRE Menu options at higher stringencies, the warehouse relocation study commissioned by South Coast AQMD, and the ports' study on the Clean Truck Rate program. The stringency factor of 0.0025 WAIRE Points per WATT is expected to result in significant emission reductions and no warehouse relocations. The emission reductions from PR 2305 would help address the disproportionate burden of air pollution in the communities neighboring warehouses and reduce their exposure to emissions. See also Response to Comment 40-42.

Response to Comment 94-2

South Coast AQMD staff understands the health impact of air pollution on communities near warehouses is an important consideration. PR 2305 is designed to reduce regional and local emissions of NOx and PM associated with warehouses in order to assist in meeting state and federal air quality standards and improve public health especially in the local communities surrounding warehouses.

Response to Comment 94-3

South Coast AQMD staff agrees that the implementation of PR 2305 will result in the creation of new jobs to support transportation electrification, such as in the installation of ZE charging infrastructure. Please refer to Master Response 6 for a discussion of warehousing employment as related to PR 2305 and PR 316, and the Socioeconomic Impact Assessment that further analyzes the economic impacts.

Response to Comment 94-4

It is true that the installation of air filter systems or the replacement of air filters will not result in any emission reductions (Final Staff Report, pp. 61-63). However, this measure is an important community benefit that can reduce exposure to particulate matter, including toxic diesel particulate matter, which can improve public health outcomes. Because this action does not reduce emissions, it does not receive the same number of WAIRE Points as other actions, which results in this item being more expensive than most other WAIRE Menu items (Table 20 of the Final Staff Report). While this action is not anticipated to be widely used, it may make sense to some operators in particular circumstances with schools, daycares, or other similar land uses nearby. There are an estimated 1,039 daycares and public and private schools located within about 0.5 miles of the 2,902 warehouses that are expected to earn WAIRE Points. By keeping filters in the WAIRE Menu, it provides additional flexibility to warehouse operators, and provides a public health benefit to people affected by pollution associated with warehouses.Response to Comment 94-5

PR 2305 is intended to be submitted to U.S. EPA for inclusion into the SIP. The concern about SIP credit does not consider the full range of options normally available to fold emission

reductions into the SIP inventory. These options are discussed in Appendix D of the Final Staff Report. As an example, the indirect source rule adopted by San Joaquin Valley Air District was approved into the SIP by EPA, but the approval did not include any 'SIP credit' for emission reductions. However, the emission reductions achieved by their rule are included as part of normal updates to the mobile source emissions inventory in regular updates by CARB. This includes regular updates to the EMFAC model for on-road vehicles, and various updates to off-road inventories as necessary. This proven example is expected to be the primary process by which SIP creditable emissions reductions would be accounted for with PR 2305 as well. Other prospective SIP creditable emission reductions methods may be possible too with the WAIRE Mitigation Program once funds are received and the program has been established.

Staff will report back to the Mobile Source Committee of the Board every year with updates on the options that warehouses are taking to implement PR 2305, if approved. This reporting will include specifics on the kinds of options chosen to earn WAIRE Points, including filtration systems. In addition, staff anticipates returning to the Board every five years with a technology review of the WAIRE Program, and will make recommendations for updates to the WAIRE Menu at that time, which will include an evaluation of the state of technology and the actions that warehouse operators are implementing to earn WAIRE Points.

Response to Comment 94-6

See Response to Comment 94-4. Staff is planning to continue recommending the inclusion of filters in the WAIRE Menu. Other funding programs are uncertain, and may not cover the broader categories of land uses that PR 2305 allows (e.g., residences).

Response to Comment 94-7

The WAIRE Menu includes the installation of a hydrogen fueling station and the use of a hydrogen fueling station as options to earn WAIRE Points. Onsite hydrogen generation was not included in the WAIRE Menu as it is dependent on many site-specific equipment design variables. Though onsite hydrogen generation is not included in the WAIRE Menu, a warehouse operator can propose it as a Custom WAIRE Plan application if it meets all the requirements for a Custom WAIRE Plan listed in PR 2305 (see PR 2305, Section (d)(4)). Staff is open to working with the commenter or other stakeholders to develop a streamlined approach to include in the WAIRE Implementation Guidelines for some Custom WAIRE Plan approaches (such as hydrogen production) if it appears that a broadly applicable default approach can be developed.

Response to Comment 94-8

South Coast AQMD staff appreciates your acknowledgement.

Response to Comment 94-9

Thank you for your interest in the warehouse ISR development process and your comments.

Response to Comment Letter – 95_NAIOP - 4/14/2021

Response to Comment 95-1

Thank you for your participation in the warehouse ISR development process, South Coast AQMD Staff appreciates the time and effort taken to provide your comments on the warehouse ISR. Legal responses to the CTA/Holland & Knight and CalTax comment letters were posted on the South Coast AQMD website on 4/16/2021, one day after receiving this comment letter.

Response to Comment 95-2

The Response to Comments listed in Appendix E of the Final Staff Report provided Response to Comments 1-30, all subsequent comment letters have been posted on the South Coast AQMD website on a rolling basis as they are submitted and compiled by staff. Legal memos responding to letters from CalTax and CTA were posted on our website on April 16, 2021.

Response to Comment 95-3

South Coast AQMD Staff recognize the importance of providing detailed analysis of PR 2035 to the public and Governing Board, and has engaged in an extensive public process to ensure that information is shared, and opportunities for feedback have been provided.

Response to Comment 95-4

The Response to Comments for letters 31 and beyond are being made available for review with the release of this Board package. Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention.

Response to Comment Letter 96 – EarthJustice – April 16, 2021

Response to Comment 96-1

Thank you for your participation in the rule development process and your comments in support of a warehouse ISR. The commenter mentions that South Coast AQMD is required to adopt indirect source rules that address "high-level, localized concentrations of pollutants", and PR 2305 is designed to achieve this, along with the primary goal of reducing regional pollutants to assist in meeting federal and state air quality standards. Trucks that travel to warehouses emit a variety of pollutants, including NOx and Particulate Matter (PM). As part of AB 617 efforts, various monitoring campaigns have been conducted to determine how pollutants are spread throughout each AB 617 community, in particular by using mobile monitors (monitoring equipment in a vehicle that collects ambient air quality data while the vehicle is driving). The results from these studies have consistently found that pollutants like NO2 (a component of NOx), and black carbon and ultrafine particulates (both components of PM, and markers for Diesel PM) all are found at some of their highest levels near areas of higher truck activity (e.g., freeways), with lower levels found farther away from areas where trucks travel.[167] These findings are consistent with voluminous research that has found high levels of pollutants in the near roadway environment, especially roads carrying diesel trucks.[168]

Response to Comment 96-2

The comment accurately states what the Socioeconomic Impact Assessment determined.

Response to Comment 96-3

The COVID-19 pandemic has resulted in negative impacts on public health while the reliance upon goods movement has resulting in increased activity for the goods movement industry. Please refer to Master Responses 4 and 5 for a discussion on impact of the COVID-19 pandemic on the volume of goods and the economy. Additionally, there is a Socioeconomic Impact Assessment for PR 2305 and PR 316 that further analyzes the economic impacts on the goods movement industry.

Response to Comment 96-4

South Coast AQMD Staff understands the importance of prioritizing ZE technology. Currently, the WAIRE Menu includes both NZE and ZE on-road trucks because Class 8 on-road ZE trucks are in demonstration service but are not yet commercially available. By allowing NZE technology in as part of the WAIRE Menu, NZE engines can provide at least a 90% reduction in NOx emissions immediately when compared to conventional diesel fueled trucks. This reduction of diesel emissions in the near term can improve the public health of the communities

[167] http://www.aqmd.gov/docs/default-source/ab-617-ab-134/camps/sbm-progress-reports/sbm-neighborhood-truck-traffic---coming-soon.pdf, http://www.aqmd.gov/docs/default-source/ab-617-ab-134/camps/wcwlb-progress-reports/wcwlb-truck-traffic-progress-report---august-2020.pdf, http://www.aqmd.gov/docs/default-source/ab-617-ab-134/camps/elabhwc-progress-reports/elabhwc-neighborhood-amp-freeway-truck-traffic---coming-soon.pdf, http://www.aqmd.gov/docs/default-source/ab-617-ab-134/camps/sbm-progress-reports/sbm-warehouses---coming-soon.pdf

[168] https://www.epa.gov/air-research/research-near-roadway-and-other-near-source-air-pollution, http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2012-air-quality-management-plan/final-2012-aqmp-(february-2013)/chapter-9-final-2012.pdf

surrounding warehouses, while at the same time Class 8 on-road ZE trucks and ZE charging and fueling infrastructure are developed and become more widespread and commercially available. Please refer to Master Response 2 for an explanation of rule feasibility, including regarding truck fleets, and specifically Master Response 2d for information on the commercial availability of NZE/ZE truck engines. See Appendix B of PR 2305 and PR 316's Final Staff Report, which contains information on the commercial availability of every technology in the WAIRE Menu.

South Coast AQMD staff's recommended stringency is 0.0025 WAIRE Points per WATT phased in over three-years. The recommended stringency was determined considering the analysis of 19 WAIRE Menu based scenarios that looked at emission reductions and costs, the potential for limited availability of WARIE Menu options at higher stringencies, the warehouse relocation study commissioned by South Coast AQMD, and the ports' study on the Clean Truck Rate program. The stringency factor of 0.0025 WAIRE Points per WATT is expected to result in significant emission reductions and no warehouse relocations. The emission reductions from PR 2305 would help address the disproportionate burden of air pollution in the communities neighboring warehouses and reduce emissions. See also Response to Comment 40-42.

Response to Comment 96-5

Again, thank you for your participation in the rule development process and your comments in support of a warehouse ISR.

Response to Comment Letter 97_Jacob Ruiz - 4/15/2021

Response to Comment 97-1

Thank you for your participation in the rule development process and your comments in support of a warehouse ISR. PR 2305 will be considered by the South Coast AQMD Governing Boarding during a public hearing on May 7, 2021.

Response to Comment 97-2

Thank you for your perspective on the impacts of air pollution and unhealthy air.

Response to Comment Letter 98 – Shannon Labuschagne – April 16, 2021

Response to Comment 98-1

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention.

Response to Comment 98-2

Thank you for your testimony on the impacts of air pollution and unhealthy air.

Response to Comment Letter 99 - Amy Vasquez - 4/15/2021

Response to Comment 99-1

Thank you for your participation in the rule development process and your comments in support of a warehouse ISR.

Response to Comment 99-2

Thank you for your testimony on the impacts of air pollution and your experience with warehouses.

Response to Comment Letter 100 - Mason - 4/7/2021

Response to Comment 100-1

The commenter is incorrect PR 2305 is not a tax nor does it lead to increased property taxes. PR 2305 offers flexibility in offering 32 WAIRE Menu options, a Custom WAIRE Plan, or an optional mitigation fee which is not a tax. See the Socioeconomic Impact Assessment and Master Responses 1, 5, and 7 for discussions on costs, economic impact and legal authority. Additionally, see the responses to Comment Letter 39 for discussions on why PR 2305 is not a tax.

Response to Comment 100-2

See the Socioeconomic Impact Assessment and Master Responses 1, 3, 4, 5, and 6 for discussions on costs, air quality benefits, the growth of the warehousing industry, economic impacts, and jobs.

Response to Comment 100-3

The most recent revision to PR 2305 released on April 7, 2021 includes a sunset provision in the rule language. PR 2305 will begin to sunset upon U.S. EPA finding that all air basins within South Coast AQMD have attained the 2015 National Ambient Air Quality Standard (NAAQS) for ozone (i.e., 70 parts per billion), and when California Air Resources Board (CARB) has determined that South Coast AQMD has met the state ozone standard (also 70 parts per billion). As stated in previous responses PR 2305 is not a tax as it offers flexibility in 32 WAIRE Menu options, a Custom WAIRE Plan, or an optional mitigation fee. See the Socioeconomic Impact Assessment, Master Response 1, 3,7, 10, and responses to Comment Letters 40, and 44 for discussions on costs, air quality strategy, the mitigation fee, and legal authority. Additionally, see the responses to Comment Letter 39 for discussions on why PR 2305 is not a tax. Also, the options to comply with PR 2305 are not arbitrary, as each compliance option addresses emissions associated with warehouses.

Response to Comment 100-4

See the Socioeconomic Impact Assessment and Master Responses 4 and 5 for discussions on the growth of the warehousing industry during the COVID-19 pandemic and economic impacts. Thank you for your comments and your interest in the warehouse ISR.

Response to Comment Letter 101 – CARB - 4/21/2021

Response to Comment 101-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention.

Response to Comment 101-2

South Coast AQMD staff agrees that the large population of conventional diesel trucks operating in the South Coast Air Basin (SCAB) are a major source of pollutants that leads to increased health impacts for the region and local communities. Immediate emission reductions are needed to improve the public health of the communities surrounding warehouses. Staff agrees that PR 2305 is a complementary piece to CARB's Mobile Source Strategy to address our region's air quality issues.

Response to Comment 101-3

As stated by the commenter, PR 2305 is part of a comprehensive set of strategies to reduce emissions in our region and specifically in the communities near warehouses.

Response to Comment 101-4

Staff agrees with the commenter that South Coast AQMD has clear authority to use its indirect source authority to regulate new and existing warehouses under state and federal law. See Master Response 7 for a discussion on South Coast AQMD's legal authority.

Response to Comment 101-5

As stated by the commenter, PR 2305 is designed to fulfill the control measure identified for warehouses in the U.S. EPA-approved 2016 AQMP (MOB-03).

Response to Comment 101-6

Staff agrees with the commenter that South Coast AQMD has clear authority to adopt PR 2305 and PR 316 under state law.

Response to Comment 101-7

Staff agrees with the commenter's statement that PR 2305 will encourage greater adoption of ZE trucks in South Coast AQMD. These ZE trucks will meet CARB's requirements for truck manufacturers under the Advanced Clean Trucks rule. Similarly, trucks that meet CARB's lowest Optional Low NOx standards under its Low NOx Omnibus rule will also be encouraged to have higher adoption rates in South Coast AQMD due to PR 2305.

PR 2305 includes the WAIRE Program which is a flexible menu-base point system that offers a menu of options which serve to not only reduce emissions but to facilitate the early implementation of related CARB regulations while accounting for potential overlaps in emissions. The net result will be that emission reductions will be achieved sooner than, and may be greater than, would have otherwise been expected due to the WAIRE Points functioning as an additional incentive to motivate early action. See Master Response 8 and the Final Staff Report for additional discussion on the potential emission reduction overlap between PR 2305 and CARB regulations. The analysis in the Final Staff Report demonstrates

that PR 2305 will not only ensure that the emission reductions from the statewide ACT and Low NOx Omnibus rules will occur in South Coast AQMD, but that emissions reductions will be greater than what those statewide rules could achieve on their own.

Response to Comment 101-8

Staff anticipates conducting a technology assessment for emission sources related to warehouses every five years, and reporting those results to our Board. Rapid advancements have occurred with on-road ZE technologies in the past several years and are anticipated to continue in the near future. Based on the assessment, staff may recommend updates to the WAIRE Menu to our Board.
Communities throughout the SCAB have been waiting and calling for the warehouse ISR for a long time as they need the immediate emission reductions coupled with the public health benefit. The warehousing industry has been growing for decades even during the COVID-19 pandemic. PR 2305 would start the transition of warehouse operations away from diesel trucks and deploy cleaner technology to bring relief to the communities. Unfortunately, ZE on-road Class 8 trucks are not yet commercially available and there is insufficient charging facilities so NZE technology was included in the program to provide the much needed 90% NOx reductions toward the ozone attainment goals and immediate benefit to public health. PR 2305 is very flexible as it allows warehouse operators to pick options that may fit their business model or allow for preparation for ZE operations in the future by allowing WAIRE Points for infrastructure installations. South Coast AQMD Staff developed the recommended stringency of 0.0025 WAIRE Points per WATT by considering the bounding analysis of 19 WAIRE Menu-based scenarios, the IEc Relocation Study, the Davies Cargo Diversion Study, and the supply of WAIRE Menu options. The current stringency results in significant emission reductions and transition of a previously unregulated industry. See also Response to Comment 40-42.

Response to Comment 101-9

While we share the goal to get to widespread deployment of ZE technologies, they are not expected to be widely available in all applications immediately. Until then, NZE technologies provide a cost-effective solution that provides a 90% reduction in NOx and a 100% reduction in Diesel PM. About 77% of natural gas used for transportation today are also renewable fuels, and can therefore provide a climate benefit.[169] Therefore these NZE options have been included in PR 2305 to maximize the opportunities for near-term emission reductions.

Response to Comment 101-10

South Coast AQMD staff's recommended stringency is 0.0025 WAIRE Points per WATT phased in over three-years. The recommended stringency was determined considering the analysis of 19 WAIRE Menu based scenarios that looked at emission reductions and costs, the potential for limited availability of WARIE Menu options at higher stringencies, the warehouse relocation study commissioned by South Coast AQMD, and the ports' study on the Clean Truck Rate program. The stringency factor of 0.0025 WAIRE Points per WATT is expected to result in significant emission reductions and no warehouse relocations. The emission reductions from PR 2305 would help address the disproportionate burden of air pollution in the

[169] , https://efiling.energy.ca.gov/getdocument.aspx?tn=236905, pg. 134.

communities neighboring warehouses and reduce emissions. For most scenarios analyzed, the monetized public health benefits outweigh the compliance costs by about 3:1. See also Response to Comment 40-42.

Response to Comment 101-11

While we share the goal to get to widespread deployment of ZE technologies, they are not expected to be widely available in all applications immediately. Until then, NZE technologies provide a cost-effective solution that provides a 90% reduction in NOx and a 100% reduction in Diesel PM. About 77% of natural gas used for transportation today are also renewable fuels, and can therefore provide a climate benefit.[170] Therefore these NZE options have been included in PR 2305 to maximize the opportunities for near-term emission reductions. PR 2305 is designed to reduce regional and local emissions, and reduce exposures for communities most impacted by warehouse operations. PR 2305 achieves all of these goals and those stated in the Air Quality Need section of the Final Staff Report.

Response to Comment 101-12

South Coast AQMD Staff agree that lowering the threshold size would increase the potential cumulative emissions reductions benefit of PR 2305. Reducing the size threshold size would increase the population of warehouses, potentially substantially so with up to 52,000 industrial facilities of any size in South Coast AQMD, whereas PR 2305 focuses on the largest ~3,320, 2,902 of which are expected to earn WAIRE Points (see Appendix C of the Final Staff Report). In order to ensure that this program can be effectively administered and enforced, the scope of the regulation has been limited to those facilities expected to have the largest impact on air quality. During future reviews of the WAIRE Program implementation staff will review and report to the Board if potential rule amendments should be considered that broaden its applicability.

Response to Comment 101-13

Thank you for your comments in support of PR 2305.

[170] https://efiling.energy.ca.gov/getdocument.aspx?tn=236905, pg. 134.

Response to Comment Letter 102 – Paige Electric - 4/9/2021

Response to Comment 102-1

We disagree with the commenter's assertion that PR 2305 is a tax. PR 2305 is not a tax nor does it lead to increased property taxes. PR 2305 offers flexibility in offering 32 WAIRE Menu options, a Custom WAIRE Plan, or an optional mitigation fee which is not a tax. See the Socioeconomic Impact Assessment and Master Responses 1, 5, and 7 for discussions on costs, economic impact and legal authority. Additionally, see the responses to Comment Letter 39 for discussions on why PR 2305 is not a tax.

Response to Comment 102-2

See the Socioeconomic Impact Assessment and Master Responses 1, 3, 4, 5, and 6 for discussions on costs, air quality benefits, the growth of the warehousing industry, economic impacts, and jobs.

Response to Comment 102-3

The most recent revision to PR 2305 released on April 7, 2021included a sunset provision in the rule language. PR 2305 will begin to sunset upon U.S. EPA finding that all air basins within South Coast AQMD have attained the 2015 National Ambient Air Quality Standard (NAAQS) for ozone (i.e., 70 parts per billion), and when California Air Resources Board (CARB) has determined that South Coast AQMD has met the state ozone standard (also 70 parts per billion). As stated in previous responses PR 2305 is not a tax as it offers compliance flexibility in 32 WAIRE Menu options, a Custom WAIRE Plan, or an optional mitigation fee. See the Socioeconomic Impact Assessment, Master Response 1, 3,7, 10, and responses to Comment Letters 40, and 44 for discussions on costs, air quality strategy, the mitigation fee, and legal authority. Additionally, see the responses to Comment Letter 39 for discussions on why PR 2305 is not a tax.

Response to Comment 102-4

See the Socioeconomic Impact Assessment and Master Responses 4 and 5 for discussions on the growth of the warehousing industry during the COVID-19 pandemic and economic impacts. Thank you for your comments and your interest in the warehouse ISR.

Response to Comment Letter 103 – Paige Electric - 4/9/2021

Response to Comment 103-1

We disagree with the commenter's assertion that PR 2305 is a tax. PR 2305 is not a tax nor does it lead to increased property taxes. PR 2305 offers flexibility in offering 32 WAIRE Menu options, a Custom WAIRE Plan, or an option mitigation fee which is not a tax. See the Socioeconomic Impact Assessment and Master Responses 1, 5, and 7 for discussions on costs, economic impact and legal authority. Additionally, see the responses to Comment Letter 39 for discussions on why PR 2305 is not a tax.

Response to Comment 103-2

See the Socioeconomic Impact Assessment and Master Responses 1, 3, 4, 5, and 6 for discussions on costs, air quality benefits, the growth of the warehousing industry, economic impacts, and jobs.

Response to Comment 103-3

The most recent revision to PR 2305 released on April 7, 2021 included a sunset provision in the rule language. PR 2305 will begin to sunset upon U.S. EPA finding that all air basins within South Coast AQMD have attained the 2015 National Ambient Air Quality Standard (NAAQS) for ozone (i.e., 70 parts per billion), and when California Air Resources Board (CARB) has determined that South Coast AQMD has met the state ozone standard (also 70 parts per billion). As stated in previous responses PR 2305 is not a tax as it offers flexibility in 32 WAIRE Menu options, a Custom WAIRE Plan, or an optional mitigation fee. See the Socioeconomic Impact Assessment, Master Response 1, 3,7, 10, and responses to Comment Letters 40, and 44 for discussions on costs, air quality strategy, the mitigation fee, and legal authority. Additionally, see the responses to Comment Letter 39 for discussions on why PR 2305 is not a tax.

Response to Comment 103-4

See the Socioeconomic Impact Assessment and Master Responses 4 and 5 for discussions on the growth of the warehousing industry during the COVID-19 pandemic and economic impacts. Thank you for your comments and your interest in the warehouse ISR.

Response to Comment Letter 104 – Rexford Industrial - 4/9/2021

NOTE: Rexford Industrial is a real estate services corporation and not a warehouse operator.

Response to Comment 104-1

We disagree with the commenter's assertion that PR 2305 is a tax. PR 2305 is not a tax nor does it lead to increased property taxes. PR 2305 offers flexibility in offering 32 WAIRE Menu options, a Custom WAIRE Plan, or an optional mitigation fee which is not a tax. See the Socioeconomic Impact Assessment and Master Responses 1, 5, and 7 for discussions on costs, economic impact and legal authority. Additionally, see the responses to Comment Letter 39 for discussions on why PR 2305 is not a tax.

Response to Comment 104-2

See the Socioeconomic Impact Assessment and Master Responses 1, 3, 4, 5, and 6 for discussions on costs, air quality benefits, the growth of the warehousing industry, economic impacts, and jobs.

Response to Comment 104-3

The most recent revision to PR 2305 released on April 7, 2021 included a sunset provision in the rule language. PR 2305 will begin to sunset upon U.S. EPA finding that all air basins within South Coast AQMD have attained the 2015 National Ambient Air Quality Standard (NAAQS) for ozone (i.e., 70 parts per billion), and when California Air Resources Board (CARB) has determined that South Coast AQMD has met the state ozone standard (also 70 parts per billion). As stated in previous responses PR 2305 is not a tax as it offers flexibility in 32 WAIRE Menu options, a Custom WAIRE Plan, or an optional mitigation fee. See the Socioeconomic Impact Assessment, Master Response 1, 3,7, 10, and responses to Comment Letters 40, and 44 for discussions on costs, air quality strategy, the mitigation fee, and legal authority. Additionally, see the responses to Comment Letter 39 for discussions on why PR 2305 is not a tax.

Response to Comment 104-4

See the Socioeconomic Impact Assessment and Master Responses 4 and 5 for discussions on the growth of the warehousing industry during the COVID-19 pandemic and economic impacts. Thank you for your comments and your interest in the warehouse ISR.

Response to Comment Letter 105 - Southwest Carpenters – 4/21/2021

Response to Comment 105-1

The recent revision to the PR 2305 rule language revised the timeline and delayed the first report submission until September 1, 2021, and delayed the first compliance period for the first phase of warehouses six months to January 1, 2022 to December 31, 2022. See Master Responses 4, 5, 6, and the Socioeconomic Impact Report for discussions on the growth of the warehousing industry during the COVID-19 pandemic, economic impacts, and jobs.

Response to Comment 105-2

See Master Responses 4, 5, 6, and the Socioeconomic Impact Report for discussions on the growth of the warehousing industry during the COVID-19 pandemic, economic impacts, and jobs.

Response to Comment 105-3

A thorough analysis of the emission reduction benefits and cost were conducted on PR 2305 including a South Coast AQMD sponsored study on potential warehouse relocations due to regulation. At the proposed stringency the study showed that there would be no warehouse relocations. See Master Response 3 for a discussion on the NOx strategy and air quality benefits. The potential jobs impacts, including on the construction industry and others is included in the Socioeconomic Impact Assessment and Master Response 6. Thank you for your comments and interest in the warehouse indirect source rule.

Response to Comment Letter 106 - Scopelitis, Garvin, Light, Hanson & Feary

Response to Comment 106-1

Thank you for your interest in the warehouse ISR development process and for bringing your comments to our attention.

The comment asserts that PR 2305 is preempted by the FAAAA because, the comment alleges, truck deliveries are a major portion of warehouse-related emissions, and the compliance options related to ZE and NZE "dictat[e]" that motor carriers use equipment other than what the market might favor. The comment asserts that the proposed rule would thus frustrate Congress's deregulatory objectives under the FAAAA, and that, under *Rowe v. New Hampshire Motor Transport Ass'n*, 504 U.S. 364 (2008), this outcome is preempted.[171]

The comment provides an incomplete description of the standard for FAAAA preemption. The FAAAA preempts state and local laws "related to a price, route, or service of any motor carrier . . . with respect to the transportation of property." 49 U.S.C. § 14501(c)(1). While the FAAAA may preempt state laws "having a connection with, or reference to" prices, routes, or services, *Rowe*, 552 U.S. at 370-71, state laws affecting prices, routes, or services "in only a 'tenuous, remote, or peripheral . . . manner' with no significant impact on Congress's

[171] The District has previously responded to comments alleging that PR 2305 is preempted by the FAAAA. *See* Response to Comment 44-4. Portions of that response are reiterated here.

deregulatory objectives" are not preempted. *Cal. Trucking Ass'n v. Su*, 903 F.3d 953, 960 (9th Cir. 2018) (quoting *Rowe*, 552 U.S. at 371).

Contrary to the comment's conclusion, PR 2305 is materially different from the preempted law in *Rowe*. There, the Court held that a Maine statute that required retailers to use motor carriers providing "a special kind of recipient-verification service" was preempted because it would "require carriers to offer a system of services that the market does not now provide (and which the carriers would prefer not to offer)," and thus had a significant impact on Congress's deregulatory objectives. *Rowe*, 552 U.S. at 368, 371-72. *Rowe* identified Congress's objectives as promoting competition, "thereby stimulating 'efficiency, innovation, and low prices,' as well as 'variety' and 'quality.'" *Id.* at 371 (quoting *Morales v. Trans World Airlines, Inc.*, 504 U.S. 374, 378 (1992)).

In contrast to the law preempted in *Rowe*, PR 2305 does not mandate or prohibit the provision of any particular service and would not frustrate Congress's deregulatory objectives. The proposed rule does not *require* any particular action at all, but rather provides a menu of options for satisfying a warehouse operator's WPCO, many of which are wholly unrelated to transportation (e.g., installing renewable energy systems on buildings, installing air filters for sensitive receptors, or adopting a custom plan). Although the proposed rule may encourage certain behaviors (e.g., using ZE or NZE vehicles or reducing annual truck trips), this does not bring it within the scope of FAAAA preemption. *See Dilts v. Penske Logistics, LLC*, 769 F.3d 637, 647 (9th Cir. 2014) (a law is not preempted "just because it shifts incentives and makes it more costly for motor carriers to choose some routes or services relative to others, leading the carriers to . . . make different business decisions"); *see also Bedoya v. Am. Eagle Express, Inc.*, 914 F.3d 812, 825 (3d Cir. 2019) (finding no preemption where a law, among other things, "does not mandate a particular course of action" and "offers carriers various options to comply."). The flexibility offered by the proposed rule would allow regulated entities to select the most efficient and cost-effective mode of compliance, thereby encouraging innovation in keeping with the deregulatory intent behind the FAAAA. *See Rowe*, 552 U.S. at 371 (describing Congress' goal as to promote competition, "thereby stimulating 'efficiency, innovation, and low prices,' as well as 'variety' and 'quality.'") (quoting *Morales*, 504 U.S. at 378).

Further, unlike the preempted law in *Rowe*, the proposed rule's compliance options related to ZE or NZE vehicles concern *equipment* and not services (or routes or prices). Courts have drawn a distinction between regulation of outputs—i.e., transportation services—and regulation of inputs. *Bedoya*, 914 F.3d at 821 (explaining that "[t]he FAAAA's focus on prices, routes, and service[s] shows that the statute is concerned with the industry's production outputs," and not "resource inputs," including "labor, capital, and technology, which may be regulated by various laws."); *S.C. Johnson & Son, Inc. v. Transp. Corp. of Am., Inc.*, 697 F.3d 544, 558 (7th Cir. 2012) (same). Regulations of *inputs* are generally not preempted. *Id.*

Even regulations that require carriers to adopt pollution-control technology fall in the category of regulation of resource inputs that are generally not preempted. For example, the Eastern District of California rejected an FAAAA preemption challenge to a CARB rule that required heavy-duty trucks to install filters and upgrade engines to reduce emissions. *Cal. Dump Truck Owners Ass'n v. Nichols*, No. 2:11-cv-00384, 2012 WL 273162 at *4-8 (E.D. Cal. Jan. 30, 2012) (concluding that plaintiff had failed to establish a likelihood of success on the merits). The court held that, even though the rule regulated the technology used in trucks, it did

not bind motor carriers to a particular route or service, and the effects of any technology-related cost increases on prices or services were too attenuated to trigger preemption. *Id.* at *7-8.

Here, as in *Nichols*, warehouse operators' compliance options related to ZE or NZE trucks concern equipment technology and do not bind covered entities to a particular route, price, or service. Moreover, the District's proposed rule is even more remotely related to motor carriers' prices, routes, and services than the rule in *Nichols* because the proposed rule does not *require* covered entities to adopt any particular compliance option. In short, like the rule in *Nichols*, the proposed rule concerns inputs (here, technologies, facilities, equipment, etc.) and lacks the (multiple) prohibited connections to prices, routes, and services that doomed the law in *Rowe*.

Response to Comment 106-2

The comment asserts that PR 2305 is preempted because it would, the comment alleges, oblige warehouse operators to require the use of equipment (ZE or NZE vehicles) that the market does not support, thereby requiring warehouse operators to do what the State itself cannot. As explained in Response to Comment 106-1, above, however, the proposed rule includes many compliance options and does not *require* operators to adopt any particular option. Further, regulations of equipment and technology—like the emissions filters required in *Nichols*—are permissible under and generally not preempted by the FAAAA.

The comment further asserts that the proposed rule is preempted because (1) the elevated cost of low emissions trucks will result in increased motor carrier prices, and (2) the need for motor carriers to consider charging infrastructure and battery range will impact routes and services. A state law is not preempted, however, merely because it may increase the cost of doing business and may factor into decisions regarding prices or routes. *See Dilts*, 769 F.3d at 643, 646 (stating that laws that operate "several steps removed from prices, routes, or services" are not preempted "even if they raise the overall cost of doing business or require a carrier to re-direct or reroute some equipment."); *Ward v. United Airlines, Inc.*, 986 F.3d 1234, 1243 (9th Cir. 2021) (requiring a showing, for preemption under the identical standard in the Airline Deregulation Act, that the alleged "increased costs would have a 'significant impact' on . . . prices, routes, or services" (quoting *Rowe*, 552 U.S. at 375)).

For example, in *Dilts*, the Ninth Circuit rejected the argument that state-mandated meal and rest breaks impermissibly decreased services because drivers would take longer to drive the same distance. 769 F.3d at 648. While the court acknowledged that motor carriers "may have to hire additional drivers or reallocate resources in order to maintain a particular service level," the law was not preempted because it did not dictate the services motor carriers had to provide. *Id.* The court also rejected the argument that meal breaks necessarily altered routes by requiring drivers to pull off the road. *Id.* at 649. The court stated that such "minor deviations" from routes were not the sort of route control Congress sought to preempt. *Id.* ("Indeed, Congress has made clear that even more onerous route restrictions, such as weight limits on particular roads, are not 'related to' routes and therefore are not preempted.").

Here, as in *Dilts*, PR 2305 includes compliance options related to pollution-control equipment and technology that operate "several steps removed from prices, routes, or services," and they are thus not preempted even though they may increase costs of doing business and

factor into decisions about routes, prices, and services. While regulated entities may *choose* to require or prefer low-emissions vehicles in their contracts with motor carriers, thereby potentially increasing the costs of business for motor carriers, the proposed rule does not require a motor carrier to provide or abandon any particular service or service level. Further, the need for motor carriers to consider charging infrastructure in planning their routes is analogous to the need to plan for meal and rest breaks. The proposed rule—which does not require adoption of low emissions vehicles—may lead motor carriers to reallocate resources or make "minor deviations" from routes, but it neither indirectly binds motor carriers to particular routes or makes specific routes necessary. *See id.* at 649. Indeed, motor carriers must already factor re-fueling locations into their routes and schedules. *See id.* ("Moreover, drivers already must incorporate into their schedule fuel breaks, pick ups, drop offs and, in some cases, time to install products or wait for their partner to complete an installation.").

Response to Comment 106-3

The comment asserts that, despite the fact that the proposed rule is "being considered to further important public health and safety goals," there is no public health exception to FAAAA preemption. This assertion is superfluous; the proposed rule need not rely on any public health exception because it falls beyond the scope of FAAAA preemption in the first instance.

Response to Comment Letter 107 - DCG – 4/28/2021

Response to Comment 107-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention.

PR 2305 is a part of the targeted strategy to reduce regional and local NOx and PM emissions to meet the federal ozone standards for 2023 and 2031 and improve public health. The most recent version of the PR 2305 rule language released April 7, 2021 addresses the commenter's concerns regarding rule implementation dates. The first compliance date requiring the submission of the Warehouse Operations Notification is September 1, 2021, an informational report to be submitted by the warehouse owner requiring basic warehouse information including the square footage information on the warehouse, the tenant(s), lease duration, and contact information. The first compliance period for the largest warehouse operators to earn WAIRE Points begins on January 1, 2022. Warehouses will be phased into PR 2305 based on size over three years and once in, there is a three-year phase-in of the rule stringency. See Master Response 4 and 5 and the Socioeconomic Impact Assessment for discussions on the warehousing industry's growth and economic impacts during the COVID-19 pandemic.

Response to Comment 107-2

The potential costs stated by the commenter are inaccurate, as the potential cost ranges are significantly lower. While the commenter describes challenges faced during the COVID-19 pandemic, the warehousing industry has actually experienced substantial growth during this time due to increased cargo volumes. See Master Responses 1, 5, and Socioeconomic Impact Assessment for discussions on the potential costs of PR 2305 and economic impacts.

Response to Comment 107-3

See Master Responses 2a through 2c for discussions on feasibility.

Response to Comment 107-4

See Master Response 2d for a discussion of available technology on the WAIRE Menu.

Response to Comment 107-5

See the Socioeconomic Impact Assessment and Master Responses 4 for discussions on the warehousing industry and economic impacts.

Response to Comment 107-6

See Master Responses 4, 5, 6, and the Socioeconomic Impact Assessment for discussions on jobs and economic uncertainty related to goods movement during the COVID-19 pandemic.

Response to Comment 107-7

See Master Response 6 and the Socioeconomic Impact Assessment for a discussion on the jobs impacts of PR 2305.

Response to Comment 107-8

See Master Response 7 and Responses to Comment Letters 39, 40, and 44 for discussion of South Coast AQMD legal authority. As explained in the Responses to Comment Letter 44, PR 2305 does not regulate trucks or trucking companies, but rather is an indirect source regulation that applies to warehouses. A regulation may violate the commerce clause if it imposes burdens on interstate commerce that so outweigh the regulation's benefits that the regulation is unreasonable or irrational. Pacific Merchant Shipping Ass'n. v. Goldstene, 639 F. 3d 1154, 1177 (9th Cir. 2011). The comment fails to articulate facts to show that this is the case for PR 2305.

Response to Comment 107-9

Thank you for your interest in the warehouse ISR and your comments. This letter and responses will be available for review by South Coast AQMD Governing Board members.

Response to Comment Letter 108 – Pactiv Evergreen – 4/23/2021

Response to Comment 108-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention. PR 2305 is applicable to all warehouses in the South Coast AQMD jurisdiction that are at least 100,000 square feet and will be required to comply using PR 2305's flexible compliance options, which can include a Custom Plan option. South Coast AQMD is available to meet with you and discuss options that may work for your facility. See Master Response 2a and 2c for a discussion on feasibility.

Response to Comment 108-2

PR 2305 is a part of the targeted strategy to reduce regional and local NOx and PM emissions to meet the federal ozone standards for 2023 and 2031 and improve public health. The most recent version of the PR 2305 rule language released April 7, 2021 addresses the commenter's concerns regarding rule implementation dates. The first compliance date requiring the submission of the Warehouse Operations Notification is September 1, 2021, an informational report to be submitted by the warehouse owner requiring basic warehouse information including the square footage information on the warehouse, the tenant(s), lease duration, and contact information. The first compliance period for the largest warehouse operators to earn WAIRE Points begins on January 1, 2022. Warehouses will be phased into PR 2305 based on size over three years and once in, there is a three-year phase-in of the rule stringency. See Master Responses 3 and 4 for discussions on the strategy to reduce emissions from the warehousing industry and the growth of the warehousing industry.

Response to Comment 108-3

South Coast AQMD sponsored a study on potential warehouse relocation to areas just outside the South Coast AQMD jurisdiction due to regulations. The study found that at the stringency proposed no warehouses are expected to relocate given the amenities of the proximity to the ports, the transportation infrastructure, and the consumer market and labor force in the South Coast AQMD region. See the Socioeconomic Impact Assessment for a discussion on the economic impacts of PR 2305 on the warehousing industry.

Response to Comment 108-4

The potential costs stated by the commenter are inaccurate, as the potential cost ranges are significantly lower. While the commenter describes challenges faced during the COVID-19 pandemic, the warehousing industry has actually experienced substantial growth during this time due to increased cargo volumes. See Master Responses 1, 5, and Socioeconomic Impact Assessment for a discussion on the potential costs of PR 2305 and economic impacts.

Response to Comment 108-5

See Master Responses 2a through 2c for discussions on feasibility.

Response to Comment 108-6

See Master Response 2d for a discussion of available technology on the WAIRE Menu.

Response to Comment 108-7

See the Socioeconomic Impact Assessment and Master Responses 4 for discussions on the warehousing industry and economic impacts during the COVID-19 pandemic.

Response to Comment 108-8

See Master Responses 4, 5, 6, and the Socioeconomic Impact Assessment for discussions on economic uncertainty related to goods movement and jobs during the COVID-19 pandemic.

Response to Comment 108-9

See Master Response 7 and Responses to Comment Letters 39, 40, and 44 for discussion of South Coast AQMD legal authority. As explained in the Responses to Comment Letter 44, PR 3205 does not regulate trucks or trucking companies, but rather is an indirect source regulation that applies to warehouses. A regulation might violate the commerce clause if it imposes burdens on interstate commerce that so outweigh the regulation's benefits that the regulation is unreasonable or irrational. *Pacific Merchant Shipping Ass'n. v. Goldstene*, 639 F. 3d 1154, 1177 (9th Cir. 2011). The comment fails to articulate facts to show that this is the case for PR 2305.

Response to Comment 108-10

Thank you for your interest in the warehouse ISR and your comments. This letter and responses will be available for review by South Coast AQMD Governing Board members.

Response to Comment Letter 109 - United – 4/23/2021

Response to Comment 109-1

Thank you for your participation in the warehouse ISR development process, and for bringing your comments to our attention. Staff has not received a comment letter from Airlines 4 America.

Response to Comment 109-2

See Master Response 7 and Responses to Comment Letters 39, 40, 44, and 106 for discussions on the South Coast AQMD legal authority.

Response to Comment 109-3

The Legal Authority section of the Final Staff Report (p. 19-20) provides the appropriate response to the references made by the commenter. However, for further legal discussion on the South Coast AQMD legal authority see Master Response 7 and Responses to Comment Letters 39, 40, 44, and 106.

Response to Comment 109-4

The response to Comment Letter 106 provides the appropriate response to the commenter's concerns on preemption. However, for further legal discussion on the South Coast AQMD legal authority see Master Response 7 and Responses to Comment Letters 39, 40, and 44. The analysis for the Airline Deregulation Act is the same as for the FAAA which is discussed in Responses to Letter 106.. Ward v. United Airlines, Inc., 986 F. 3d. 1234, 1243 n. 2 (9th Cir. 2021). Also, it is unclear if the operations cited by the commenter for aircraft maintenance training and cabin cleaning provisioning fall under the definition of warehousing activity. If they do not, then it may be possible that PR 2305 does not apply to the commenter's warehouse, depending on the amount of space left that is dedicated to warehousing activity. See PR 2305 (d)(1), (d)(7), (e)(2), and (g)(1).

Response to Comment 109-5

The scenario analysis accounts for the potential overlap in emission reductions between PR 2305 and existing CARB regulations. See Master Responses 2a, 2b, 2c, 8 and 10 for discussions on feasibility, concerns on duplicative efforts, and concerns regarding the mitigation fee. The commenter's claim that they do not own or operate fleets traveling to their facility, therefore they would need to pay a mitigation fee is incorrect. First, the operator could work with their clients to see if they could arrange for NZE or ZE trucks to make the shipments to the commenter's warehouse, or they could choose another non-truck option on the WAIRE Menu, or a Custom WAIRE Plan. The comment that the mitigation fees will only go towards ZE fueling/charging infrastructure is incorrect. They will also provide incentives for NZE and ZE trucks. Both the fueling/charging infrastructure and trucks that are incentivized by the WAIRE Mitigation Program will increase the likelihood that these trucks will visit the commenter's warehouse, thus allowing them to earn WAIRE Points and reduce their emissions profile. There are many entities in the goods movement sector whose business models rely on mobile sources that emit pollutants like NOx and PM including trucking companies, shippers, goods owners, warehouse operators, etc. All entities have a role to play to reduce emissions

and exposures, especially for the communities near their facilities. In the case of PR 2305, many feasible options are included so that warehouse operators can find the option that most suits their needs.

Response to Comment 109-6

The commenter is incorrect, PR 2305 will result in emission reductions toward attainment of the state and federal attainment standards. Whether these emission reductions are assigned to PR 2305, or to another part of the SIP inventory (e.g., incentive programs that are enhanced by PR 2305, future emissions inventories that are updated with cleaner truck fleets due to PR 2305, etc.) is not relevant for warehouse operators. In its approval of the SJVAPCD Indirect Source Rule into the SIP, EPA recognized the benefit of their rule and the emissions reduction potential, even if the emissions are not SIP creditable at the time of approval of the rule into the SIP. See Appendix D and Master Responses 3 and 7 for discussions on the potential SIP credit approach, air quality benefits from PR 2305, and legal authority.

Response to Comment 109-7

Thank you for your comments and interest in the warehouse ISR.

Response to Comment Letter 110 – Environmental Defense Fund – 4/22/2021

Response to Comment 110-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention. South Coast AQMD Staff agree that the South Coast Air Basin (SCAB) has the worst air quality in the nation and getting worse due to the emissions from goods movement operations that heavily impact the health of the communities surrounding the warehouses. PR 2305 is needed to reduce emissions from the warehousing industry and improve the public health in the communities surrounding the warehouses.

Response to Comment 110-2

The commenter is referring to Figure 4 of the Final Staff Report (p. 17) which shows the CalEnviroScreen Percentile for communities within a half mile radius from a warehouse which shows the disproportionate burden of air pollution on the communities of color living in the disadvantaged areas surrounding warehouses. Warehouses attract diesel trucks and other emitting equipment to itself and impact the surrounding communities with NOx and DPM emissions. South Coast AQMD staff agree that there are disproportionate impacts of air pollution that negatively impacts these disadvantaged communities surrounding the warehouses which is only increasing due to the high cargo volumes at the ports, the COVID-19 pandemic, and the growth of e-commerce.

Response to Comment 110-3

PR 2305 is designed to offer a flexible menu of clean technology options that warehouse operators would need to implement to reduce emissions NOx and PM or exposure to meet their compliance obligation. Their compliance obligation is based on the number of trucks that visit their warehouse. Incorporating ZE and clean technology leads to immediate emission reductions, facilitates the implementation of other regulations, or provides support for the growth of ZE technology. By design the warehouse operators would use the flexibility of PR 2305 to implement the most cost-effective options available to them to comply with PR 2305.The inclusion of NZE and ZE truck acquisition and usage will increase use of the cleaner technologies and great support and demand to grow assist in growing the technology while earning the warehouse operator WAIRE Points.

Response to Comment 110-4

Thank you for providing the reports. South Coast AQMD Staff has been working with the California Public Utilities Commission, California Energy Commission, and truck makers to advance the development of ZE technology and infrastructure in preparing for California's ZE goals. Currently all of the NZE and ZE technology offered on the WAIRE Menu with the exception of ZE Class 8 on-road trucks are commercially available and in commercial service, with ZE Class 8 on-road trucks expected late 2021 or 2022. The ZETI tool[172] provides additional information on ZE technology including availability. See the Socioeconomic Impact Assessment and Master Response 2d for more information on the cost analysis conducted on the implementation of ZE technology.

[172] . https://globaldrivetozero.org/tools/zero-emission-technology-inventory/

Response to Comment 110-5

South Coast AQMD Staff agree that no one policy will result in transforming the market. PR 2305 is one piece of a larger puzzle of strategies to reduce emissions and assist in the transitioning the goods movement industry away from diesel engines. In addition to PR 2305's design to reduce NOx and PM emissions and improve public health, it also seeks to facilitate other regulations by providing WAIRE Points incentives to install ZE charging or fueling infrastructure and NZE/ZE acquisition and usage points to further the support and demand for new NZE and ZE technology. PR 2305 also has local benefit by providing immediate emission reductions to the disproportionately burdened communities surrounding warehouses by motivating warehouses to implement cleaner technology solutions when replacing their diesel equipment.

Thank you for your interest in the warehouse ISR and your comments. This letter and responses will be available for review by South Coast AQMD Governing Board members.

Response to Comment Letter 111 – Quidel - 4/8/2021

Response to Comment 111-1

The commenter is mistaken in that PR 2305 is neither a tax nor does it lead to increased property taxes. PR 2305 instead is a regulation that provides a high level of compliance flexibility in offering 32 WAIRE Menu options, a Custom WAIRE Plan, or an optional mitigation fee which is not a tax. See the Socioeconomic Impact Assessment and Master Responses 1, 5, and 7 for discussions on costs, economic impact and legal authority. Additionally, see the responses to Comment Letter 39 for discussions on why PR 2305 is not a tax.

Response to Comment 111-2

See the Socioeconomic Impact Assessment and Master Responses 1, 3, 4, 5, and 6 for discussions on costs, air quality benefits, the growth of the warehousing industry, economic impacts, and jobs.

Response to Comment 111-3

The most recent revision to PR 2305, released on April 7, 2021 includes a sunset provision in the rule language. PR 2305 will begin to sunset upon U.S. EPA finding that all air basins within South Coast AQMD have attained the 2015 National Ambient Air Quality Standard (NAAQS) for ozone (i.e., 70 parts per billion), and when California Air Resources Board (CARB) has determined that South Coast AQMD has met the state ozone standard (also 70 parts per billion). See the Socioeconomic Impact Assessment, Master Response 1, 3, 7, 10, and responses to Comment Letters 40, and 44 for discussions on costs, air quality strategy, the mitigation fee, and legal authority. Additionally, see the responses to Comment Letter 39 for further explanation as to why PR 2305 is not a tax. Also, the options to comply with PR 2305 are not arbitrary, as each compliance option addresses emissions associated with warehouses.

Response to Comment 111-4

See the Socioeconomic Impact Assessment and Master Responses 4 and 5 for discussions on the growth of the warehousing industry during the COVID-19 pandemic and economic impacts. Thank you for your comments and your interest in the warehouse ISR.

Response to Comment Letter 112 – Sadaf - 4/16/2021

Response to Comment 112-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention.

Response to Comment 112-2

The commenter is mistaken in that PR 2305 does not impact or add taxes, including property taxes. PR 2305 is instead a regulation that provides compliance flexibility in offering 32 WAIRE Menu options, a Custom WAIRE Plan, or an optional mitigation fee which is not a tax. See response to Comment Letter 39. See the Socioeconomic Impact Assessment and Master Responses 1, 5, and 7 for discussions on costs, and economic impacts.

Response to Comment 112-3

South Coast AQMD conducted thorough analysis on the emission reductions and costs of PR 2305, which included a sponsored study on potential warehouse relocations in response to regulation. The study by Industrial Economics, Inc., showed that no warehouses would relocate at the proposed stringency. See the Socioeconomic Impact Assessment and Master Responses 1, 4, and 5 for discussions on costs, the growth of the warehousing industry, and economic impacts during the COVID-19 pandemic.

Response to Comment Letter 113 – Cummins Logistics - 4/20/2021

Response to Comment 113-1

The commenter is mistaken in that PR 2305 is neither a tax nor does it lead to increased property taxes. PR 2305 instead is a regulation that provides compliance flexibility in offering 32 WAIRE Menu options, a Custom WAIRE Plan, or an optional mitigation fee. See Response to Letter 39. See the Socioeconomic Impact Assessment and Master Responses 1, 5, and 7 for discussions on costs, economic impact and legal authority. Additionally, see the responses to Comment Letter 39 for further explanation why PR 2305 is not a tax.

Response to Comment 113-2

See the Socioeconomic Impact Assessment and Master Responses 1, 3, 4, 5, and 6 for discussions on costs, air quality benefits, the growth of the warehousing industry, economic impacts, and jobs.

Response to Comment 113-3

The most recent revision to PR 2305, released on April 7, 2021, included a sunset provision in the rule language. PR 2305 will begin to sunset upon U.S. EPA finding that all air basins within South Coast AQMD have attained the 2015 National Ambient Air Quality Standard (NAAQS) for ozone (i.e., 70 parts per billion), and when California Air Resources Board (CARB) has determined that South Coast AQMD has met the state ozone standard (also 70 parts per billion). As stated in previous responses, PR 2305 is not a tax but a regulation, offering compliance flexibility in 32 WAIRE Menu options, a Custom WAIRE Plan, or an optional mitigation fee. See the Socioeconomic Impact Assessment, Master Response 1, 3, 7, 10, and responses to Comment Letters 40, and 44 for discussions on costs, air quality strategy, the mitigation fee, and legal authority. Additionally, see the responses to Comment Letter 39 for further explanation as to why PR 2305 is not a tax.

Response to Comment 113-4

See the Socioeconomic Impact Assessment and Master Responses 4 and 5 for discussions on the growth of the warehousing industry during the COVID-19 pandemic and economic impacts. Thank you for your comments and your interest in the warehouse ISR.

Response to Comment Letter 114 – HD Supply - 4/19/2021

Response to Comment 114-1

The commenter is mistaken in that PR 2305 is neither a tax nor does it lead to increased property taxes. PR 2305 instead is a regulation that provides compliance flexibility in offering 32 WAIRE Menu options, a Custom WAIRE Plan, or an optional mitigation fee which is not a tax. See the Socioeconomic Impact Assessment and Master Responses 1, 5, and 7 for discussions on costs, economic impact and legal authority. Additionally, see the responses to Comment Letter 39 for a further explanation as to why PR 2305 is not a tax.

Response to Comment 114-2

See the Socioeconomic Impact Assessment and Master Responses 1, 3, 4, 5, and 6 for discussions on costs, air quality benefits, the growth of the warehousing industry, economic impacts, and jobs.

Response to Comment 114-3

The most recent revision to PR 2305, released on April 7, 2021, includes a sunset provision in the rule language. PR 2305 will begin to sunset upon U.S. EPA finding that all air basins within South Coast AQMD have attained the 2015 National Ambient Air Quality Standard (NAAQS) for ozone (i.e., 70 parts per billion), and when California Air Resources Board (CARB) has determined that South Coast AQMD has met the state ozone standard (also 70 parts per billion). As stated in previous responses PR 2305 is not a tax as it offers flexibility in 32 WAIRE Menu options, a Custom WAIRE Plan, or an optional mitigation fee. See the Socioeconomic Impact Assessment, Master Response 1, 3, 7, 10, and responses to Comment Letters 40, and 44 for discussions on costs, air quality strategy, the mitigation fee, and legal authority. Additionally, see the responses to Comment Letter 39 for a further explanation as to why PR 2305 is not a tax.

Response to Comment 114-4

See the Socioeconomic Impact Assessment and Master Responses 4 and 5 for discussions on the growth of the warehousing industry during the COVID-19 pandemic and economic impacts. Thank you for your comments and your interest in the warehouse ISR.

Response to Comment Letter 115 – Ryan Ole Hass - 4/7/2021

Response to Comment 115-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention. PR 2305 is a part of the targeted strategy to reduce region and local NOx and PM reductions toward meeting the federal ozone standards for 2023 and 2031 and improve public health. See Master Response 3 and 4 for a discussion on the NOx emission reduction strategy, air quality benefits, and the growth of the warehousing industry during the COVID-19 pandemic.

Response to Comment 115-2

See Master Responses 1, 5, and Socioeconomic Impact Assessment for a discussion on the potential costs of PR 2305 and economic impacts.

Response to Comment 115-3

See Master Responses 2a, 2c, and 2d for discussions on feasibility and technology availability.

Response to Comment 115-4

See the Socioeconomic Impact Assessment and Master Responses 4 for discussions on the warehousing industry and economic impacts.

Response to Comment 115-5

See Master Response 6, and the Socioeconomic Impact Assessment for a discussion on jobs.

Response to Comment 115-6

PR 2305 provides flexible compliance options as it offers 32 WAIRE Menu options, a Custom WAIRE Plan, or an optional mitigation fee. See responses to Comment Letter 39 for a further explanation as to why PR 2305 is not a tax.

Response to Comment 115-7

See Master Responses 1, 3, and the Socioeconomic Impact Assessment for discussions on the NOx strategy, air quality benefits, and costs.

Response to Comment 115-8

Thank you for your comments and interest in the warehouse ISR.

Response to Comment Letter 116 – Gregg Pawlik - 4/21/2021

Response to Comment 116-1

PR 2305 is a part of the targeted strategy to reduce region and local NOx and PM emissions to meet the federal ozone standards for 2023 and 2031 and improve public health. See Master Response 3 and 4 for a discussion on the NOx emission reduction strategy, air quality benefits, and the growth of the warehousing industry during the COVID-19 pandemic.

Response to Comment 116-2

See Master Responses 1, 5, and Socioeconomic Impact Assessment for a discussion on the potential costs of PR 2305 and economic impacts.

Response to Comment 116-3

See Master Responses 2a, 2c, and 2d for discussions on feasibility and technology availability.

Response to Comment 116-4

See the Socioeconomic Impact Assessment and Master Responses 4 for discussions on the warehousing industry and economic impacts.

Response to Comment 116-5See Master Response 6, and the Socioeconomic Impact Assessment for a discussion on jobs.

Response to Comment 116-6

PR 2305 is flexible as it offers 32 WAIRE Menu options, a Custom WAIRE Plan, or an optional mitigation fee which we do not believe is a tax. See responses to Comment Letter 39 for discussions on why PR 2305 is not a tax.

Response to Comment 116-7

See Master Responses 1, 3, and the Socioeconomic Impact Assessment for discussions on the NOx strategy, air quality benefits, and costs.

Response to Comment Letter 117 – Mike Kelso, Trimodal – April 7, 2021

Response to Comment 117-1

The PR 2305 cost analysis relies on CARB's ZE truck price forecast table in Table C-7 of their Advanced Clean Trucks Standardized Regulatory Impact Assessment (SRIA) for ZE Class 8 truck acquisition costs in calendar years 2024-2030.[173] ZE Class 8 truck acquisition costs for calendar years 2022 and 2023 are calculated by linearly interpolating with the calendar year 2024 price estimate and the 2018 calendar year estimate of $474,930 quoted in the Appendix H: Draft Advanced Clean Trucks Total Cost of Ownership Discussion Document.[174] ZE truck prices vary considerably based on battery size and duty cycle. The ZE Class 8 price forecast in the SRIA is based on a 400 kWh battery with an estimated 140 mile daily range. Price quotes are expected to vary across truck makers, like with any product. The analysis contained in the Socioeconomic Impact Assessment is meant to be representative of costs faced broadly by warehouse operators under PR 2305.

Response to Comment 117-2

For a discussion of replacing diesel Class 8 trucks with ZE trucks, please see Response to Comment 43-35.

The PR 2305 Second Draft Socioeconomic Impact Assessment dated April 2021 assumes a 42,000 annual mileage for ZE Class 8 trucks compared with the 54,000 annual mileage assumed for Diesel Class 8 and NZE Class 8 trucks. The lower annual mileage for ZE Class 8 trucks results in higher estimates of per mile usage costs and per mile total cost of ownership for ZE Class 8 trucks (when compared to the ZE Class 8 trucks with a 54,000 annual range as was assumed in the PR 2305 Draft Socioeconomic Impact Assessment dated March 2021).

Response to Comment 117-3

This comment cites that some customers are looking at alternative ports due to rising rents (which have grown even more than stated by the commenter). The 30% cited by the commenter is not consistent with estimates calculated in the Socioeconomic Impact Assessment and Final Staff Report. That analysis found that for most scenarios the costs would increase by no more than $0.23/sf/yr, with a worst case of $0.83/sf/yr. Current rents are about $10-$11/sf/yr, and have risen about $0.50/sf/yr. PR 2305 is expected to impose about 0.5% increase in overall operating costs. Although some customers may be pursuing alternative ports, warehousing overall is growing in South Coast AQMD more than in other regions and larger market forces routinely shift where customers decide to ship goods. Vacancies are very low, even with increasing rents and millions of square feet of new buildings being introduced every year. A study of warehouse relocations was conducted by a third party, and then peer reviewed by an independent reviewer. The analysis concluded warehouses would not relocate to other locations with compliance costs at the level imposed by PR 2305. Although global trade flows shift regularly, this shifting is due to larger macroeconomic forces beyond local regulations and local costs (see Final Staff Report, Chapter 3, Rule Stringency section).

[173] https://ww3.arb.ca.gov/regact/2019/act2019/appc.pdf
[174] https://ww3.arb.ca.gov/regact/2019/act2019/apph.pdf

Response to Comment Letter 118 - Manuel A. Mancha, City of Moreno Valley Community Development Director – March 16, 2021

Response to Comment 118-1

South Coast AQMD staff recognizes the complexity of the scenario and cost modeling considered in the Draft Socioeconomic Impact Assessment for PR 2305. For more traditional proposed or proposed amended rules, the costs are more straightforward, as they cover mainly facilities known by South Coast AQMD staff, the actions expected to comply are more certain, and the costs of those actions are fairly easily estimated. Each of these factors is highly uncertain in PR 2305, e.g. which warehouse operators are affected, which actions each warehouse operator takes to comply, and how costly each compliance action turns out to be. Therefore, it is reasonable the scenario and cost estimation performed in the Draft Socioeconomic Impact Assessment is complicated.

One way South Coast AQMD staff attempted to make the analysis less complicated, was to present hypothetical compliance "scenarios." South Coast AQMD staff has developed, modeled, and estimated the costs and health benefits of 19 different compliance scenarios. See Response to Comments 43-2 for additional discussion on the use of scenario modeling for menu-based points systems. For a summary of potential impacts, the commenter is referred to Tables 26 to 31, and 42 in the Socioeconomic Impact Assessment, and Table 20 of the Final Staff Report.

Response to Comment 118-2

South Coast AQMD staff has estimated administrative costs, including those for reporting requirements of PR 2305, and included them into the cost estimates presented in the Draft Socioeconomic Impact Assessment. Since the comment was submitted, PR 2305 was updated to provide more flexibility for warehouse operators to use methods already in place to track truck activity at their warehouses (e.g., for security purposes). In PR 2305 (d)(1)(B), operators are now only required to count trucks using a 'verifiable and representative' method, rather than the more stringent method that required a 'contemporaneous record' in PR 2305 when the commenter submitted this letter. Staff tried to ensure the administrative cost assumptions are conservative in both the time required to complete each task and the per-hour salary cost to facilities. Moreover, many of the administrative costs, such as camera installations and truck tracking, are already in place at many existing PR 2305 warehouse facilities.

Response to Comment Letter 119 – Cora Went - 4/16/2021

Response to Comment 97-1

Thank you for your participation in the rule development process and your comments in support of a warehouse ISR. And thank you for your testimony on the impacts of air pollution.

Response to Comment Letter 120 – PWF, LAANE, OCCORD, and WWRC - 04/23/2021

Response to Comment 120-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention. PR 2305 is designed to reduce NOx and PM emissions to attainthe federal ozone standards for 2023 and 2031 while facilitating implementation of other regulations, and improving public health in the communities surrounding warehouses. We also recognize that the warehouse industry has been growing for several years and even during the COVID-19 pandemic.

South Coast AQMD staff's recommended stringency for the rule is 0.0025 WAIRE Points per WATT phased in over three-years. The recommended stringency was determined considering the analysis of 19 WAIRE Menu based scenarios that looked at emission reductions and costs, the potential for limited availability of WAIRE Menu options at higher stringencies, the warehouse relocation study commissioned by South Coast AQMD, and the ports' study on the Clean Truck Rate program. The stringency factor of 0.0025 WAIRE Points per WATT is expected to result in significant emission reductions and no warehouse relocations. The proposed stringency can result in significant emission reductions of approximately 10-15% of the baseline for NOx, and South Coast AQMD staff will routinely report back to the Board to evaluate the efficacy of the rule. The emission reductions from PR 2305 would help address the disproportionate burden of air pollution in the communities neighboring warehouses and reduce emissions. See also Response to Comment 40-42.

Response to Comment 120-2

Thank you for sharing your insights into the warehousing market in our region. Staff agrees that the industry is robust, and is expected to continue to grow if PR 2305 is approved. See Master Responses 4, 5, and the Socioeconomic Impact Assessment for discussions on the growth of the warehousing industry during the COVID-19 pandemic and economic impacts on the warehousing industry.

Response to Comment 120-3

South Coast AQMD Staff evaluated the range of warehouse sizes and determined that the largest warehouses have greater emissions than smaller warehouses. If PR 2305 is approved, it will require that South Coast AQMD compliance staff verify compliance for about another 3,320 facilities. It is important to ensure that the program is properly administered before increasing its scope to include many thousands of new facilities. For example, there are a total of about 52,000 industrial properties of any size in South Coast AQMD. Staff will provide annual reports to the Mobile Source Committee of the Board and will recommend potential amendments to the rule if necessary, including considerations of changing the building size threshold.

Response to Comment 120-4

The staff recommended stringency of PR 2305 is 0.0025 WAIRE Points per WATT. See Response to Comment 120-1 for additional discussion of stringency.

Response to Comment 120-5

Thank you for your comment and your interest in the warehouse ISR.

Response to Comment Letter 121 – Lee & Associates – 4/27/2021

Response to Comment 121-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention. PR 2305 is a part of the targeted strategy to reduce region and local NOx and PM emissions to meet the state and federal air quality standards and improve public health. The most recent version of the PR 2305 rule language released April 7, 2021 addresses the commenter's concerns regarding rule implementation dates. The first compliance date requiring the submission of the Warehouse Operations Notification is September 1, 2021, an informational report to be submitted by the warehouse owner requiring basic warehouse information including the square footage information on the warehouse, the tenant(s), lease duration, and contact information. The first compliance period for the largest warehouse operators to earn WAIRE Points begins on January 1, 2022. Warehouses will be phased into PR 2305 based on size over three years and once in, there is a three-year phase-in of the rule stringency. See Master Responses 3 and 4 for discussions on the strategy of PR 2305 to reduce emissions and the warehousing industry's growth during the COVID-19 pandemic.

Response to Comment 121-2

The potential costs stated by the commenter are inaccurate, as the potential cost ranges are significantly lower. Further, while there have been economic impacts during the COVID-19 pandemic, the warehousing industry has continued to grow substantially during this time due to the increase in cargo volumes. See Master Responses 1, 5, and Socioeconomic Impact Assessment for a discussion on the potential costs of PR 2305 and economic impacts.

Response to Comment 121-3

See Master Responses 2a through 2c for discussions on feasibility.

Response to Comment 121-4

See Master Response 2d for a discussion of available technology on the WAIRE Menu.

Response to Comment 121-5

See the Socioeconomic Impact Assessment and Master Responses 4 for discussions on the warehousing industry and economic impacts.

Response to Comment 121-6

See Master Responses 4, 5, 6, and the Socioeconomic Impact Assessment for discussions on jobs and economic uncertainty related to goods movement during the COVID-19 pandemic.

Response to Comment 121-7

See Master Response 6 and the Socioeconomic Impact Assessment for a discussion on the jobs impacts of PR 2305.

Response to Comment 121-8

See Master Response 7 and Responses to Comment Letters 39, 40, 44, and 106 for discussion of South Coast AQMD legal authority. As explained in the Responses to Comment Letter 44, PR 3205 does not regulate trucks or trucking companies, but rather is an indirect source regulation that applies to warehouses. A regulation might violate the commerce clause if it imposes burdens on interstate commerce that so outweigh the regulation's benefits that the regulation is unreasonable or irrational. *Pacific Merchant Shipping Ass'n. v. Goldstene*, 639 F. 3d 1154, 1177 (9th Cir. 2011). The comment fails to articulate facts to show that this is the case for PR 2305.

Response to Comment 121-9

Thank you for your interest in the warehouse ISR and your comments. This letter and responses will be available for review by South Coast AQMD Governing Board members.

Response to Comment Letter 122 – Logistics Property Co (10 letters) – 4/28/2021

NOTE: There are 10 identical letters from 10 different Logistics Property Co signatories (Vince Pergande, Robert Hefferman, Mark Glagola, Irma Sahagun, Grace Hidalgo, Cameron Pybus, Jeanne Sok, Maria Peralta, James G. Martell, and William Peltin)

Response to Comment 122-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention. PR 2305 is a part of the targeted strategy to reduce region and local NOx and PM emissions to meet the federal ozone standards for 2023 and 2031 and improve public health. The most recent version of the PR 2305 rule language released April 7, 2021 addresses the commenter's concerns regarding rule implementation dates. The first compliance date requiring the submission of the Warehouse Operations Notification is September 1, 2021, an informational report to be submitted by the warehouse owner requiring basic warehouse information including the square footage information on the warehouse, the tenant(s), lease duration, and contact information. The first compliance period for the largest warehouse operators to earn WAIRE Points begins on January 1, 2022. Warehouses will be phased into PR 2305 based on size over three years and once in, there is a three-year phase-in of the rule stringency. See Master Responses 3 and 4 for discussions on the strategy of PR 2305 to reduce emissions and the warehousing industry's growth during the COVID-19 pandemic.

Response to Comment 122-2

The potential costs stated by the commenter are inaccurate, as the potential cost ranges are significantly lower. Further, while there have been economic impacts during the COVID-19 pandemic, the warehousing industry has continued to grow substantially during this time due to the increase in cargo volumes. See Master Responses 1, 5, and Socioeconomic Impact Assessment for a discussion on the potential costs of PR 2305 and economic impacts.

Response to Comment 122-3

See Master Responses 2a through 2c for discussions on feasibility.

Response to Comment 122-4

See Master Response 2d for a discussion of available technology on the WAIRE Menu.

Response to Comment 122-5

See the Socioeconomic Impact Assessment and Master Responses 4 for discussions on the warehousing industry and economic impacts.

Response to Comment 122-6

See Master Responses 4, 5, 6, and the Socioeconomic Impact Assessment for discussions on jobs and economic uncertainty related to goods movement during the COVID-19 pandemic.

Response to Comment 122-7

See Master Response 6 and the Socioeconomic Impact Assessment for a discussion on the jobs impacts of PR 2305.

Response to Comment 122-8

See Master Response 7 and Responses to Comment Letters 39, 40, 44, and 106 for discussion of South Coast AQMD legal authority. As explained in the Responses to Comment Letter 44, PR 3205 does not regulate trucks or trucking companies, but rather is an indirect source regulation that applies to warehouses. A regulation might violate the commerce clause if it imposes burdens on interstate commerce that so outweigh the regulation's benefits that the regulation is unreasonable or irrational. *Pacific Merchant Shipping Ass'n. v. Goldstene,* 639 F. 3d 1154, 1177 (9th Cir. 2011). The comment fails to articulate facts to show that this is the case for PR 2305.

Response to Comment 122-9

Thank you for your interest in the warehouse ISR and your comments. This letter and responses will be available for review by South Coast AQMD Governing Board members.

Response to Comment Letter 123 – Great Buy Products - 4/9/2021

Response to Comment 123-1

The commenter's concern that PR 2305 will lead to increased property taxes is incorrect. PR 2305 is an air quality regulation that provides flexible compliance options by offering 32 WAIRE Menu options, a Custom WAIRE Plan, or an optional mitigation fee to comply. See the Socioeconomic Impact Assessment and Master Responses 1, 5, and 7 for discussions on costs, economic impact and legal authority. Additionally, see the responses to Comment Letter 39 for discussions on why PR 2305 is not a tax.

Response to Comment 123-2

See the Socioeconomic Impact Assessment and Master Responses 1, 3, 4, 5, and 6 for discussions on costs, air quality benefits, the growth of the warehousing industry, economic impacts, and jobs.

Response to Comment 123-3

The most recent revision to PR 2305, released on April 7, 2021, includes a sunset provision in the rule language. PR 2305 will begin to sunset upon the U.S. EPA finding that all air basins within South Coast AQMD have attained the 2015 National Ambient Air Quality Standard (NAAQS) for ozone (i.e., 70 parts per billion), and when the California Air Resources Board (CARB) has determined that South Coast AQMD has met the state ozone standard (also 70 parts per billion). As stated in previous responses PR 2305 does not increase taxes. Instead, PR 2305 is a flexible air quality regulation offering 32 WAIRE Menu options, a Custom WAIRE Plan, or an optional mitigation fee. See the Socioeconomic Impact Assessment, Master Response 1, 3, 7, 10, and responses to Comment Letters 40, and 44 for discussions on costs, air quality strategy, the mitigation fee, and legal authority. Additionally, see the responses to Comment Letter 39 for discussions on why PR 2305 is not a tax. Also, the options to comply with PR 2305 are not arbitrary, as each compliance option addresses emissions associated with warehouses.

Response to Comment 123-4

See the Socioeconomic Impact Assessment and Master Responses 4 and 5 for discussions on the growth of the warehousing industry during the COVID-19 pandemic and economic impacts. Thank you for your comments and your interest in the warehouse ISR.

Response to Comment Letter 124 – Rexford Industrial - 4/9/2021

Response to Comment 124-1

The commenter is incorrect, PR 2305 will not result in the increase of property taxes. PR 2305 is instead an air quality regulation that provides flexibility by offering 32 WAIRE Menu options, a Custom WAIRE Plan, or an optional mitigation fee to comply. See the Socioeconomic Impact Assessment and Master Responses 1, 5, and 7 for discussions on costs, economic impact and legal authority. Additionally, see the responses to Comment Letter 39 for discussions on why PR 2305 is not a tax.

Response to Comment 124-2

See the Master Responses 3 and 8 for discussions on air quality benefits and concerns on duplicative regulatory effort. Staff appreciates that the commenter has used innovative leasing and business models to drive environmental initiatives. This same kind of innovative approach can be useful for warehouse operators to comply with PR 2305.

Response to Comment 124-3

PR 2305 is not a tax nor does it lead to increased property taxes. PR 2305 provides flexible compliance pathways in offering 32 WAIRE Menu options, a Custom WAIRE Plan, or an optional mitigation fee,. See the Socioeconomic Impact Assessment and Master Responses 1, 2a, 2c, and 5 for discussions on costs, feasibility, and economic impacts. Additionally, see the responses to Comment Letter 39 for discussions on why PR 2305 is not a tax.

Staff notes that the commenter's most recent financial report was published since the comment letter was submitted.[175] This report shows that even with PR 2305 in place that they project vacancy in their property portfolio to go down in the future, and same property income to increase. Another recent projection by the commenter's firm found that rents are projected to grow over the next five years by 41% in LA County.[176] These projections are consistent with the analysis in the Socioeconomic Impact Assessment that while there will be costs with PR 2305, the industry is expected to be able to absorb increasing costs as part of their normal business and that it will continue to grow. The potential monetized public health benefit of PR 2305 is expected to be about three times higher than the compliance costs for most scenarios that were analyzed in the Final Staff Report.

Response to Comment 124-4

See the Socioeconomic Impact Assessment and Master Responses 4 and 5 for discussions on the growth of the warehousing industry and economic impacts.

[175] https://s21.q4cdn.com/234859041/files/doc_financials/2021/q1/REXR-Q1-2021-Earnings-Release-FINAL.pdf
[176] https://s21.q4cdn.com/234859041/files/doc_presentations/2021/Final-2021-Rexford-Citi-Investor-Presentation.pdf

Response to Comment Letter 125 – Clean Energy - 04/27/2021

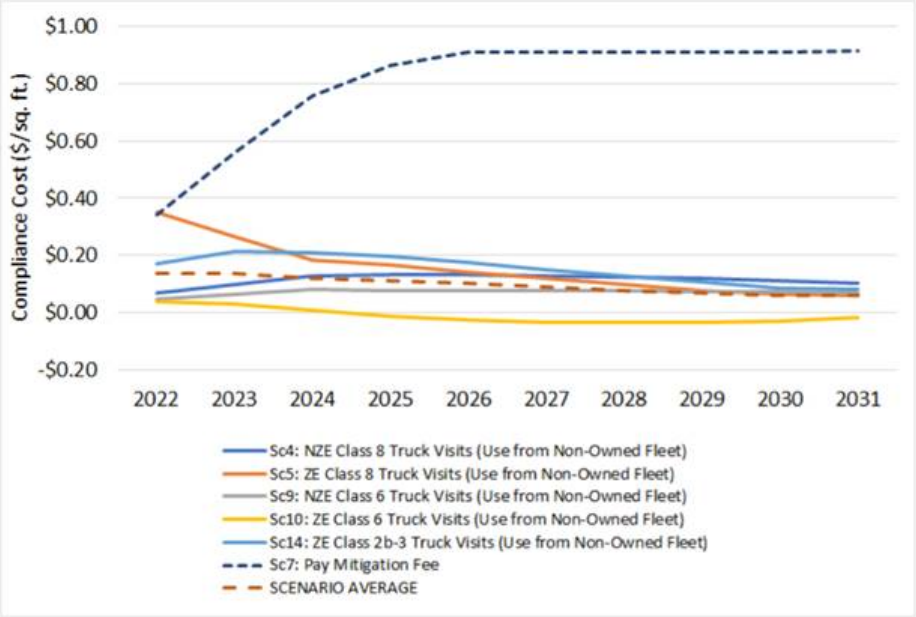
Response to Comment 125-1

The commenter did not state the entire purpose of PR 2305. The purpose, as stated in PR 2305 (a) is:

> The purpose of this rule is to reduce local and regional emissions of nitrogen oxides and particulate matter, and to facilitate local and regional emission reductions associated with warehouses and the mobile sources attracted to warehouses in order to assist in meeting state and federal air quality standards for ozone and fine particulate matter.

PR 2305 is a unique rule compared to other more traditional stationary source rules. There are many air quality needs that PR 2305 is trying to address (see Air Quality Need section in Chapter 1 of the Final Staff Report), many complementary policies and regulations in development, albeit with longer timelines, and a large and diverse industry with differing needs. PR 2305 is therefore designed to be flexible, while meeting the region's air quality needs. An important consideration with any regulatory development is cost, and PR 2305 is no different. With the flexibility allowed in PR 2305, costs are a reasonable common metric for all compliance actions that can serve as a proxy for the level of effort of a warehouse operator. These costs have therefore been built into the very structure of the WAIRE Points system. The end result is a simplified menu of compliance options that facilitates smoother administration and implementation across all WAIRE Menu items. PR 2305 is expected to result in near term emission reductions, as early as 2022-2023. These near term reductions are expected to occur because warehouse operator's are expected to choose the most cost-effective approach to compliance. As shown in Figure 16 of the Final Staff Report (copied below), NZE class 8 truck visits (Sc. 4) are more cost effective than ZE class 8 truck visits (Sc. 5) until about 2027.

Figure 16: Potential Bounding Analysis Costs from Truck Visits from a Non-owned Fleet



Because of the structure of PR 2305 including costs together with emission reductions in the WAIRE Points system, this cheaper scenario result in greater NOx emission reductions for

NZE class 8 trucks. For example, Scenario 4 (NZE trucks) results in 2.5 tons per day while Scenario 5 (ZE trucks) results in only 2.3 tons per day in 2024 (Table 15 of the Final Staff Report). Warehouse operators are anticipated to gravitate towards the lower cost options of compliance that fits within their operational needs. In the early years, this is expected to be NZE trucks, and the WAIRE Points system encourages this outcome. This also appears to be the goal of the commenter.

Response to Comment 125-2

See Response to Comment 125-1. PR 2305 is designed to achieve emission reductions faster than CARB regulations, including achieving emission reductions in the 2022-2023 timeframe, and in the 2031 timeframe as shown in Table 15 of the Final Staff Report.

Response to Comment 125-3

There are other significant benefits of the current WAIRE Points system's structure in addition to those discussed in Response to Comment 125-1 and 2 above. PR 2305 is different than traditional rules in that it applies to indirect sources, who can have a critical and unique role to play in the transformation of the truck fleet. In particular, on the path to zero emissions trucks in the coming decade, charging and fueling infrastructure could present a significant obstacle. PR 2305 encourages its development at sites that make the most sense to warehouse operators. By including costs in the WAIRE Points system, the installation of the ZE infrastructure can earn WAIRE Points on its own, without needing to wait for it to be utilized. This is an important consideration as these ZE infrastructure projects can take 1-2 years to complete, or more. At the same time, the warehousing industry is dynamic, and short term leases of 3-5 years are common. With approximately 2,900 warehouses required to earn WAIRE Points, it is important that compliance occur over a short period, in this case annually, to ensure that PR 2305 applies equally to all warehouse operators given the significant expected turnover. If costs are taken out of the WAIRE Points system, then it is not clear how installing ZE charging/fueling infrastructure could earn any WAIRE Points until it was used. Given the potentially significant costs and effort associated with these kinds of projects, this effectively discourages the eventual transition to ZE trucks.

Finally, including costs in the WAIRE Points system allows the acquisition and usage of vehicles/equipment to earn WAIRE Points independently. Because of this approach, existing incentive programs should be able to work within the regulatory format of PR 2305. The dynamic of allowing incentives to work within a regulation is unique, but an important consideration given the substantially higher costs of the technologies included in the WAIRE Menu, whether NZE or ZE. By allowing operators to use apply for and use incentive funding, they will be able to reduce the cost of implementation and get more NZE and ZE trucks on the road faster. With increased demand for incentives, it is also possible that the level of incentive funding may be able to be lowered and spread among more award recipients, thus spreading the benefits of the incentives to a broader population.

By removing the cost component from the WAIRE Points system, it is not clear that incentives could still be used in the program and there would be less encouragement of the installation of ZE charging/fueling infrastructure. Both of these outcomes would make PR 2305 a less effective rule. Finally, as a procedural matter this kind of fundamental reshaping of the rule

would likely result in many months of delay to redo from scratch the analysis in the Final Staff Report, Socioeconomic Impact Assessment, and Environmental Assessment. This would also result in a delay of emission reductions.

Response to Comment 125-4

Thank you for your comments and interest in the warehouse ISR.

Response to Comment Letter 126 – Vogel Properties - 4/19/2021

NOTE: Should this Comment Letter have any CEQA concerns, the Final EA can be found in Attachment J.

Response to Comment 126-1

Thank you for your interest in the warehouse ISR development process, and for bringing your comments to our attention. Most of the requirements of PR 2305 are the responsibility of the warehouse operator as they have day to day control of the operations that are the source of emissions. However, as the warehouse owner has unique knowledge about the tenants and leases the warehouse operator is required to submit a Warehouse Operations Notification (WON) which provides basic information on the size of the warehouse, information on the current and previous tenants, lease terms, and square footage leased. If adopted, the WON is due September 1, 2021 and each time there are new tenants or renovations to the warehouse that changes the rentable building area. As the warehousing industry is dynamic, only the warehouse owner would have the most accurate information South Coast AQMD compliance staff would need regarding their building. Very limited reporting is required of the warehouse owner unless they are also the operator, or they wish to exercise the provision of earning WAIRE Points on behalf of the warehouse operator. Regarding the commenters statement of a vacant warehouse, a WON would still be required to report the size of the warehouse and the last tenant.

Response to Comment 126-2

PR 2305 seeks to reduce regional and local NOx and PM emissions to meet attainment of the federal and state air quality standards for ozone and PM, using the authority granted to us. The goods movement sector is the source of more than half of the NOx emissions that cause ozone and trucks are the largest source, and the warehousing category is the largest facility-based sector contributing to those emissions.[177] See Master Response 4 and 7 for discussions on the growth of the warehousing industry and the South Coast AQMD legal authority.

Response to Comment 126-3

If a warehouse operator is concerned with the potential for grid impacts they may choose a different option in the WAIRE Menu, or implement a site-specific Custom Plan, or pay a mitigation fee. Local utility programs are also expanding to address the need for charging infrastructure for heavy duty vehicles.[178] While the local distribution grid at every site may have its own constraints, an analysis by the California Energy Commission determined that the load added to the grid from even wider adoption of truck electrification than PR 2305 would ever require is only about 1-2% higher than their 'mid-case' projection, and less than their 'high-case' projection. See pg. 78 of the Final Staff Report and Response to Comment 1.11 in the Final Environmental Assessment Appendix X for additional discussion.

[177] http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2018/2018-may4-032.pdf
[178] Example: https://crt.sce.com/overview

Response to Comment 126-4

South Coast AQMD sponsored a study on the potential relocation of warehouses due to regulation. The study found that at the stringency proposed there are no warehouses expected to relocate. In fact, the warehousing industry continues to grow maintaining a low vacancy rate of 4% even as rates are increasing annually, due to the close proximity to the San Pedro Bay ports, developed transportation infrastructure, and a large workforce. See Master Response 4, 5, and the Socioeconomic Impact Assessment for discussions on the growth of the warehousing industry during the COVID-19 pandemic and economic impacts. Thank you for your comments and your interest in the warehouse ISR.

SUPPLEMENT TO AGENDA ITEM #27
Board Meeting of May 7, 2021

The South Coast AQMD has continued to receive numerous public comment letters for Item No. 27 Certify Final Environmental Assessment and Adopt Proposed Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions Program, and Proposed Rule 316 – Fees for Rule 2305, Submit Rule 2305 for Inclusion Into the SIP, and Approve Supporting Budget Action, since the release of the Governing Board agenda package last week. Based on the comments received, this supplement has been prepared to provide additional information to the Governing Board and the public.

This supplement does not involve any changes to Proposed Rule 2305 or Proposed Rule 316. *See*, Health and Safety Code section 40726. Instead, the first supplement is a clarification to the WAIRE Implementation Guidelines to specifically identify a type of action that may be permissible in a Custom WAIRE Plan. The remaining two supplements provide clarifying responses to issues raised in comment letters received on May 4, 2021 from Airlines for America and the law firm of Holland & Knight, representing the California Trucking Association (letters attached). An agency may choose to provide written responses to comments provided outside of the public comment period even though written responses are not required. *See*, e.g., 14 Cal. Code Regs. section 15088(a).

Supplement Number One-Clarification to the WAIRE Mitigation Plan Guidelines [Agenda Item No. 27, Attachment I, Staff Report, Appendix A, page 103, second paragraph, add:

"A Custom WAIRE Plan allows for local hire to be counted as points towards compliance with the rule by reducing employee commute emissions. Use of a local state certified apprenticeship program or a skilled and trained workforce with a local hire component can help demonstrate those emission reductions."

Supplement Number Two-Response to Letter from Airlines for America, dated May 4, 2021 (Attachment A)

I. PR 2305 is not preempted by federal law.

A. PR 2305 is not preempted by the federal Clean Air Act.

The letter makes several arguments that PR 2305 is preempted by the federal Clean Air Act ("CAA" or "Act"). As explained previously in our responses to the California Trucking Association letter of March 2, 2021 ("CTA Letter"), these arguments lack merit.

First, the letter suggests that PR 2305 is preempted by the provisions relating to indirect source regulation ("ISR") in CAA section 110. 42 U.S.C. § 7410(a)(5). It contends that section 110 preempts any ISR programs other than those applicable to new sources. This argument is

precluded by section 116 of the CAA, which expressly disclaims any preemption of state law beyond that effected by several enumerated sections of the Act. 42 U.S.C. § 7416. Except as specified in the enumerated sections, "nothing in this chapter shall preclude or deny the right of any State or political subdivision thereof to adopt or enforce (1) any standard or limitation respecting emissions of air pollutants or (2) any requirement respecting control or abatement of air pollution." *Id.* The enumerated sections do not include section 110.[1] The savings provision in section 116 thus makes clear that section 110 cannot preempt PR 2305.

Even putting aside section 116, the ISR provisions in section 110 were clearly not intended to preempt state regulation of indirect sources. The language in section 110(a)(5) was adopted as part of the 1977 Clean Air Act Amendments to limit EPA's authority to require ISR in SIPs, not to restrict states' authority to develop their own programs under state law. The legislative history confirms this interpretation. *See* H.R. Rep. No. 95-294 (1977), *reprinted in* 1977 U.S.C.C.A.N. 1077; H.R. Conf. Rep. No. 95-564, *reprinted in* 1977 U.S.C.C.A.N. 1502; *see also Nat'l Ass'n of Home Builders v. San Joaquin Valley Unified Air Pollution Control Dist.*, 627 F.3d 730, 737-38 (9th Cir. 2010) ("*NAHB*"). Indeed, the comment letter in section 2 emphasizes that the 1977 amendments were adopted to curtail EPA's authority to require ISR programs in SIPs in response to rules proposed by EPA to require review of new indirect sources. The reference to states' ability to develop their own programs was included merely to clarify that the statutory language was intended only to limit EPA's authority to *mandate* inclusion of ISR requirements in SIPs, not to limit the requirements that states could choose to adopt.[2] *See also NAHB*, 627 F.3d at 738 (the 1977 amendments "'left largely to the states' the matter of 'whether and how to regulate' indirect sources") (quoting *Sierra Club v. Larson*, 2 F.3d 462, 467 (1st Cir. 1993)).

Second, the letter contends that CAA section 209(e) preempts the proposed rule. The letter adopts the comments provided by CTA on section 209 preemption, to which District counsel has already responded. However, the CTA letter did not assert preemption under section 209(e), which addresses emission standards for off-road vehicles and engines, but rather argued that PR 2305 is preempted by section 209(a), which applies to on-road vehicles and engines. Regardless, the same analysis applies to both provisions, which, as noted in District counsel's response to the CTA Letter, are not meaningfully different. *See* Response to CTA Letter at 5 n.5. As explained in the response to the CTA Letter, both arguments are precluded by the Ninth

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[1] Counsel for the District noted this in responding to the CTA Letter. *See* Response to CTA Letter at 3 n.2.

[2] The original version of section 110 adopted by the 1970 CAA amendments provided that SIPs must "include[] emission limitations, schedules, and timetables for compliance with such limitations, and such other measures as may be necessary to insure attainment and maintenance of such primary or secondary standard, including, but not limited to, land-use and transportation controls." Pub. L. No. 91-604, § 4(a) (1970) (adding section 110(a)(2)(B)). Because this language would certainly include ISR programs of all kinds, the comment's position necessarily implies that Congress intended in 1977 to *strip* states of their preexisting authority to adopt their own regulation of existing indirect sources. The comment offers no explanation or support for that implausible proposition.

Circuit's decision in *NAHB*, which rejected a similar challenge to an ISR program adopted by the San Joaquin District.

Finally, the comment implies in a footnote (n. 22) that PR 2305 is preempted by both the CAA and state law because it allegedly regulates land use. But the comment does not explain how PR 2305 supposedly interferes with local land use regulation. It only obliquely states that "*to the extent* PR 2305 infringes on city and county land use authority" it would be preempted. (Emphasis added.) In fact, PR 2305 does nothing to interfere with local governments' ability allow, disallow, or control the use of land for warehouse purposes or dictate where warehouses may be built. Like every other air district rule, it merely limits emissions from particular sources—here, indirect sources. As described by the Supreme Court, "Land use planning in essence chooses particular uses for the land; environmental regulation, at its core, does not mandate particular uses of the land but requires only that, however the land is used, damage to the environment is kept within prescribed limits." *Cal. Coastal Comm'n. v. Granite Rock Co.*, 480 U.S. 572, 587 (1987). PR 2305 neither mandates nor prohibits any particular use of land and thus does not interfere with land use authority.

B. PR 2305 is not preempted by the Airline Deregulation Act or the Federal Aviation Administration Authorization Act.

Airlines for America asserts that PR 2305 is preempted by the Airline Deregulation Act ("ADA") and the related Federal Aviation Administration Authorization Act ("FAAAA"). As explained in our prior responses to the CTA Letter, the Scopelitis, Garvin, Light, Hanson & Feary letter of April 22, 2021, the Los Angeles World Airports ("LAWA") letter of March 2, 2021, and the United Airlines letters of March 2, 2021 and April 23, 2021, these contentions lack merit.

The FAAAA preempts state and local laws "related to a price, route, or service of any motor carrier . . . with respect to the transportation of property." 49 U.S.C. § 14501(c)(1). While the FAAAA may preempt state laws "having a connection with, or reference to" prices, routes, or services, *Rowe v. N.H. Motor Transp. Ass'n*, 552 U.S. 364, 370-71 (2008), state laws affecting prices, routes, or services "in only a 'tenuous, remote, or peripheral . . . manner' with no significant impact on Congress's deregulatory objectives" are not preempted. *Cal. Trucking Ass'n v. Su*, 903 F.3d 953, 960 (9th Cir. 2018) (quoting *Rowe*, 552 U.S. at 371); *see also Cal. Trucking Ass'n v. Bonta*, — F.3d —, 2021 WL 1656283, at *7 (9th Cir. Apr. 28, 2021) (stating that "the Supreme Court's decisions about F4A preemption . . . have tended to construe the F4A narrowly.").[3] Courts apply the same preemption analysis under the ADA that they apply under the FAAAA. *Ward v. United Airlines, Inc.*, 986 F.3d 1234, 1243 n.2 (9th Cir. 2021); *see also* 49 U.S.C. § 41713(b)(1) (providing that a State may not enact or enforce a rule "related to a price, route, or service of an air carrier."). While the FAAAA preemption provision includes the additional phrase "with respect to the transportation of property" that is not found in the ADA, the ADA nevertheless only preempts those regulations that would have a "significant impact" on

[3] The recent decision in *Bonta* also explains that the language from *American Trucking Associations v. City of Los Angeles*, 559 F.3d 1046, 1053 (9th Cir. 2009), cited in footnote 35 of the letter, is dictum, and the issue discussed was not on appeal in that case. 2021 WL 165283, at *11.

airline prices, routes, or services, and not those that affect routes, rates, or services in a tenuous or peripheral manner. *Id.* at 1243.

Airlines for America asserts that PR 2305 directly regulates carrier routes and services because the WAIRE Points Compliance Obligation ("WPCO") is determined based on the number of truck trips to warehouses, which the letter terms "routes," and the types and emissions of trucks making those trips, which the letter terms "services." As an initial matter, the WPCO does not directly regulate trucks or airlines. A warehouse's WPCO is based on the total emissions related to a warehouse facility. While it is calculated based on truck trips, those trips serve as a proxy for total warehouse emissions, because the number of truck visits is representative of the total activity at, and emissions associated with, a warehouse. Moreover, the WPCO does not require warehouse operators to take any specific action, let alone any action related to prices, routes, or services of airlines or motor carriers. Instead, operators may select their preferred compliance actions from a menu containing many options that are wholly unrelated to transportation (e.g., installing renewable energy systems on buildings, installing air filters for sensitive receptors, or adopting a custom plan).

Further, contrary to the letter's assertion, the WPCO does not directly regulate routes or services. The term "routes" in the FAAAA and ADA refers to "courses of travel." *Air Transport Ass'n of Am. v. City & Cty. of San Francisco* (9th Cir. 2001) 266 F.3d 1064, 1071. Neither the WPCO specifically nor PR 2305 as a whole regulates courses of travel—neither binds any airline or motor carrier to a particular route or makes a specific route necessary. *See Dilts v. Penske Logistics, LLC*, 769 F.3d 637, 649 (9th Cir. 2014). Similarly, the types of trucks used and their emissions do not constitute "services." Thus, for example, even a direct regulation of emissions-control equipment in trucks is not preempted by the FAAAA. *See Cal. Dump Truck Owners Ass'n v. Nichols*, No. 2:11-cv-00384, 2012 WL 273162 at *4-8 (E.D. Cal. Jan. 30, 2012); *see also Bedoya v. Am. Eagle Express*, 914 F.3d 812, 821 (explaining that "[t]he FAAAA's focus on prices, routes, and service[s] shows that the statute is concerned with the industry's production outputs," and not "resource inputs," including "labor, capital, and technology, which may be regulated by various laws."); *S.C. Johnson & Son, Inc. v. Transp. Corp. of Am., Inc.*, 697 F.3d 544, 558 (7th Cir. 2012) (same).

The letter next asserts that PR 2305's requirement that warehouse operators tally truck trips to facilitate the WPCO calculation requires motor and air carriers to adopt a new system of services similar to that required in the regulation held preempted in *Rowe*. Here, too, the comment mistakes the scope of the term "services." For example, in *Rowe*, the preempted law required carriers to offer a new "recipient-verification service" that obliged them to verify the age and identity of individuals receiving shipped tobacco products, 552 U.S. at 368, which presumably benefitted customers by making it less likely that tobacco products would fall into the hands of minors. Here, however, unlike the regulation in *Rowe* that effectively obligated motor carriers to offer new services, the requirement to tally truck trips does not oblige motor carriers to offer any new service or alter any existing service—it merely requires warehouse operators to count truck arrivals. This requirement has nothing to do with the services a motor carrier offers to a customer.

The letter also asserts that PR 2305 directly regulates cargo services by establishing applicability thresholds based on warehouse size. The letter, however, does not provide any

explanation as to how excluding warehouses below a certain capacity bears any relation to the prices, routes, or services of motor carriers or airlines.

The letter next argues that the principle in *Ray v. Atlantic Richfield Co.*, 435 U.S. 151 (1978)—that an ordinance with an alternative compliance option that would be preempted if applied independently is not preempted where it is accompanied by a non-preempted alternative—does not apply. The letter contends that this principle does not apply to PR 2305 because the WPCO effectively compels warehouse operators to reduce the number of truck trips or to switch to lower-emissions vehicles. As stated above, however, the WPCO itself does not require warehouse operators to take any specific action—it is merely a calculation of the warehouse's effective emissions. And the compliance options available include actions wholly unrelated to transportation. The principle in *Ray* therefore applies here.

The letter next asserts that the mitigation fee compliance option cannot save PR 2305 from preemption because it is the only option available to warehouse operators that do not operate their own fleet of trucks and cannot purchase lower-emissions vehicles. This assertion is incorrect. First, the mitigation fee option is not needed to "save" PR 2305 from preemption because the proposed rule is not preempted, as explained above. Second, the mitigation fee option is not the only available option for warehouse operators that do not operate their own fleet of trucks. Warehouse operators in that position may, for example, install renewable energy systems, install charging equipment, install air filters for sensitive receptors, or contract with motor carriers using ZE or NZE vehicles, or they may develop their own custom compliance plans. As noted above, many of these options have nothing to do with transportation by motor carriers or airlines, and no single option is required.

Finally, the letter asserts in two footnotes (numbers 36 and 45, respectively), with no analysis, that PR 2305 is preempted by two additional statutes. These footnotes are incorrect. First, PR 2305 is not preempted by the Anti-Head Tax Act, 49 U.S.C. § 40116, because the mitigation fee is not required, nor is it a direct head tax or a fee on the sale of air transportation. *See Alaska Airlines, Inc. v. Dept. of Food & Ag.*, 33 Cal. App. 4th 506, 513-14 (1995). Second, the letter asserts that PR 2305 is preempted by the Federal Aviation Act of 1958 "insofar as it interferes with the FAA's exclusive jurisdiction over aviation, including the movement and/or operation of aircraft." PR 2305 does not interfere with the movement or operation of aircraft and thus is not preempted by the Federal Aviation Act of 1958.

II. The District has authority to regulate emissions associated with existing warehouses.

The comment also contends that the District lacks authority to adopt an ISR program that covers existing, as opposed to new, sources. District counsel previously addressed this argument in detail in response to the CTA Letter. *See* Response to CTA Letter at 1-4.

Indeed, for many years, the District has implemented ISR for large employers, Rule 2202, which applies to existing sources and requires the source to select from several options, including reducing commute trips, reducing emissions through other projects, or paying an air quality improvement fee, which is used to obtain emission reductions.

Further, the comment's characterization of Health and Safety Code ("HSC") section 40440(b)(3) is simply incorrect. That section imposes a mandate; it does not limit authority. It requires the District to provide for "indirect source controls in those areas of the south coast district in which there are high-level, localized concentrations of pollutants or with respect to any new source which will have a significant effect on air quality in the South Coast Air Basin." Only the second half of the sentence refers to new sources; the first half refers to all sources, whether or not new, demonstrating that "indirect source controls" are not inherently limited to new sources.

Moreover, neither the comment, the CTA Letter, or any other comments received by the District have explained *why* the Legislature would supposedly prohibit the District from applying ISR to existing sources. The District routinely regulates a wide variety of both new and existing sources. Indeed, section 40440(b) demonstrates that the District's regulatory authority under section 40440(a) fully extends to existing sources, as it mandates "the use of best available retrofit control technology for existing sources." HSC § 40440(b)(1); *see also Am. Coatings Ass'n v. S. Coast Air Quality Mgmt. Dist.*, 54 Cal. 4th 446 (2012) (upholding the District's regulation of emissions from coatings as an existing source under section 40440(b)(1)). Accordingly, in the absence of a prohibition or limitation on the District's regulation of existing sources, the District may regulate such sources. As explained in response to the CTA Letter, neither section 40716 nor section 40440(b)(3) imposes such a limitation.

The comment again emphasizes the ISR provisions in CAA section 110. As noted in response to the CTA Letter, CAA section 110 is irrelevant to the question whether the District has statutory authority to adopt PR 2305. The District's authority derives from state, not federal, law. Section 110 is relevant only insofar as it *preempts* the South Coast AQMD's otherwise existing authority. As explained above and in response to the CTA Letter, section 110 does not preempt any state law. The comment does not explain how section 110 could be relevant beyond the context of preemption. Accordingly, the comment's reliance on section 110 is misplaced.[4]

Supplement Number Three-Response to Letter from Holland & Knight Representing the California Trucking Association, dated May 4, 2021 (Attachment B)

I. The South Coast AQMD has authority to regulate emissions associated with existing warehouses.

The comment argues again that the District lacks authority to adopt ISRs for existing indirect sources. As explained above in response to the Airlines letter and previously in response to the previous CTA Letter, this is incorrect. The new letter largely reiterates arguments made in CTA's prior letter.

The comment argues that the District lacks authority to regulate existing indirect sources because the HSC includes no provision that specifically refers to "existing indirect sources." As

[4] The comment letter submitted by the California Air Resources Board similarly concludes that the CAA does not restrict the District's authority to adopt ISR for existing sources.

noted in response to CTA's prior letter that there is no principle of law that requires such specific authorization. The comment does not and cannot grapple with the point made in the prior responses that the Legislature also did not specifically enumerate the vast number of other sources that the District regulates, such as lead smelters, pharmaceutical manufacturing facilities, or fluidized catalytic cracking units. The letter fails to explain why a specific authorization is not required for those sources but should be required for regulation of existing indirect sources. Regulation of all of these sources is authorized by the several provisions expressly granting rulemaking authority to the District in furtherance of attaining state and federal air quality standards.

The letter contends that the rule is outside the District's "implied authority." But the rule is authorized by the District's ample express authority provided by the statutory sections cited in the prior responses. No authority need be implied. Again, the Legislature was not obligated to specifically authorize regulation for each type of source that the District may regulate.

The letter contends that the phrase "indirect source program" in the HSC must be given the same meaning as that phrase is given by the ISR provisions in federal CAA section 110. The glaring defect in this argument is that the HSC does not use that phrase at all. Rather, in section 40716 it refers to "regulations to . . . [¶] [r]educe or mitigate emissions from indirect and areawide sources of air pollution" and in section 40440(b)(3) it refers to "indirect source controls." The only commonality between these provisions and section 110 are the words "indirect source." That phrase is defined in CAA section 110 *without* any limitation to new or modified sources, and in fact it expressly includes existing sources:

> [T]he term 'indirect source' means a facility, building, structure, installation, real property, road, or highway which attracts, or may attract, mobile sources of pollution. Such term includes parking lots, parking garages, and other facilities subject to any measure for management of parking supply (within the meaning of subsection (c)(2)(D)(ii)), including regulation of *existing* off-street parking but such term does not include new or existing on-street parking.

42 U.S.C. § 7410(a)(5)(C) (emphasis added). Accordingly, if section 110 provides a guide to interpretation of the HSC, it suggests that the state law should *not* be read as precluding regulation of existing indirect sources.

Further, as explained above in response to the Airlines letter, the implication that section 110 should be read as a limit on the scope of authority under California law fundamentally mistakes the purpose of the ISR provisions in section 110. They were adopted to limit EPA's authority to compel states to include ISR requirements in their SIPs. The letter fails to provide legislative history or other indicia of legislative intent to support the notion that the California Legislature intended to incorporate similar limitations on the otherwise broad authority of air districts to regulate indirect sources.

II. PR 2305 is not preempted by federal law.

The letter again contends that PR 2305 is preempted under CAA section 209 because it is allegedly a "purchase mandate." This is incorrect, as explained in the response to the prior CTA

Letter, and was explicitly rejected by the Ninth Circuit in its decision upholding the San Joaquin ISR program in *NAHB. See NAHB*, 627 F.3d at 735-36. Nothing in the current letter changes that analysis.

The letter repeats the contention from the prior letter that the San Joaquin ISR truly regulated total site emissions whereas PR 2305 is supposedly limited to truck emissions. Neither is true. The portion of the San Joaquin program challenged in *NAHB* was limited to emissions from construction equipment. Direct regulation of those emissions would have been preempted, and yet the court upheld the program because it involved regulation of an *indirect* source. *See* Response to CTA Letter at 6. The court upheld the program even though "NAHB correctly observe[d] that Rule 9510 is ultimately directed at emissions that come from construction equipment." 627 F.3d at 736. Moreover, as noted in the prior responses, PR 2305 does not regulate truck emissions. Truck trips are used to establish the WPCO for warehouses as a proxy for total facility emissions. Response to CTA Letter at 6. The new letter emphasizes that the WPCO calculation takes into consideration the emissions associated with those truck trips, but fails to explain how that fact demonstrates that those weighted truck trips are not representative of total facility emissions. The District has not denied that the majority of emissions associated with warehouse operations are emissions from truck trips. But that does not convert the rule into an emission standard preempted by section 209, just as the fact that the San Joaquin rule was "ultimately directed at emissions that come from construction equipment" did not cause it to be a preempted emission standard for construction equipment.

The letter further argues that *NAHB* does not control here because the San Joaquin program involved regulation of new, rather than existing, indirect sources. The letter fails to explain how that distinction could be relevant for purposes of section 209 preemption, which does not address indirect sources. Nor does *NAHB* rely in any respect on the fact that the San Joaquin program involved new construction as opposed to existing sources.

But more fundamentally, the letter misconstrues the indirect source provisions in section 110. As noted above, those provisions were adopted to restrict *EPA's ability* to implement rules that it had proposed which would have required states to undertake review of new indirect sources. If the letter's interpretation of section 110 were correct, EPA would be prohibited from requiring states to include in their SIPs ISR programs for new sources, but would be *entirely free* to require states to include such programs to regulate existing sources. If it were not obvious, the legislative history confirms that this was not Congress's intent: "An indirect source review program is one which provides for the review of new, *existing* or modified indirect sources." H.R. Conf. Rep. 95-564, at 126 (1977), *reprinted in* 1977 U.S.C.C.A.N. 1502, 1507 (emphasis added). Because section 110's ISR provisions are not limited to new sources, they cannot provide a basis for treating control of new indirect sources as preserved from preemption but control of existing indirect sources as preempted.

III. PR 2305 can be included in the SIP.

The letter also makes a new argument that PR 2305 cannot be included in the SIP because, supposedly, only ISR programs that target new sources can be included in the SIP. As just noted, this is a misreading of the ISR provisions in section 110(a)(5). But moreover, it is inconsistent with the structure of section 110. Section 110 does not itemize the sorts of control

measures that states may include in their SIPs. Accordingly, a state need not point to some provision of that section as "authorizing" the inclusion of a measure in the SIP. Rather, the statute directs states to "include enforceable emission limitations *and other control measures, means, or techniques* (including economic incentives such as fees, marketable permits, and auctions of emissions rights), . . . as may be necessary or appropriate to meet the applicable requirements of this chapter." 42 U.S.C. § 7410(a)(2)(A) (emphasis added). It leaves the formulation of those "measures, means, or techniques" to the states; that is why they are called *state* implementation plans. As noted above, the ISR provisions were designed solely to restrict the authority of EPA to compel states to include ISR programs among those "measures, means, or techniques," not to limit a state's voluntary choice of such programs.[5]

Finally, the letter contends that the District views PR 2305 as authorized by CARB and EPA's approval of the MOB-3 control measure in the SIP. The District does not contend that approval of MOB-03 authorizes the rule. The authority for the rule comes from state law, as discussed above.

IV. The Project Description In The CEQA Analysis Is Not Deficient.

The EA's project description adequately described the proposed project, including the mitigation fee component. At page 2-17, the Draft EA explains what these mitigation fees could be used for: "Similar to the measures used to earn WAIRE Points, the mitigation program would implement measures such as subsidizing the purchase of NZE and ZE trucks and/or the installation of charging and fueling infrastructure for ZE trucks. The mitigation program would prioritize use of the mitigation fees in areas near the warehouses using this compliance option. Therefore, the environmental impacts associated with the mitigation program are similar to implementation of measures to earn WAIRE Points and are analyzed in this EA." See also Draft EA at page 2-5 (describing the mitigation fee and noting that it would "allow facilities to pay mitigation fees if other others are not chosen and apply collected funds to subsidize the purchase and use of ZE/NZE equipment or the installation of fueling/charging infrastructure"); Draft EA at page 2-6 (noting that the "Mitigation Fee" option was carried forward to PR 2305).

Because the mitigation fees would be used to implement measures similar to the other WAIRE Points compliance options, the Draft EA reasonably concluded that the environmental impacts would also be the same, i.e., if the South Coast AQMD uses mitigation fees to purchase new ZE trucks, the impacts will be the same as if a warehouse operator purchased new ZE trucks pursuant to the proposed rule.

California Unions for Reliable Energy v. Mojave Desert Air Quality Management District (2009) 178 Cal.App.4th 1225 (*CURE*) does not suggest otherwise. In that case, the air district adopted a road paving rule without conducting any environmental review. Thus, the court was not considering the adequacy of a project description, but rather whether there was substantial evidence to support the air district's conclusion that the project would "assure the maintenance,

[5] The letter also contends that the District will be unable to show that it has authority under state law to adopt PR 2305. That argument has been refuted above and in prior responses.

restoration, enhancement, or protection of the environment" and therefore would be exempt under CEQA. *Id*. at 1231.

The Draft EA did not omit analysis of the effects of the mitigation measures, but rather stated that the effects would be essentially the same as those of other WAIRE Points compliance options. Because the proposed rule allows warehouse operators to choose their compliance method, it is uncertain at this time how many would select the "mitigation fee" option. Moreover, although the mitigation fees must be expended on projects that achieve or facilitate reductions in emissions comparable to those associated with regulated warehouses, the specifics of the particular mitigation projects to be funded are presently unknown. As a result, it would be speculative to attempt any more detailed analysis of the effects of specific projects that may be funded with mitigation fees. See Friends of the Sierra Railroad v. Tuolumne Park and Recreation District (2007) 147 Cal.App.4th 643, 657-58 (CEQA review premature where no concrete plans for development had been proposed). The District will determine whether further CEQA compliance is required as it develops the WAIRE Mitigation Program that will govern the expenditure of mitigation fees.

Lastly, the EA did address the proposed project's indirect impacts to grid infrastructure, agricultural and biological resources, geology and hydrology, water supply, wastewater treatment, storm water drainage, energy, and solid waste services (see Section 4.2.3.2.5, *Impacts to Electricity Providers,* Section 4.3.5, *Operational Impacts in Excess of the Capacity of Local Landfills*, and Chapter 4.5, *Other Impact Areas)*. The indirect environmental analysis is discussed in Chapter 1.2.2, *Other CEQA Documents*, Chapter 4.0.1.5, *Indirect Impacts Associated with New Facility Construction*, and Chapter 4.5.1, *Indirect Impacts*, of the Draft EA. As stated in Response to Comments 1.9 and 1.10, these impacts were analyzed qualitatively, as the CARB ACT Regulation EA did, because it is impossible to determine at this time where the potential grid improvements and other new facilities will be located. Because the indirect impacts from projects funded by mitigation fees will be the same as those resulting from implementation of other compliance options, the draft EA did analyze the indirect impacts of actions funded by the mitigation fees.

V. Changes to the Proposed Rules Do Not Necessitate Recirculation Under CEQA

After the Draft EA was circulated for public review, and in response to comments received and stakeholder input, PR 2305 was modified in the following ways:

(a) A sunset provision was added, ending the proposed rule's requirements once state and federal air quality standards have been reached.

(b) "Low use" warehouse operators were exempted from compliance with the rule.

(c) NZE yard trucks that use renewable fuels were added as an allowable option under Custom WAIRE Plans.

(d) The compliance period was shifted by 6 months, starting January 1, 2022.

There were no changes made to PR 316.

None of these revisions requires recirculation of the EA pursuant to CEQA. See Pub. Res. Code § 21092.1; CEQA Guidelines § 15088.5. A lead agency is required to recirculate an EIR when significant new information is added to the EIR after public notice is given of the availability of the draft EIR for public review … but before certification." CEQA Guidelines § 15088.5(a). "Significant new information" includes information disclosing (1) that a new significant environmental impact would result from the project or from a new mitigation measure; (2) there will be a substantial increase in the severity of an environmental impact unless new mitigation measures are adopted; (3) a feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the significant environmental impacts of the project, but the project's proponents decline to adopt it; or (4) the draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded. CEQA Guidelines § 15088.5(a).

CEQA does not require recirculation "unless the [EA] is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect." CEQA Guidelines § 15088.5(a). Recirculation also is not required "where the new information added to the EIR merely clarifies or amplifies or makes insignificant modifications in an adequate EIR." CEQA Guidelines § 15088.5(b).

The minor changes to the proposed rule would not result in significant new impacts, nor in a substantial increase in the severity of an impact already identified. Including a sunset provision would reduce the potential environmental impacts of the proposed rule by eliminating all compliance obligations after the standards are achieved. "Low use" operators are those with a WPCO score of less than 10, meaning they receive approximately two Class 8 truck visits/day. There are not expected to be many "low use" warehouses. Exempting them from the rule would reduce the adverse environmental impacts of the proposed project because the exempt facilities would not be required to implement any compliance options, such as constructing new charging stations. The "low use" exemption could reduce the benefits of the proposed rule, but any reduction in benefit would be negligible, because there are not expected to be many "low use" warehouses and their compliance obligations would have been small to begin with. Similarly, including a sunset provision could reduce the benefits of the proposed rule, but the sunset provision is triggered only when state and federal air quality standards have been met and the need for the project benefits has therefore been reduced or eliminated. Including NZE yard trucks under the Custom WAIRE Plans could decrease air quality and GHG benefits when compared with allowing only ZE yard trucks as a compliance option, but would still result in an air quality and GHG benefit with respect to baseline conditions. Additionally, allowing NZE yard trucks would also lessen the impacts of battery disposal associated with ZE yard trucks. Lastly, shifting the compliance period would result in the same impacts occurring at a later date.

The Final EA reflects revisions, clarifications, and corrections to the Draft EA as a result of changes to the proposed rule language subsequent to the public review and comment period.

South Coast AQMD staff has reviewed the modifications to PR 2305 and PR 316 and has updated the CEQA analysis in the Final EA accordingly.

Airlines for America®

We Connect the World

May 4, 2021

submitted electronically to:
South Coast Air Quality Management District
Clerk of the Boards: cob@aqmd.gov
Mr. Victor Juan: vjuan@aqmd.gov

Re: Comments on Proposed Rule (PR) 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program and PR 316 – Fees for Rule 2305

On behalf of our members, Airlines for America® ("A4A")[1] thanks the South Coast Air Quality Management District ("AQMD" or "District") for providing this opportunity to comment on its Proposed Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions ("WAIRE") Program ("PR 2305") and PR 316 – Fees for Rule 2305 ("PR 316" or "Proposed Fees Rule"), which will be the subject of a public hearing before the District Governing Board to consider adoption of the proposed rules on May 7, 2021.

As an initial matter, A4A and our members want to commend the District Staff – particularly Ian McMillian – for their efforts to engage with stakeholders and to listen to and address concerns with the proposed rules. Specifically, in our view a number of issues in the original draft of PR 2305 highlighted the need to clarify the intended scope of the WAIRE program and particular requirements. To their credit, Staff worked very hard to engage stakeholders to ensure they understood these issues and provide clarifying language. As a result, a number of potential practical issues have been addressed, obviating the need to comment here.[2]

We also want to emphasize at the outset that A4A and its members fully support the District's efforts to achieve National Ambient Air Quality Standards ("NAAQS") and recognize the unique challenges the District faces as an extreme nonattainment area for the federal NAAQS Ozone standards and serious nonattainment area for the federal fine Particulate Matter (PM 2.5) standards. A4A and our members have a long history of working with the District to address this pressing concern and remain committed to doing so. We do, however, have very significant remaining concerns regarding PR 2305 and PR 316. In particular, as detailed below, in our view the District (and the State) does not have authority to impose the Indirect Source Rule as a general matter and, specifically, does not have the authority to impose such a rule on facilities located at airports or apply them to air carriers. Accordingly, we oppose these rules and respectfully urge the Board to decline to adopt them.

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[1] A4A is the principal trade and service organization of the U.S. airline industry. A4A members are Alaska Airlines, Inc.; American Airlines Group; Atlas Air, Inc.; Delta Air Lines; Federal Express Corp.; Hawaiian Airlines; JetBlue Airways Corp.; Southwest Airlines Co.; United Airlines Holdings, Inc.; and United Parcel Service Co. Air Canada is an associate member.

[2] For example, addressing our concern that as originally drafted PR 2305 § (d)(7)(C) could be read to apply to warehouse owners and operators even if they were not required to earn WAIRE points under § (d)(1), Staff has added language clarifying § (d)(7)(C) only applies to entities that are required to earn WAIRE points.

BACKGROUND

Again, A4A and its members fully support the District's efforts to attain the NAAQS and ensure public health. Commercial airlines are dedicated to providing air transportation services to the public that, above all, ensure the safety of our passengers, crew and the larger public. Accordingly, we view responsible environmental stewardship as essential to our business and have embraced the need to work proactively to address environmental concerns and achieve concomitant public health objectives.

Indeed, we are proud of the role we took in working with the District to implement measures in accordance with its 2016 Air Quality Management Plan ("2016 AQMP") to reduce emissions of oxides of nitrogen ("NOx") associated with aviation activity. Specifically, we worked for many months with our airport partners and the District to develop voluntary measures that were eventually incorporated into five memoranda of understanding ("MOUs") between each of the South Coast airports[3] and the District. All of these MOUs included a voluntary measure to achieve reductions in emissions of ozone precursors from airport ground support equipment ("GSE") more rapidly than would otherwise be achieved under State regulations. As reported to the District's Mobile Source Committee at its January 22nd meeting this year, despite the extraordinary challenges airports and airlines have faced in the wake of the COVID-19 pandemic, together with our airport partners we have successfully implemented this voluntary program and achieved real NOx reductions that have brought the District closer to attainment.

Our effort to work with the District to ensure the viability and effectiveness of its 2016 AQMP is not unique. A4A and our members, despite continuing concerns regarding the State's authority to adopt and enforce such regulations, have worked for almost two decades with the California Air Resources Board ("CARB") to develop reasonable regulations to address GSE emissions. These rules include the Large-Spark Ignition, In-Use Off-Road Diesel, Portable Equipment Registration Program and Air Toxics Control Measure for Diesel Particulate Matter from Portable Engines. In addition, A4A and its members have committed to working with CARB to develop a new "Zero-Emission GSE" regulation consistent with the State's Mobile Source Strategy. We also continue our long-standing record of working with the District (and the State) to adopt reasonable measures to achieve attainment of the Ozone NAAQS as it develops its 2022 AQMP through active participation in and support of its Aviation Working Group.

In addition, A4A and our members have committed the time and resources needed to support the development of economically reasonable, technologically feasible and environmentally beneficial international standards for aircraft engines and aircraft governing noise, NOx, PM, and CO_2 (carbon dioxide), through the International Civil Aviation Organization / Committee on Aviation Environmental Protection ("ICAO/CAEP"). Last year, the ICAO Council adopted emissions standards for non-volatile particulate matter ("nvPM") for both mass and number applicable to both in-production and new type aircraft engines. This culminated a years-long process to supersede ICAO's smoke standard and set the foundation for continued progress in the future. A4A strongly supports the incorporation of the nvPM standards into U.S. law. In addition, A4A worked for years in the ICAO/CAEP process to support development of a CO_2 Certification Standard for aircraft which ICAO adopted in 2017 and strongly supported the U.S. Environmental Protection Agency's ("EPA") recent adoption of GHG emissions standards for

[3] These airports are: Hollywood-Burbank Airport (BUR), Long Beach International Airport (LGB), Los Angeles International Airport (LAX), Ontario International Airport (ONT), and John Wayne Santa Ana Airport (SNA).

aircraft engines pursuant to Section 231 of the federal Clean Air Act ("CAA")[4] that are equivalent to the ICAO CO_2 Certification Standard. ICAO/CAEP has focused a great deal of effort on NOx and we have strongly supported this effort – as is noted in the *Draft 2020 Mobile Source Strategy*, significant progress has been made and as a result of successive, increasingly stringent NOx standards, aircraft engines produced today must be about 50% cleaner than under the initial standard adopted in 1997.[5]

The COVID-19 health crisis afflicting the world has, in turn, crippled our nation's economy, hitting the aviation sector particularly hard. In the most recent week for which data is available, nationally, U.S. passenger volumes were down 43% from year-ago levels, with passenger airline departures down 32%.[6] The effect of the pandemic on aviation activity at the five major commercial airports in the South Coast has been severe. Total commercial aircraft operations at these airports declined 53% in 2020 compared to 2019 and, although there has been some recovery in the region, total commercial carrier operations in the first quarter of 2021 are down 39% compared to the first quarter of 2019.[7] At LAX, in 2020 commercial operations plunged 57% from pre-pandemic levels[8]; operations have recovered only modestly in the first two months of 2021 and remain down 45% compared to pre-pandemic levels.[9] The decline in aircraft operations has resulted in a similar proportional decline in fuel consumption (and so, associated emissions). Despite the magnitude of the challenge ahead, we have every expectation that our sector will be critical to helping the economy revive and thrive, eventually returning it to pre-COVID levels. However, at present, we believe air passenger volumes are unlikely to return to pre-COVID levels before 2023.[10] Cargo activity has been a relative bright spot in the industry, with volumes up 9% in 2020 compared to 2019.[11] From an environmental perspective, it is also important to note that the pandemic has accelerated the retirement of less fuel-efficient aircraft – as many as 862 in the U.S. passenger airline fleet since the end of 2019.[12] As a result, when air transportation demand returns to pre-COVID levels, it will be served by more efficient aircraft fleets, thus very likely lowering associated emissions.

Our record demonstrates that our industry can grow and help the country, California and the South Coast Basin prosper even as we continue to improve our environmental performance. Before COVID-19 struck, U.S. airlines were transporting a record 2.5 million passengers and 58,000 tons of cargo per day, helping drive $1.7 trillion in annual economic activity and 10 million jobs. According to the Federal Aviation Administration ("FAA"), in 2016 aviation drove over 4% of the California's gross domestic product, providing over 1,164,000 jobs and $194

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[4] 42 U.S.C. § 7521.

[5] CARB, *Revised Draft Mobile Source Strategy* (April 23, 2021) at 149.

[6] *See Impact of COVID-19 Updates*, Slides 14-15 (A4A; available here: https://www.airlines.org/dataset/impact-of-covid19-data-updates/#) (updated May 4, 2021).

[7] This data reflects air carrier and air taxi operations at the five major commercial airports in the South Coast: BUR, LAX, LGB, ONT and SNA. Source: The Operations Network, Airport Operations: Standard Report.

[8] Data compares air carrier and air taxi operations for April-December in 2019 and 2020; Data available here: https://www.lawa.org/lawa-investor-relations/statistics-for-lax/volume-of-air-traffic.

[9] Data compares air carrier and air taxi operations for January-February in 2020 and 2021.

[10] *Impact of COVID-19 Updates*, Slide 5.

[11] *Impact of COVID-19 Updates*, Slide 36.

[12] *Impact of COVID-19 Updates*, Slide 40.

billion in economic activity in the State.[13] Commercial airlines alone contributed over 141,000 jobs with a payroll of over $8.7 billion and drove $37.4 billion in economic activity.[14] At the same time, U.S. airlines have relentlessly pursued and implemented technology, operational and infrastructure measures to minimize our environmental impacts. In particular the U.S. airlines have been and remain keenly focused on fuel efficiency and GHG emissions savings. For the past several decades, the U.S. airlines have dramatically improved fuel efficiency and reduced GHG emissions by investing billions in fuel-saving aircraft and engines, innovative technologies like winglets (which improve aerodynamics) and cutting-edge route-optimization software. As a result, the U.S. airlines have improved their fuel efficiency over 135 percent since 1978, saving over 5 billion metric tons of CO_2, which is equivalent to taking more than 27 million cars off the road on average in each of those years. Taking a more recent snapshot, data from the Bureau of Transportation Statistics confirm that U.S. airlines improved their fuel- and CO_2-emissions efficiency by 40 percent between 2000 and 2019.

But the U.S. airlines are not stopping there. Since 2009, we have been active participants in a global aviation coalition that committed to 1.5 percent annual average fuel efficiency improvements through 2020, with goals to achieve carbon-neutral growth beginning in 2020 and a 50 percent net reduction in CO_2 emissions in 2050, relative to 2005 levels. On March 30, 2021, A4A and our carriers strengthened our commitment to address climate change by committing to net-zero carbon emissions by 2050, and pledging to work with the federal government, state and local governments, and other stakeholders to rapidly expand the production and deployment of sustainable aviation fuel ("SAF") so 2 billion gallons of cost-competitive SAF are available for U.S. aircraft operators in 2030. These new goals were adopted in the midst of the most severe economic crisis the commercial aviation sector has ever faced, demonstrating the strength of our commitment to the environment and depth of our recognition that environmentally responsible growth is essential to the vitality of our sector.

As we continue to recover from the current economic and social crisis induced by the COVID-19 virus, our commercial airlines look to the future with the belief that our sector will continue to thrive on the condition we continue to improve our environmental performance. It is in this spirit that we offer the comments below. We continue to unequivocally support progress towards attainment of the Ozone and PM NAAQS in the South Coast Air Basin, however, we cannot support these proposed regulations because they exceed the District's (and the State's) regulatory authority.

COMMENTS

1. The District's Authority to Adopt an Indirect Source Rule ("ISR") is Limited by the Federal CAA (42 U.S.C. § 7401 et seq.)

Congress adopted CAA Section 110(a)(5)(A),[15] as part of the Clean Air Act Amendments of 1977, reacting to strong opposition to U.S. EPA's attempts to impose controls on indirect

[13] FAA, *The Economic Impact of Civil Aviation on the U.S. Economy – State Supplement* (November 2020) at 35.

[14] *Id.*

[15] 42 U.S.C. § 7410(a)(5)(A).

sources. The provision prohibits U.S. EPA from requiring states to incorporate ISRs in their State Implementation Plans ("SIPs") but allows states to include an "indirect source program" in their SIPs.[16] However, this did not empower states to enact ISRs of <u>any</u> scope or effect whatever. Rather CAA Section 110(a)(5)(A) permits states to incorporate ISRs into their SIPs as long as those ISRs are consistent with limitations established by the CAA and other federal law.

The District itself recognizes its authority to promulgate this rule is limited by and subject to federal law, including the CAA. District staff affirms that the purpose of PR 2305 is to achieve reductions in NOx emissions that will contribute to its efforts to attain the Ozone and PM NAAQS, as required by the CAA. The Draft Staff Report acknowledges that the CAA requires the State to submit a SIP for nonattainment areas that do not meet NAAQS and PR 2305 is put forward to implement the SIP. The District is the entity required under State law to develop a plan to demonstrate compliance with NAAQS and, in March 2017, the District approved its 2016 AQMP, which was subsequently incorporated into the State SIP by CARB and approved by U.S. EPA in 2019. The 2016 AQMP included "MOB-03 – Emissions Reductions at Warehouse Distribution Centers," which called for a process to consider various strategies to achieve such reductions. Subsequently, in May 2018, the District Governing Board directed staff to develop an ISR applicable to warehouses, leading to PR 2305. In short, the central purpose of PR 2305 is to achieve compliance with the CAA. Indeed, District staff affirms:

> There are six key reasons why PR 2305 and PR 316 are needed. <u>*First and foremost*</u>, the SCAB region continues to experience ozone and fine particulate matter levels that exceed federal air quality standards. . . . NOx is the primary pollutant that needs to be reduced to meet federal air quality standards, and mobile sources associated with goods movement make up about 52% of all NOx emissions in the SCAB. Trucks are the largest source of NOx emissions in the air basin and also for the emissions associated with warehouses. Any diesel PM reductions brought about by PR 2305 and PR 316 will also help meet federal air quality standards for fine PM.[17]

In other words, the primary reason PR 2305 has been proposed for adoption is to induce reductions in NOx emissions – overwhelmingly from trucks – required to enable the District to attain the Ozone NAAQS. As stated in its legal analysis:

> By approving MOB-03 into the 2016 AQMP, the South Coast AQMD and CARB have committed to, and the U.S. EPA has authorized, the development [[18]] of an indirect source rule to achieve emission reductions from mobile sources attributed to warehouse activities, <u>*in order to assist attaining the federal ozone NAAQS in 2023 and 2031*</u>.[19]

In order for PR 2305 to achieve its objective (i.e., "assist attaining the federal ozone NAAQS") it will have to be submitted as a revision to the State SIP and approved by U.S. EPA. EPA has explicitly acknowledged that it cannot approve an ISR (or any other SIP measure) unless the District/State has demonstrated it has "legal authority to carry out SIPs and SIP revisions" and

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[16] Importantly, Congress did not authorize states to promulgate ISRs applicable to airports and other "major federally assisted indirect sources" allocating that authority to EPA. CAA Section 110(a)(5)B).

[17] <u>*Second*</u> *Draft Report: Proposed Rule 2305 - Warehouse Indirect Source Rule - Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program and Proposed Rule 316 – Fees for Rule 2305* (April 2021) ("<u>*Second*</u> *Draft Report*") at 14 (emphasis added) (footnotes omitted).

[18] It is the <u>development</u> of the ISR that, at this stage, has been authorized by EPA. EPA has not considered and has <u>not</u> authorized the Warehouse ISR as proposed in PR 2305.

[19] <u>*Second*</u> *Draft Report* at 18.

such legal authority does not exist where a proposed ISR is preempted by federal law, including the CAA.[20]

A comment letter from the District's outside law firm contends "[t]he [federal Clean Air Act] is irrelevant to the District's authority to adopt the proposed rule" because "[t]he District's regulatory authority represents an exercise of the State's police power . . . as delegated by the Legislature; the CAA is not the source of the District's authority."[21] This analysis is inapt. Under the CAA, a State must always have underlying legal authority conferred by its Legislature to adopt an enforceable regulation in order for that regulation to be eligible for incorporation into a SIP. CAA Section 110(a)(2)(E) (SIP "shall . . . provide (i) necessary assurances that the State . . . will have adequate . . . authority under State (and as appropriate, local) law to carry out such implementation plan"). This provision, which conditions the authority of a state to adopt a SIP measure on obtaining the power to adopt an ISR from the *source* of that power (the Legislature) is itself a limitation on a state's authority to adopt an ISR and an affirmation that the CAA *limits* that power.[22] Indeed, it defies common sense to assert that the purpose of the ISR is to assist in achieving compliance with the CAA but whether the ISR itself complies with the CAA is "irrelevant." The District's lawyers concede the point by affirming the ISR "is expressly authorized by the CAA in Section 110(a)(5)."[23]

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[20] *Revisions to the California State Implementation Plan, San Joaquin Valley Unified Air Pollution Control District – Final Rule*, 76 Fed. Reg. 26609, 26609-10 (May 9, 2011). *See also, Id.* at 26614 ("in reviewing SIP submissions, EPA's role is to approve State choices, *provided* that they meet the criteria of the Clean Air Act") (emphasis added).

[21] *Letter from Zinn et al to Bayron Gilchrist and Barbara Baird,* SCAMQD: *Responses to Comments Submitted by the California Trucking Association* (April 1, 2021) (hereinafter "Zinn Letter") at 2 (citations omitted) (emphasis added).

[22] Certainly, an exercise of the "State's police power" is subject to limitations imposed by federal law. *See City of Burbank v. Lockheed Air Terminal, Inc*., 411 U.S. 624 (1973) (exercise of police power preempted by federal law); *San Diego Unified Port District v. Giantruco*, 651 F.2d 1306, 1316 (9th Cir. 1981) (imposition of land use permit preempted by federal law; "The observation that a state has a power in no way implies any doubt about equally well-settled limits to that power, such as federal preemption"). In fact, state and federal law further limit the District's authority to promulgate ISRs by explicitly providing it may not encroach on the land use powers of cities and counties. The Clean Air Act Amendments of 1990 provide that "[n]othing in this Act constitutes an infringement on the existing authority *of counties and cities* to plan and control land use, and nothing in this Act provides or transfers authority over such land use." Pub. L. 101-549 § 131, U.S. Code Cong. & Admin. News (104 Stat.) 2399, 2689 (emphasis added). Section 40716(b) of the CA Health & Safety Code ("H&SC") incorporates the equivalent language into state law, providing that a *district's* authority, as set out in § 40716(a), cannot infringe on the land use authority of cities and counties. *See Att. Gen. Opin. 92-519* (1993*)* at 5 ("While subdivision (b) of section 40716 ensures that a regulatory program for indirect sources may legally coexist with the traditional land use planning and control prerogatives exercised by cities and counties . . . it also indicates an intent to uphold the authority of cities and counties to plan and control land use"). The California Legislature took pains to make it especially clear that the South Coast District's authority to promulgate indirect source rules is constrained and preempted by the land use authority vested in the State's cities and counties. Specifically, H&SC § 40440(b)(3) provides that the District's authority to promulgate indirect source rules is limited to those actions that are "[c]onsistent with Section 40414;" Section 40414 provides: "No provision of this chapter shall constitute an infringement on the existing authority of counties and cities to plan or control land use, and no provision of this chapter shall be interpreted as providing or transferring new authority over such land use to either the south coast district, the Southern California Association of Governments, or the state board." Thus, to the extent PR 2305 infringes on city and county land use authority, it is preempted by both the CAA and the CA H&SC. *See also, Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning - A Reference for Local Governments Within the South Coast Air Quality Management District* at p. 1-13 (May 6, 2005) ("**Local governments have the flexibility to address air quality issues through ordinances, local circulation systems, transportation services, and land use. No other level of government has that authority, including the AQMD."**) (**bold** original; underlining added).

[23] Zinn Letter at 5. To be clear, we agree with both assertions in the Zinn Letter that (1) the CAA is not the source of state/district power to promulgate ISRs and (2) the CAA "authorizes" the exercise of that power to help attain NAAQS. Section 110(a)(5) "authorizes" states/district to promulgate ISRs, not in the sense that it creates the power for them to

California law also subjects the District's authority to adopt ISRs to the limitations imposed by state and federal law. Under California law, "[b]efore adopting, amending, or repealing a rule or regulation, the district board shall make findings of . . . *authority* . . . and *consistency* . . . ." H&SC § 40727(a) (emphasis added). H&SC Section 40727(b) defines "authority" to mean "a provision of law or of a state or federal regulation permits or requires the regional agency to adopt . . . the regulation"; "consistency" is defined to mean "that the regulation is in harmony with, and not in conflict with or contradictory to, existing statutes, court decisions, or state or federal regulations." H&SC § 40440(a) repeats these limitations and specifically applies them to the District, providing that the "south coast district board shall adopt rules and regulations that carry out the plan and are not in conflict with state law and federal laws and rules and regulations." H&SC § 40440(b) makes clear these limitations apply to "indirect source rules." Just as CAA Section 110(a)(5) limits the District's authority to promulgate ISRs to those consistent with the CAA and other federal law, California law provides the District cannot adopt an ISR if it is "in conflict with or contradictory to" federal law and regulations.

2. PR 2305 Exceeds the District's Authority Because it Applies to Existing Warehouses

The CAA defines an "indirect source program" as a "the facility-by-facility review of indirect sources of air pollution" that includes "measures as are necessary to assure, or assist in assuring, that a *new or modified* indirect source will not attract mobile sources of pollution" that would cause or contribute to an exceedance of or prevent the maintenance of a NAAQS. CAA Section 110(a)(5)(D) (emphasis added). The history of the development of the "indirect source" concept in EPA's regulatory actions and the amendments of the CAA make clear that Section(a)(5)(D) means precisely what it says.

In 1973, the EPA Administrator declared it was his "judgment [that] it is necessary to review, and where necessary prevent, the *construction* of facilities which may result in increased emissions from motor vehicle activity or emissions from stationary sources that could cause or contribute to violation of [NAAQS]. Such facilities are generally designated 'complex sources.'"[24] EPA announced the Administrator would "require all States to adopt and submit to him a legally enforceable procedure for reviewing the impact of the *construction* and *modification* of a 'complex source' and for preventing the construction or modification of complex source where necessary to attain and maintain a national standard."[25] In a separate action taken that day, EPA issued an advance notice of proposed rulemaking stating the Administrator "has determined that it is necessary for State [implementation] plans to contain, at a minimum, procedures whereby the State can review *prior to construction or modification*, the location of sources of pollution and of other facilities which may cause an increase in air pollution because of activities associated with such facilities" and provided notice that the Administrator would

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do so (that is done – if at all – under State law), but in the sense that it permits them to do so (subject to the CAA and other superseding federal law).

[24] 38 Fed. Reg. 6279 (March 8, 1973) (emphasis added). We also note that EPA understood the underlying power to regulate an indirect source – even if EPA were to require states/districts to do so under the CAA – must come from the States themselves. 38 Fed. Reg. 6279, 6280 ("States will be required to have the authority to disapprove the construction or modification [of indirect sources] . . . . States should begin now to determine their legal authority . . . and to obtain such authority where it is lacking.")

[25] *Id.* (emphasis added).

propose regulations requiring "States . . . to have legally enforceable procedures reviewing *prior to construction or modification*, the location of such facilities and for preventing such construction or modification where it would interfere with the attainment or maintenance of a national standard."[26] Later that year, EPA issuing a notice of proposed new "guidelines" (in the form of proposed amendments to its regulations), explaining:

> It is generally recognized, however that not only the types of facilities generally known as stationary sources but also facilities such as airports, amusement parks, highways, shopping centers and sport complexes also affect or may affect air quality by indirect means, primarily by means of the mobile source activity associated with them. . . . [This] proposal . . . would require, with respect not only with respect to 'stationary sources' in the traditional sense, but also certain other types of facilities, as assessment of both direct and indirect effects on air quality *prior* to their *construction* . . .[27]

EPA finalized these "guidelines" (in the form of final amendments to its regulations) referring to them as "requirements for the review of the indirect impact of *new or modified* sources, i.e., the impact arising from associated mobile source activity," explaining that "[i]n the Administrator's judgment, indirect impact of *new or modified* sources" was necessary to attaining NAAQS.[28] In February the following year, EPA promulgated final regulations requiring "Review of Indirect Sources" in which it explained that the regulations expanded new source review procedures "to cover not only stationary sources but 'complex' or 'indirect' sources of air pollution – facilities which do not themselves emit pollutants, but which attract increased motor vehicle activity . . . ."[29] These regulations were "applicable only to facilities commencing construction on or after January 1, 1975."[30] In the face of intense opposition from state and local governments over EPA's assertion of its authority to regulate "indirect sources" the Agency suspended its "Review of Indirect Sources" regulations and, as part of the Clean Air Act Amendments of 1977, Congress enacted CAA Section 110(a)(5)(A) explicitly denying EPA the authority to require states to include "indirect source review programs" in their SIPs but permitting them to do so. In doing so, Congress made clear in CAA Section 110(a)(5)(D) that such programs, which – as is clear from the extensive history above – had *never* included existing indirect sources, were to be defined as limited to those including "measures as are necessary to assure, or assist in assuring, that a *new or modified* indirect source" would not cause or contribute to exceedance of a NAAQS.[31]

Accordingly, it is clear that the CAA limits any ISR adopted pursuant to the CAA to new and modified indirect sources. It is also clear under California law that the District has authority to regulate only "new sources" using an indirect source rule. CA H&SC § 40440(b) provides (emphasis added) that the District must "provide for indirect source controls in those areas of the south coast district in which there are high-level, localized concentrations of pollutants or

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[26] 38 Fed. Reg. 6290, 6291 (March 8, 1973) (emphasis added).

[27] 38 Fed. Reg. 9599 (April 18, 1973) (emphasis added).

[28] 38 Fed. Reg. 15834, 15835 (June 18, 1973) (emphasis added).

[29] 39 Fed. Reg. 7270 (Feb. 25, 1974).

[30] 39 Fed. Reg. 7270, 7272 (Feb. 25, 1974).

[31] Pub. L. 95-95 § 108(e), 1977 U.S. Code Cong. & Admin. News (91 Stat.) 685, 695-696 (emphasis added). *See NRDC, Inc., v. USEPA*, 725 F.2d 761, 765 (DC Cir., 1984) ("Congress . . . was not so accepting of EPA's actions. Congress reacted negatively and immediately to EPA's attempt to regulate indirect sources of pollution . . . [and] amended the Act to make clear that states could not be required, though they were permitted, to regulate indirect sources of pollution.").

with respect to any new source that will have a significant effect on air quality in the South Coast Air Basin." Because PR 2305 applies to existing warehouses it plainly exceeds the District's (and the State's) authority.[32]

In addition, the CAA expressly provides that EPA "shall have" the authority to establish "indirect source review programs which apply only to federally assisted highways, *airports*, and other major federally assisted indirect sources and federally owned or operated indirect sources." CAA Section 110(a)(5)(B). Thus, any ISR promulgated by the District – whether otherwise consistent with the CAA or other federal law – cannot regulate on-airport facilities. As such, PR 2305 also exceeds the District's jurisdiction insofar as it applies to on-airport facilities.

3. PR 2305 is Preempted by Federal Law

Under the Supremacy Clause, U.S. CONST. art. VI, cl. 2, state laws that "interfere with, or are contrary to," federal law are invalid and preempted. *Gibbons v. Ogden*, 22 U.S. 1, 211 (1824). As pointed out above, the District's proposed ISR (PR 2305) "represents an exercise of the State's police power" and as such is subject to limitation by Congress' exercise of its superseding power through federal law.

Federal legislation may expressly preempt state law, or it may do so implicitly in at least two ways – where Congress intends federal law to "'occupy the field,'" and where state law conflicts with federal law. *Crosby v. Nat'l Foreign Trade Council*, 530 U.S. 363, 372 (2000). Conflict preemption exists "where it is impossible for a private party to comply with both state and federal law," or where the challenged law "'stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress.'" *Id.* at 372-73 (quoting *Hines v. Davidowitz*, 312 U.S. 52, 67 (1941)). "'[T]he purpose of Congress is the ultimate touchstone in every pre-emption case.'" *Wyeth v. Levine*, 555 U.S. 555, 565 (2009) (citation and internal quotation marks omitted); *Cippollone v. Liggett Group, Inc.* 505 U.S. 504, 516 (1992) (purpose of Congress is "ultimate touchstone" of preemption analysis).

As discussed above, CAA Section 110(a)(5)(D) is an example of such a limitation, preempting any regulation of existing (as opposed to "new or modified") sources. As explained in footnote 22 above, to the extent the District proposed Warehouse ISR infringes on city and county land

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[32] The Attorney General Opinion cited by staff in the *Second Draft Report* is not contrary. In fact, the Opinion supports the conclusion that an ISR adopted under the CAA may only apply to new or modified sources. That opinion asserts "a district's regulations may require the developer of an indirect source to submit the plans to the district for review and comment prior to the issuance of a permit for construction by a city or county. A district may also require the owner of an indirect source to adopt reasonable post-construction measures to mitigate particular indirect effects of the facility's operation." Atty. Gen. Opinion 92-519 at 6. This language nowhere asserts that an "indirect source" includes an existing indirect source or that an "indirect source review program" may – contrary to the express language of CAA Section 110(a)(5)(D) – include measures other than those "necessary to assure . . . that a new or modified source will not attract mobile sources of air pollution." In fact, the Opinion clearly affirms "[t]he federal administrative regulation, referred to as 'indirect source review,' entailed requiring such facilities to obtain federally-controlled permits *before construction or significant modification*" and this led to Congress to enact "'the 1977 amendments to the Clean Air Act'" pertaining to "'[indirect source reviews].'" Atty. Gen. Opinion 92-519 at 6 (emphasis added) (citation omitted). To be valid – and consistent with the Opinion's understanding of the origin of "indirect source reviews" – the statement that district regulations may require owners of indirect sources to adopt post-construction measures to mitigate emissions must be interpreted to mean such measures can only be applied prospectively to entities that will operate indirect sources that are either newly constructed or after their modification.

use authority, it also is preempted by both the CAA and the CA H&SC. Below we address the preemptive effect of other federal statutes.

a. PR 2305 is Preempted by the CAA Section 209(e)

The opinion of the United States Court of Appeals for the Ninth Circuit in *National Assn. of Home Builders v San Joaquin Valley Unified Air Pollution Control Dist.* (2010) 627 F.3d 730 ("*NAHB*") makes clear that an indirect source rule may be subject to preemption by CAA Section 209(e).[33] The legal and factual arguments as to whether PR 2305 is preempted by Section 209(e) have been set forth at length in the comments of Holland & Knight submitted on behalf of the California Trucking Association and the District's response (the Zinn Letter). We agree with the analysis presented in the Holland & Knight comment letter that Proposed 2305 effectively creates a purchase mandate that is preempted by CAA Section 209(e). *Engine Manufacturers Assn v. South Coast Air Quality Management Dist.* (2004) 541 U.S. 246, 252, 255 ("*EMA*").[34]

b. PR 2305 is Preempted by Other Federal Statutes

Under the Airline Deregulation Act ("ADA") "a state [or] political subdivision of a state . . . may not enact or enforce a law, regulation, or other provision having the force or effect of law related to a price, route, or service of an air carrier . . . ." 49 U.S.C. § 41713(b)(1). The Federal Aviation and Administration Authorization Act ("FAAAA") contains similar language precluding states and local governmental entities from "enact[ing] or enforce[ing] a law, regulation, or other provision having the force and effect of law related to a price, route, or service of any motor carrier ... with respect to the transportation of property." 49 U.S.C. § 14501(c)(1). The "FAAAA" language is "borrowed language from the Airline Deregulation Act of 1978" (*Rowe v. N.H. Motor Transp. Ass'n*, 552 U.S. 364, 368 (2008)) and "analysis from . . . Airline Deregulation Act cases" is viewed as "instructive for our FAAAA analysis as well." *Dilts v. Penske Logistics, LLC*, 769 F.3d 637, 644 (9th Cir. 1974). However, "the FAAAA formulation contains one conspicuous alteration — the addition of the words 'with respect to the transportation of property.' That phrase massively limits the scope of preemption ordered by the FAAAA." *Dan's City Used Cars, Inc. v. Pelkey*, 569 U.S. 251, 261 (2013) (internal quotation and citation omitted).

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[33] While we agree with the *NAHB* court in this aspect of its opinion, we strongly disagree with its fundamental analysis of the preemption issue. In short, the *NAHB* court appears to conclude that as long as a state/district adopts an ISR that "targets emissions, and requires emissions reductions, from [an indirect source] as a whole" [at 739] it may effectively pierce Section 209(e). The court's observations that "Section110(a)(5) . . . is a grant of power to the states," [at 739, n.8], "[i]t would be odd if the Act took away from the states with one hand what it granted with the other" and "[p]reemption would be an especially strange result given the history of the Act" [at 737] reflect a fundamental misunderstanding of the effect of CAA Section 110(a)(5) and the history of the Act. As explained at length above, CAA Section 110(a)(5) did not "grant" the underlying power upon which states/districts must rely to promulgate ISRs; that power is granted by a state Legislature. Because the source of a district's/state's power to adopt an ISR is state law it remains subject to preemption by federal law. In short, federal preemption is not an "odd" effect or a "strange result" of CAA Section 110(a)(5): it is carefully preserved in the statute.

[34] *See also* 76 Fed. Reg. 26609, 26611 (May 9, 2011) ("an ISR rule otherwise authorized under CAA section 110(a)(5) . . . could be preempted if it creates incentives so onerous as to be in effect a purchase mandate"); US EPA Region IX Air Division, *Technical Support Document for EPA's Rulemaking for the California State Implementation Plan as submitted by the California Air Resources Board Regarding San Joaquin Valley Unified Air Pollution Control District Rule 9510, 'Indirect Source Review (ISR)'* at 12 ("If the in-use control either 1) acted to compel the manufacturer or user of a nonroad engine to change the emission control design or equipment of the nonroad engine, or 2) created incentives so onerous as to be in effect a mandate to manufacture or use one engine over another, the in-use control could fall within the scope of preemption under section 209").

In *Morales v. TWA*, 504 U.S. 374, 383, 384 (1992), the Supreme Court explained that the "related to" phrase "express[es] a broad pre-emptive purpose" and means that a state law that "'has a connection with, or reference to,'" a carrier's price, route, or service is preempted. In *Morales* the Court held a state law may be preempted even if its effect on prices, routes or services "is only indirect" (*Id.* at 386), observing that where a state law affects airline prices "in too tenuous, remote, or peripheral a manner" it might not be preempted (*Id*. at 390). In *Rowe* the Court made clear "less direct" state laws – even one that "tells *shippers* what to choose rather than *carriers* what to do" – are preempted where the "effect is that carriers will have to offer . . . services that differ significantly from those that, in the absence of regulation, the market might dictate." *Rowe* at 372.[35] *Rowe* held that the FAAAA preempted a Maine law that forbade licensed tobacco retailers from using "a 'delivery service' unless that service follows particular delivery procedures." *Id.* at 371. The Court noted that the Maine law would have "a 'significant' and adverse 'impact' in respect to the federal Act's ability to achieve its preemption-related objectives," because it would "require carriers to offer a system of services that the market does not now provide (and which the carriers would prefer not to offer)." *Id*. at 371-72. As other circuits have explained, *Rowe* thus "necessarily defined 'service' to extend beyond prices, schedules, origins, and destinations." *Air Transp. Ass'n v. Cuo*mo, 520 F.3d 218, 223 (2d Cir. 2008). *Accord DiFiore v. Am. Airlines*, 646 F.3d 81, 88 (1st Cir. 2011).

Federal Express Corp. v. California Public Utilities Comm'n, 936 F.2d 1075 (9th Cir. 1991) is also instructive in evaluating the ISR as it applies to air carriers. There the California Public Utilities Commission ("PUC") had issued several "general orders" that regulated, among other things the "terms of the terms of the bills of lading, the freight bills and 'accessorial services' documents issued by the carriers" subject to "a procedure by which carriers may obtain variances from its orders" as part of what the PUC claimed was a "flexible" and "adaptive" regulatory program. *Id.* at 1077. The court observed:

> trucking operations of Federal Express are integral to its operation as an air carrier. The trucking operations are not some separate business venture; they are part and parcel of the air delivery system. Every truck carries packages that are in interstate commerce by air. The use of the trucks depends on the conditions of air delivery. The timing of the trucks is meshed with the schedules of the planes.

Id. at 1078.[36] The court ruled that even "regulations which are not patently economic — the rules on claims and bills of lading, for example — relate to the terms on which the air carrier offers its services. Terms of service determine cost. To regulate them is to affect the price. The

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[35] *See also American Trucking Associations v. City of Los Angeles*, 559 F.3d 1046, 1053 (9th Cir. 2009). There, although it reversed the district court's decision on other grounds, the Ninth Circuit "fully agree[d] with the district court" that plaintiffs had demonstrated a likelihood of succeeding on the merits of their claim that concession agreements required by city ordinance were preempted by the FAAAA, commenting "[t]hat the Concession agreements relate to prices, routes or services of motor carriers can hardly be doubted." The Ninth Circuit thus "fully agreed" with District Court finding that "the concession agreements here directly regulate the carriers themselves, at least to the extent that they wish to access the Ports. Therefore, the effect of the concession agreements on 'price, route, or service,' would likely be sufficiently non-tenuous and direct to warrant preemption." *Am. Trucking Ass'ns, Inc. v. City of Los Angeles*, 577 F. Supp.2d 1110, 1117 (citations omitted).

[36] The Federal Aviation Act of 1958 also preempts PR 2305 insofar as it interferes with the FAA's exclusive jurisdiction over aviation, including the movement and/or operation of aircraft. *See Burbank v. Lockheed Air Terminal, Inc.,* 411 U.S. 624, 633 (1973) ("[f]ederal control [over aviation] is intensive and exclusive") (*quoting Northwest Airlines, Inc. v. Minnesota*, 322 U.S. 292, 303 (1944)).

terms of service are as much protected from state intrusion as are the air carrier's rates." *Id*. Accordingly, the Court determined the ADA preempted the PUC from applying its regulations to air carriers.

PR 2305 will undoubtedly increase the costs of operating warehouses and for airline cargo operations. But the effects of the proposed regulation go far beyond mere economic effects to directly affect carrier routes and services. In fact, the central obligation imposed under PR 2305 (d)(1) establishes a "WAIRE Points Compliance Obligation (WPCO)" that is a function of two parameters: "Weighted Annual Truck Trips (WATT)" and "Stringency."[37] This WATT parameter depends on the "number of truck trips" and the type of trucks making those trips, weighted by truck class according to the relative level of emissions associated with that class.[38] The regulatory obligation imposed under the ISR is thus literally a direct function of the routes (here termed "trips") and services provided (types of trucks used). This is a textbook case of a regulatory measure that is preempted under the ADA and FAAAA. This is reenforced by Staff's explicit affirmation that the Stringency parameter of the WPCO is set at a level designed to do far more than impose economic costs: "as demonstrated in the 'Compliance Cost' section . . . there will be financial impacts to industry to implement PR 2305, *and* it will also *require* many warehouse operators and cargo owners to *change their business practices* to implement actions *required* by PR 2305."[39] The proposed rule also directly regulates cargo services provided by motor carriers and air carriers by establishing applicability thresholds based on warehouse size.[40] Moreover, to demonstrate compliance with the regulation, PR 2305, "[w]arehouse operators are required to submit truck data . . . for the amount of warehouse activity during the compliance period" which must be "contemporaneous" with the truck trips themselves (e.g., recorded at least daily) in a manner "verifiable by South Coast AQMD staff."[41] This level of intrusion into the business practices of motor and air carriers and the requirements to adopt a new system of service far exceed those considered by the Supreme Court in *Rowe* and the

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[37] *Second Draft Report* at 27; PR 2305 (d)(1)(A).

[38] *Second Draft Report* at 28; PR 2305 (d)(1)(B).

[39] *Second Draft Report* at 58 (emphasis added). District staff all but directly affirms the ISR is specifically designed to require warehouse owners/operators to provide services and operate routes using low-emitting trucks. The "first and foremost reason" the District identifies for adopting PR 2305 is that the "SCAB region continues to experience ozone and fine particulate matter levels that exceed federal air quality standards," a circumstance that cannot be realistically addressed without reducing emissions from trucks because they "are the largest source of NOx emissions in the air basin . . ." *Second Draft Report* at 14. In describing the rational for setting the WPCO "Stringency" parameter, District staff discuss the need to ensure the truck fleet in the SCAB becomes cleaner at length:

> Even [under] the most aggressive modeling in [CARB's Draft Mobile Source Strategy], in 2023 more than 95% of heavy-duty trucks will be no cleaner than 2010 engine standards assumed for all trucks in the baseline emissions inventory from the 2016 AQMP. This scenario projects these trucks will still make up about 57% of the truck fleet in 2031. Since the 2016 AQMP requires a 45% and 55% reduction in NOx by 2023 and 2031 respectively, the continued presence of large fractions of 2010 MY trucks in the fleet will hamper efforts to meet these deadlines.

Second Draft Report at 52-53 (footnote omitted). The District goes on to affirm: "Because of the pressing need to meet federal air quality standards in 2023 and 2031, both from a public health perspective and from a public policy perspective . . . the stringency of the rule should be set at a level that achieves emission reductions beyond what other regulations will require." *Id.*

[40] *See, e.g.,* PR 2305 (b), (d)(1).

[41] *Second Draft Report* at 28, 91.

Ninth Circuit in *Federal Express v. PUC* and determined to be preempted by the FAAAA and ADA.[42]

The contention that PR2305 is not preempted because it does not "*require* any particular action at all" and "flexibility and choice [is] built into the proposed rules"[43] is not correct. In *Ray v. Atl. Richfield Co.*, 435 U.S 151 (1978) the Court held a Washington State statute mandating certain design criteria for ocean going vessels was preempted by federal law. The Court also held that a separate provision, requiring vessels to be escorted by a tug but waiving that requirement if the vessel met certain design criteria was not preempted because the provision did not "exert pressure on tanker owners to comply with the design standards." 435 at 173 n.25. *See also United States v. Massachusetts*, 493 F.3d 1, 23 (1st Cir. 2007) (finding a state financial assurance requirement would be preempted if it "placed strong pressure on the industry" to conform to preempted design criteria). PR 2305 does not present a case of whether an "alternative" means of compliance is preempted because it creates sufficient pressure to indirectly compel a regulated entity to use a compliance alternative that is preempted. Here, the compliance obligation is explicitly and purposefully designed to ensure that the only means available to a regulated entity to reduce its compliance obligation are to reduce the number of truck trips or change the type of trucks making those trips. In addition, the applicability thresholds are explicitly tied to the size and extent of cargo services provided. The District is preempted by the FAAAA and the ADA from dictating such business practices. Even if it were conceded that the "alternatives" for achieving compliance are not preempted, the District is directly regulating – through the compliance obligation and applicability thresholds – business practices that *Rowe* and other cases discussed above clearly establish the District is preempted from regulating under the FAAA and ADA.[44]

Finally, we emphasize that the "option" of allowing regulated entities to meet their WPCO by simply paying a mitigation fee could not save PR 2305 from preemption. As an initial matter, we reject the contention that a governmental entity that does not have the power to compel a particular action can extract a fee or other payment from a regulated entity for failing to take that action. Moreover, the mitigation fee is arguably created not to provide a means for warehouse owners/operators to choose more "efficient" actions, but because for many warehouse owners/operators it is the only means available for achieving compliance with the WPCO. Some operators (like many predominately passenger air carriers) do not operate their own fleet of trucks and therefore cannot purchase trucks, by far the most effective means of generating WAIRE points, leaving such carriers in the position of being unable to achieve compliance without paying the mitigation fee. In other words, the mitigation fee is not an option available to

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[42] We note that *Rowe* contradicts the claim in the Zinn Letter (at 11) that "[r]egulations concerning pollution-control technology fall into the category of regulation of resource inputs that are generally not preempted." *Rowe* at 373 ("Despite the importance of the public health objective, we cannot agree with Maine that the federal law creates an exception on that basis, exempting state laws that it would otherwise pre-empt. The Act says nothing about a public health exception"). In addition, the distinction drawn between laws that regulate "inputs" and "outputs" only reenforces the conclusion that PR 2305 is preempted: the regulation's compliance obligation is a function of "outputs," i.e., number of truck trips and types of trucks used. Moreover, cases drawing such a distinction involve laws or regulations of "general applicability," not regulations like PR 2305 that directly regulate carrier operations.

[43] Zinn Letter at 9-10 (emphasis original).

[44] Using the *Ray* parlance, PR 2305 applies regulatory "pressure" directly through the WPCO and applicability thresholds. The *Ray* analysis, which is applied to determine whether indirect regulatory pressure is "direct enough" to establish preemption, proceeds from the unquestionable premise that direct regulation of preempted matters is forbidden.

carriers "in lieu" of other compliance options, but rather the *only* compliance option available. In this circumstance, the ISR is effectively a purely economic regulation of the carrier's business that is directly related to the prices, routes and services the carrier provides. This is a clear case of a regulatory measure that is preempted under the FAAA and ADA.[45]

4. PR 316 Also Exceeds the District's Authority

Because the District lacks authority to adopt PR2305, it cannot adopt the fee rule – PR 316 – intended to support it.

CONCLUSION

We appreciate the opportunity to comment.

Sincerely yours,



Timothy A. Pohle
Senior Managing Director, Environmental Affairs

[45] In this circumstance, the ISR also is preempted by the Anti-Head Tax Act, 49 U.S.C. § 40116 because it imposes a "fee" or "charge" on the sale of air transportation and transportation of property by aircraft. *See* 49 U.S.C. § 40102(a)(5) (definition of "air transportation") and *See* 49 U.S.C. § 40102(a)(25) (definition of "interstate air transportation").

Holland & Knight

50 California Street, Suite 2800 | San Francisco, CA 94111 | T 415.743.6987 | F 415.743.6910
Holland & Knight LLP | www.hklaw.com

Marne S. Sussman
+1 415-743-6987
Marne.Sussman@hklaw.com

May 4, 2021

Via Email (rbanuelos@aqmd.gov; vjuan@aqmd.gov)

Ryan Bañuelos, Planning/CEQA
Victor Juan, Planning, Rule Development and Area Sources
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: Comments for Proposed Rule 2305 – Warehouse Indirect Source Rule - Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program; and Proposed Rule 316 – Fees for Regulation XXIII

Dear Mr. Bañuelos and Mr. Juan:

Our client, the California Trucking Association ("CTA"), appreciates the opportunity to submit supplemental comments on the South Coast Air Quality Management District's ("SCAQMD" or "District") Second Draft Staff Report ("DSR or Staff Report")[1] and Draft Environmental Assessment ("EA") for the Proposed Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program; and Proposed Rule 316 – Fees For Regulation XXIII (collectively, the "Proposed Rules").

Many members of the CTA will be directly regulated by the Proposed Rules and many others will be compelled to assist the covered warehouses in achieving compliance with the Proposed Rules. This will require substantial capital investment by CTA members and will have far reaching environmental and economic effects. We continue to believe that the Proposed Rules as drafted are preempted by federal law and extend beyond the authority granted to the District by the state Legislature. Nothing in the proposed changes affects our previous comments and we provide further comments on these issues below.

I. Statement of Interest.

The CTA is the largest state trade association representing trucking in the United States. Its 1800 members include both large and small fleets with an average fleet size of 20 trucks. CTA members

[1] Victor Juan *et al*., Second Draft Staff Report ("Staff Report"), Proposed Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program and Proposed Rule 316 – Fees for Rule 2305, April 2021.

are actively participating in the development, piloting, and demonstration of alternative fuel and electric-drive capable vehicles. In fact, some member fleets have been working to bring electric-drive vehicles to market for nearly ten years. The CTA continues to support a coordinated and measured transition to alternative fuel and electric-drive capable vehicles.

II. The District Does Not Have Authority to Adopt an Indirect Source Rule that Applies to Existing Warehouses.

As explained in our March 2, 2021 comment letter, the District lacks authority to adopt an ISR that applies to existing sources. While the District attempts to argue otherwise in a memorandum requested from Shute Mihaly & Weinberger (hereinafter, "Shute Memorandum"), the arguments are not compelling.[2] As explained previously, "[a]n air pollution control district, as a special district, has only such powers as are given to it by statute and it is an entity, the powers and functions of which are derived entirely from the Legislature." 74 Cal. Atty. Gen. Op. 196 (1991) (citing *People ex rel. City of Downey v. Downey County Water Dist.* (1962) 202 Cal.App.2d 786, 795).

Though the memorandum cites to Health & Safety Code ("HSC") sections 40001(a)[3], 40440(a)[4], 40703[5], and 40000[6] as authority for the District to adopt an ISR for existing warehouses, none of these sections even mention indirect sources, let alone existing ones. That an agency has been granted some authority to act within a given area does not mean that it enjoys plenary authority to act in that area. *Railway Labor Exec. Ass'n . National Mediation Bd.* (D.C. Cir. 1994) 29 F.3d 655, 670 (en banc). Thus, a general grant of authority to address "emission sources" does not authorize the District to impose control measures on existing indirect sources.

While administrative officials "may exercise such additional powers as are necessary for the due and efficient administration of powers expressly granted by statute, or as may fairly be implied from the statute granting the powers" (*Dickey* v. *Raisin Proration Zone No. 1* (1944) 24 Cal.2d

[2] *See* Shute, Mihaly, & Weinberger, Memorandum to Bayron Gilchrist and Barbara Baird, Re: Responses to comments submitted by the California Trucking Association, dated April 1, 2021.

[3] HSC § 40001(a) states: "Subject to the powers and duties of the state board, the districts shall adopt and enforce rules and regulations to achieve and maintain the state and federal ambient air quality standards in all areas affected by emission sources under their jurisdiction, and shall enforce all applicable provisions of state and federal law."

[4] HSC § 40440(a) states: "The south coast district board shall adopt rules and regulations that carry out the plan and are not in conflict with state law and federal laws and rules and regulations. Upon adoption and approval of subsequent revisions of the plan, these rules and regulations shall be amended, if necessary, to conform to the plan."

[5] HSC § 40703 states: "In adopting any regulation, the district shall consider, pursuant to Section 40922, and make available to the public, its findings related to the cost effectiveness of a control measure, as well as the basis for the findings and the considerations involved. A district shall make reasonable efforts, to the extent feasible within existing budget constraints, to make specific reference to the direct costs expected to be incurred by regulated parties, including businesses and individuals."

[6] HSC § 40000 states: "The Legislature finds and declares that local and regional authorities have the primary responsibility for control of air pollution from all sources, other than emissions from motor vehicles. The control of emissions from motor vehicles, except as otherwise provided in this division, shall be the responsibility of the state board."

796, 810), the doctrine of implied administrative powers is not without limitation. "It cannot be invoked where the grant of express powers clearly excludes the exercise of others, or where the claimed power is incompatible with, or outside the scope of, the express power. For a power to be justified under the doctrine, it must be essential to the declared objects and purposes of the enabling act -- not simply convenient, but indispensable. Any reasonable doubt concerning the existence of the power is to be resolved against the agency." *Addison v. Dept. of Motor Vehicles* (2007) 69 Cal.App.3d 486, 498.

The District has not, and cannot, identify a law that grants it authority to adopt an ISR that regulates existing sources. And the fact that various HSC provisions clearly address indirect sources, stationary sources, and mobile sources in very different manners, means that the District cannot read an implied authority to regulate existing indirect sources from a general grant of authority to regulate emission sources as a whole. In addition, contrary to the Shute Memorandum's claim that the Clean Air Act ("CAA") "is irrelevant to the District's authority to adopt the proposed rule," the CAA ISR provisions are relevant to the scope of the District's regulatory authority when the Legislature used the term "indirect source control program" in HSC §§ 40918 and 40440(b)(3), which is not a term defined in California law but is identical to the term used in the CAA which limits such programs to ***new or modified*** indirect sources. 42 U.S.C. § 7410(a)(5)(D). Reading the various sections of the HSC together with the CAA, it is clear that the Legislature did not grant the District authority to require existing, unmodified sources to comply with an indirect source control program.

Finally, HSC § 40440(a) specifically states that: "The south coast district board shall adopt rules and regulations that carry out the plan and are not in conflict with state law and federal laws and rules and regulations." The District cannot argue that the CAA is irrelevant when the District only has authority to regulate in a way that is not otherwise preempted by federal law.

III. The Proposed Rules Are Preempted by Federal Law.

A. The Proposed Rules Are a Purchase Mandate Under the Clean Air Act.

Though the District has modified the Proposed Rules to add another scenario, that does not alleviate the preemption issue as the Proposed Rules still represent a purchase mandate. As explained in our prior letter, while the District has ostensibly designed the Proposed Rules to provide multiple compliance pathways, the actual effect is uniform—ZE trucks must be acquired. This is because, while certain scenarios do not require acquisition of a ZE vehicle (Scenarios 7 (pay mitigation fee), 11 (rooftop solar and mitigation fee), 15 (filter system installations) and 16 (filter purchases))[7], the costs of these non-acquisition pathways are far higher than acquisition. In addition, newly added Scenario 7a still relies on the acquisition of ZE or NZE vehicles by someone, even if it is not the warehouses themselves who are required to acquire the vehicles. Staff Report at 61, 66-67. While Scenario 7a may somewhat reduce the cost of compliance with the rule, it does not do so in a way that eliminates the fact that the Proposed Rules constitute a purchase mandate.

[7] Scenario 17 requires TRU plug installations and usage in cold storage facilities but is applicable only to cold storage warehouses.

The Shute Memorandum attempts to argue that the Proposed Rules are not a purchase mandate, as the Proposed Rules would allegedly regulate the entirety of the indirect source (the warehouse), such as the rule at issue in *National Association of Home Builders v. San Joaquin Valley Unified Air Pollution Control District,* 627 F.3d 730 (9th Cir. 2010) ("*NAHB*"), and are thus not preempted by the CAA. However, the rule in *NAHB* more broadly addressed site emission than the Proposed Rules and, as admitted by the District, the overwhelming majority of emissions that will be addressed by the Proposed Rules are from trucks making trips to the warehouses. Staff Report at 13 ("heavy duty trucks are the largest source of emissions, comprising more than 90% of the total PR 2305 inventory.").

In weighing preemption, the *NAHB* court had a firm thumb on the scale: because the ISR at issue there was adopted *pursuant to* the CAA's indirect source review program, the court had to "cautiously examine" whether one of the CAA's provisions preempted another. *NAHB*, 627 F.3d at 737. The court in *NAHB* relied heavily on the fact that Rule 9510 was adopted under the CAA's indirect source review program provision. *Id.* at 736 ("As we shall explain, however, NAHB's claim of preemption does not follow from its premise. Even if Rule 9510 establishes standards or requirements, those requirements do not relate to the control of emissions from construction equipment. In so holding, we think it crucial that the District adopted Rule 9510 under the Act's 'indirect source review program' provision, section 110(a)(5)."); *id.* at 739 ("Keeping in mind that Rule 9510 is a proper indirect source review program under section 110(a)(5), we proceed to examine the arguments NAHB makes, and the authorities it advances, in favor of preemption"); *id.* at 737 ("Because the plain language of the Act's 'indirect source review program' provision, section 110(a)(5), authorizes Rule 9510, we must cautiously examine the Act before we conclude that another of its provisions, section 209(e)(2), preempts Rule 9510"). Here, the District cannot argue that the Proposed Rules are authorized by section 110(a)(5), as that authorizes ISRs for ***new or modified sources*** only. 42 U.S.C. § 7410(a)(5)(D). Indeed, the District has argued that the CAA and its authorities are entirely irrelevant. The District cannot rely on *NAHB* when its preemption conclusion was predicated on the ISR's consistency with and authorization by the CAA.

The court in *NAHB* also relied on the fact that "[t]he 'baseline' amount of emissions, and the required reduction in emissions from that baseline, are both calculated in terms of the development as a whole. The Rule and the emissions reductions it requires are site-based rather than engine- or vehicle-based. *See* 42 U.S.C. 7410(a)(5)(c) (requiring that an indirect source review program be a 'facility-by-facility' review). It regulates an indirect source as a whole." *NAHB*, 627 F.3d at 737. The Proposed Rules make no such attempt. The compliance obligation is entirely determined by the *number and type of trucks that visit the site*. Perhaps if the *NAHB* court had upheld an ISR that used only the number and type of construction vehicles as a proxy for the emissions of the development as a whole, the case would be determinative. But it did not. Instead the *NAHB* ISR concerned the total emissions from the completed development, rather than the specific vehicles for which there was a claimed purchase mandate. This is not the case with the Proposed Rules, which entirely rely on truck trips. The Shute Memorandum states that "[t]he proposed rule uses truck trips as a proxy for total warehouse emissions when setting the compliance obligation because the number of truck visits is representative of the total activity at,

and emissions associated with, a warehouse." The Memorandum cites the Staff Report at 27 (truck trips "serve[] as a proxy for *overall* warehouse activity and emissions" (emphasis added)) and at 35 (stating that "[t]rucks delivering or picking up goods from a warehouse are a proxy for total activity and emissions related to a warehouse" and structuring reporting requirements on that basis). However, nothing in the actual calculation of WATT or WPCO supports this claim and nothing in the *NAHB* decision approves of such "proxy" metrics. To calculate a facility's WATT the relevant equation is WATT = Class 2b through 7 trucks trips + (2.5 x Class 8 truck trips). The Staff Report states that "Larger Class 8 trucks carry more goods and have higher emissions and are thus weighted more heavily than smaller Class 2b to 7 trucks. The value of 2.5 was calculated by comparing the running exhaust emission rates of different truck classes in EMFAC that typically visit warehouses (Figure 6 below) for calendar year 2023 (after CARB's Truck and Bus rule is fully phased in). The ratio between individual truck classes varies but is approximately 2.5 overall when comparing Class 8 to Class 2B to 7." Staff Report at 28 (emphasis added). This explanation makes clear that the multiplier for the WATT calculation is based purely off of the increase in emissions from the trucks themselves based on class, not an assumed increased in activity at the warehouse due to Class 8 trucks calling there more frequently. Further, the WPCO, or WAIRE Point Compliance Obligation, is then calculated as WPCO = WATTs x stringency x Annual Variable. Thus, the claim that truck trips (and truck emissions) is merely used as a proxy for assuming overall emissions from a warehouse as an indirect source is not supported as a warehouse's WPCO is based purely on emissions from trucks.

In addition, the District admits that the only source of emissions included in the baseline emissions inventory are mobile sources. Staff Report at 12 ("The sources of emissions associated with warehouses include the trucks that deliver goods to and from the facilities, yard trucks located at warehouses that move trailers, transport refrigeration units (TRUs)…and the passenger vehicles for warehouse employees. Additional emissions sources can include onsite stationary equipment (e.g., diesel backup generators or manufacturing equipment), and emissions from power plants that provide electricity for the warehouse – though these sources have not been included in the baseline emissions inventory."). Thus, unlike *NAHB*, neither the baseline, nor the required compliance obligation (the WPCO) are site-based; both are based on mobile source emissions only.

The District's attempt to shoe-horn itself into the *NAHB* category, when in fact it is attempting to adopt a purchase mandate, does not pass scrutiny. See *NAHB*, 627 F.3d at 739 ("What allows Rule 9510 to qualify as an indirect source review program under section 110(a)(5) is precisely what allows the Rule to avoid preemption under section 209(e)(2): its site-based regulation of emissions.").

If the District were truly concerned with regulating total emissions from warehouses as an indirect source, it would collect information to determine what other emissions come from warehouses and how to reduce those emissions and provide pathways to compliance with the Proposed Rules that address emission reductions from sources related to warehouses other than vehicles (the only pathway that does this is the installation of solar panels). For these reasons, the District's claim that the Proposed Rules, like the rule in NAHB, are merely intended to address emissions from warehouses as indirect sources, and not from vehicles, does not stand. The Proposes Rules impose

requirements that relate to the control of emissions from mobile sources and are thus preempted under the CAA.

IV. The Proposed Rules Will Not Be Eligible for Inclusion in the State Implementation Plan ("SIP").

The District states that the primary purpose of the Proposed Rules, specifically Proposed Rule 2305, is to achieve NOx reductions that will contribute to the District's goal of reaching attainment of the ozone National Ambient Air Quality Standards ("NAAQS"), as required by the CAA.[8] The Proposed Rule will also result in reductions in Particulate Matter ("PM") to help attain the PM NAAQS. In order to accomplish this, Proposed Rule 2305 must be included as a revision to the State Implementation Plan ("SIP") and approved by both the California Air Resources Board ("CARB") and the Environmental Protection Agency ("EPA"). SIP revisions may only be approved if the rule "complies with the provisions of the Clean Air Act and applicable federal regulations." 42 U.S.C. § 7410(k). Because section 7410(a)(5) only permits states to submit ISR rules to the SIP which apply to new and modified sources, the District cannot submit, and EPA cannot approve, an ISR which applies to existing sources. *See Wildlife Alive v. Chickering* (1976) 18 Cal.3d 190, 196 ("In the grants [of powers] and the regulation of the mode of exercise, there is an implied negative; an implication that no other than the expressly granted power passes by the grant; that it is to be expressed only in the prescribed mode…."). Nor can the District or CARB "provide necessary assurances" under section 7410(a)(2)(E) that "the State . . . will have adequate . . . authority under State (and as appropriate, local) law to carry out such implementation plan." As explained above, the District has no authority to adopt an ISR on existing sources. For these reasons, Proposed Rule 2305 cannot be approved into the SIP and will not achieve the District's goal of helping to attain the NAAQS for ozone and PM.

The District's claim that, by approving "MOB-03 – Emissions Reductions at Warehouse Distribution Centers" in the 2016 Air Quality Management Plan ("AQMP") both CARB and EPA have authorized the Proposed Rules is unreasonable. MOB-03 described general strategies in which the District would attempt to control emissions from warehouses, but did not specify the particular strategies that would be adopted, did not address the fact that these controls would be applied to existing sources, and repeatedly mentioned the option for voluntary actions to reduce emissions.[9] CARB and EPA's approval of a vague and generalized concept in the 2016 AQMP does not bless the Proposed Rules with legitimacy and legality now. Even if the District had authority under state law to adopt Proposed Rule 2305, which it does not, it will not be eligible for inclusion in the SIP and thus the District will not receive any of the benefits towards attainment that it expects from adoption of the Proposed Rule 2305.

[8] Staff Report at 14.
[9] South Coast Air Quality Management District, Final 2016 Air Quality Management Plan, March 2017, http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=15, at 4-27 – 4-29 (stating that "[t]o the extent these actions are voluntary in nature and are sustained over a long-term basis and the emission reduction levels are maintained, the emission reductions may be credited as surplus reductions…into the SIP.").

V. The Environmental Assessment ("EA") Remains Insufficient and Changes to the Proposed Rules Necessitate Revision and Recirculation of the EA.

A. The EA Project Description is Deficient.

The District anticipates using the funds generated by its Mitigation Fee to subsidize a variety of programs, and specifically includes among them "a focus on grid upgrades on the utility side of the meter." The various programs are a non-exclusive list of potential emission-reducing projects that might be funded or implemented. While these utility upgrades could be considered "merely permissive," "[a]t a minimum, the District committed itself to allowing" mitigation funds to be used on such upgrades. *See California Unions for Reliable Energy v. Mojave Desert Air Quality Management District* (2009) 178 Cal.App.4th 1225, 1246 (*CURE*).

At a minimum, the failure to fully disclose these actions in the Final EA results in an inadequate project description. A project description that omits integral components of the project may result in an EIR that fails to disclose all of the impacts of the project. *Santiago County Water Dist. v. County of Orange* (1981) 118 Cal.App.3d 818, 829 (project description for sand and gravel mine omitted water pipelines serving project); *Communities for a Better Environment v. City of Richmond* (2010) 184 Cal.App.4th 70, 80. The "project" is "the whole of an action" that may result in either a direct physical environmental change or a reasonably foreseeable indirect change. CEQA Guidelines § 15378; *Habitat & Watershed Caretakers v. City of Santa Cruz* (2013) 213 Cal.App.4th 1277, 1297; *Banning Ranch Conservancy v. City of Newport Beach* (2012) 211 Cal.App.4th 1209, 1220. Project descriptions have been found inadequate when they failed to include discussion of necessary expansions to accommodate the contemplated project. See *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal.App.4th 713 (project description inadequate when it failed to discuss sewer lines and wastewater treatment expansion necessary for the contemplated housing development); *Santiago County Water Dist. v. County of Orange* (1981) 118 Cal.App.3d 818, 830 (project description for sand and gravel mine inadequate when it failed to describe or analyze the construction of water pipelines needed for operations); *Whitman v. Board of Supervisors* (1979) 88 Cal.App.3d 397 (project description for oil well inadequate for failure to describe or analyze associated pipeline). The District apparently now acknowledges that the compliance actions taken by covered entities under the Proposed Rules will result in increased production of electricity and other resources that may require "grid upgrades on the utility side of the meter." The upgrades are a reasonably foreseeable component of the Project and must be analyzed.

The District is not excused from analyzing the effects of its actions merely by classifying such acts as mitigation. CEQA mandates a review of not only the impacts of the project, but also "the impacts of mitigation measures" if such measures "would cause one or more significant effects in addition to those that would be caused by the project as proposed." *Save Our Peninsula Com. v. Monterey County Bd. of Supervisors* (2001) 87 Cal.App.4th 99, 130 (*Save Our Peninsula*) (citing CEQA Guidelines § 15126(c) [now § 15126.4(a)(1)(D)]).

Here, the EA completely fails to meaningfully address the potentially significant and foreseeable impacts of these necessary utility upgrades, which would include significant air pollution

emissions from construction of necessary grid infrastructure that run counter to the Proposed Rules' stated objectives. *CURE*, 178 Cal.App.4th at 1245; see CTA Letter re Scoping of Environmental Assessment. The EA also neglects to evaluate potentially significant impacts to agricultural and biological resources through land use conversions, geologic and hydrologic impacts due to increased lithium extraction activities, substantial increases in the demand for water supply, wastewater treatment, storm water drainage, energy, and solid waste services. *CURE*, 178 Cal.App.4th at 1236, CTA Letter re Scoping of Environmental Assessment.

As it stands, the Board is being asked to trade one impact for another without the barest disclosure of the scope or magnitude of impacts from the utility upgrades the District proposes to fund. The EA's failure to meaningfully disclose these potentially significant effects is unlawful. CEQA Guidelines § 15126.4(a)(1)(D); *see also CURE*, 178 Cal.App.4th at 1230-31 (air district's failure to analyze negative effects mitigation measure to reduce air pollution was unlawful); *Save Our Peninsula*, 87 Cal.App.4th at 130-32 (EIR unlawfully failed to analyze impacts of mitigation adopted "late in the environmental review process"); *Stevens v. City of Glendale* (1981) 125 Cal.App.3d 986, 991 (EIR unlawful because mitigation "involve[d] . . . new environmental impacts not considered in the draft EIR").

B. Changes to the Proposed Rules Necessitate Recirculation.

CEQA requires agencies to recirculate "[w]hen significant new information is added to an environmental impact report" after the close of the earlier public review period." Pub. Res. Code § 21092.1; CEQA Guidelines § 15088.5. In particular, recirculation is required where the omission of information has rendered the original draft EIR "fundamentally and basically inadequate and conclusory in nature." *See* CEQA Guidelines § 15088.5(a)(4) (*citing Mountain Lion Coalition v. Fish & Game Com.* (1989) 214 Cal.App.3d 1043).

An agency cannot simply release a draft EIR "that hedges on important environmental issues while deferring a more detailed analysis to the final [EIR] that is insulated from public review." *Mountain Lion Coalition*, 214 Cal.App.3d at 1052 (rejecting EIR with a corrected cumulative impacts analysis that was not recirculated); *see also Spring Valley Lake Assn. v. City of Victorville* (2016) 248 Cal.App.4th 91, 108 (revisions to EIR's air quality analysis required recirculation where they contained insufficient evidence to support agency's findings); *King & Gardiner Farms, LLC v. County of Kern* (2020) 45 Cal.App.5th 814, 830 (recirculation required where "draft EIR inadequately addressed the subject and there was no meaningful public review and comment on the new assessment"); *Ukiah Citizens for Safety First v. City of Ukiah* (2016) 248 Cal.App.4th 256, 266-67 (rejecting city's claim that a new addendum on energy impacts merely "amplifie[d]" information in the EIR).

Public review is critical "to test, assess, and evaluate the data and make an informed judgment as to the validity of the conclusions to be drawn therefrom." *Sutter Sensible Planning, Inc. v. Sutter County Bd. of Supervisors* (1981) 122 Cal.App.3d 813, 822 (internal quotation marks omitted); *see also Ultramar, Inc. v. South Coast Air Quality Management Dist.* (1993) 17 Cal.App.4th 689, 702-04. The District's hasty publication of the Final EA, just days before the Board's approval

hearing, deprived the public and technical experts of their ability to fulfill this critical oversight role. The District must recirculate the Final EA to allow meaningful public review.

VI. Conclusion.

We join in the comments of the Airlines for America, the California Taxpayers Association, and Scopelitis, Garvin, Light, Hanson & Feary, which provide further explanation for why the Proposed Rules are outside of the District's authority, preempted by the CAA and the Federal Aviation Administration Authorization Act ("F4A"), and constitute an improper tax. The District has not been granted the authority to impose a sweeping purchase mandate under the guise of an ISR regulation on existing, unmodified warehouses. While the District's goals of reducing air emissions in the Basin are laudable, the District has only the rulemaking authority invested in it by statute. Even if the Legislature had granted the District such authority, it is preempted by federal law. In addition, the accompanying Draft EA fails to meet the District's obligations under CEQA. For this reason, the District must revise the Proposed Rules and recirculate the EA before adoption.

Sincerely yours,

HOLLAND & KNIGHT LLP



Marne S. Sussman

cc: Chris Shimoda

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Final Socioeconomic Impact Assessment for Proposed Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program and Proposed Rule 316 – Fees for Rule 2305

May 2021

Deputy Executive Officer
Planning, Rule Development, and Area Sources
Sarah L. Rees, Ph.D.

Assistant Deputy Executive Officer
Planning, Rule Development, and Area Sources
Ian MacMillan

Authors:	Paul Stroik, Ph.D., Air Quality Specialist Ryan Finseth, Ph.D., Air Quality Specialist
Technical Assistance:	Caitlin Dawson, Air Quality Specialist Victor Juan, Program Supervisor Farimah Shirmohammadi, Air Quality Specialist Brian Vlasich, Air Quality Specialist
Reviewed By:	Shah Dabirian, Ph.D., Program Supervisor Barbara Baird, Chief Deputy Counsel Veera Tyagi, Principal Deputy District Counsel

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

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Cities of Orange County

JANICE RUTHERFORD
Supervisor, Second District
County of San Bernardino

EXECUTIVE OFFICER:

WAYNE NASTRI

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EXECUTIVE SUMMARY

A socioeconomic analysis was conducted to assess the potential impacts of Proposed Rule (PR) 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program and Proposed Rule 316 – Fees for Rule 2305 on the four-county region of Los Angeles, Orange, Riverside, and San Bernardino. A summary of the analysis and findings is presented below.

Elements of Proposed Amendments	Proposed Rule (PR) 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program and PR 316 – Fees for Rule 2305 would apply to operators and owners of existing and new warehouses. PR 2305 would be applicable to any existing or new warehouse located in South Coast AQMD's jurisdiction with an indoor warehouse floor space equal to or greater than 100,000 square feet within a single building that may be used for warehousing activities by one or more warehouse operators. PR 2305 would require warehouses subject to the rule to annually take actions which either reduce emissions regionally and/or locally or that facilitate emission reductions. Warehouse owners or operators would be subject to an annual WAIRE Points Compliance Obligation (WPCO). WAIRE Points can be earned by selecting from the following implementation measures in the WAIRE Menu: 1) acquiring and/or using near-zero-emission (NZE) and zero-emission (ZE) trucks; 2) acquiring and/or using ZE yard trucks; 3) installing and/or using ZE charging/fueling infrastructure (e.g., electric charger or hydrogen fuel station) for cars, trucks, and/or transport refrigeration units (TRUs); 4) installing and/or using onsite solar panels; and 5) installing MERV 16 or greater filters or filter systems in residences, schools, daycares, hospitals, or community centers. WAIRE Points may be earned only for "surplus" actions which go beyond existing federal and state regulations already applicable to warehouse owners or operators earning WAIRE Points. In lieu of satisfying the WPCO via implementation measures, warehouse owners or operators may choose the option to pay a mitigation fee to the South Coast AQMD which would be used in a mitigation program to achieve emissions reduction in the same region as the warehouse. PR 316 – Fees for Rule 2305 establishes fees to recover South Coast AQMD administrative costs associated with ensuring compliance, such as submittal and review of various notifications and reports, implementing an incentive program using up to 6.25% of the mitigation fees from warehouse operators that pay a mitigation fee, as well as compliance activities such as conducting desktop audits, onsite inspections, and reviewing records.

Community Profile	CalEnviroScreen 3.0 (CES 3.0) GIS data was used to quantify the environmental burdens, prevalence of existing health conditions, and the population demographics in communities adjacent to PR 2305 warehouses. Based on population-weighted averages, these communities face substantially higher burden than the district as a whole. The population within 0.5 miles of a large warehouse has a population-weighted average CES 3.0 Score of 46.6 (85th percentile statewide), while the South Coast AQMD jurisdiction has a population-weighted average CES 3.0 Score of 33.9 (67th percentile statewide). Risks posed from PM2.5 and diesel PM are also higher for populations located within 0.5 miles of warehousing facilities. Communities within 0.5 miles have an average asthma rate of 56 per 10,000 individuals (64th percentile) and experience heart attacks at a rate of 9.2 per 10,000 individuals (65th percentile). Comparably, the district-wide percentiles for asthma and cardiovascular incidence rates are 53rd and 57th, respectively. Warehouse-adjacent communities are 62.1% Hispanic and 7.6% African American, while the district-wide population is 45.4% Hispanic and 6.5% African American. In addition, the warehouse-adjacent communities experience poverty at a higher rate (46.7%) than non-warehouse-adjacent communities (38.2%).
Potentially Affected Facilities and Industries	PR 2305 is expected to potentially affect 3,995 warehouse operators at 2,902 warehouses classified under a variety of industry codes, mainly in the goods-movement industries of construction (NAICS 23), manufacturing (NAICS 31-33), wholesale trade (NAICS 42), retail trade (NAICS 44-45), and transportation and warehousing (NAICS 48-49). Of the 3,995 warehouse operators potentially affected by PR 2305, 1,964 are estimated to be in Los Angeles (LA) County, 468 estimated to be in Orange (OR) County, 470 estimated to be in Riverside (RV) County, and 1,093 estimated to be in San Bernardino (SB) County.
Cost Assumptions	All dollar figures presented in 2018 dollars. Purchases of ZE and NZE emission equipment is modeled as a one-time capital cost. Costs/savings resulting from the subsequent use of ZE and NZE equipment is modeled as recurring operating and maintenance (O&M) costs. The potential menu options available to facilities to meet compliance obligations are: ▪ ZE and NZE Truck Acquisitions (Capital Cost) and Usage (O&M Cost) ▪ ZE and NZE Truck Visits from a Non-Owned Fleet (O&M) ▪ Electric Vehicle Charger Acquisition (Capital) and Usage (O&M) ▪ Hydrogen Filling Station Acquisition (Capital) and Usage (O&M) ▪ ZE Yard Truck Acquisition (Capital) and Usage (O&M) ▪ Solar Panel Acquisition (Capital) and Usage (O&M) ▪ High-Efficiency Filter Systems Acquisition (Capital) and Replacement Filters (O&M) ▪ TRU Plug Acquisition (Capital) and Usage (O&M) ▪ Pay Mitigation Fee (O&M)

Facilities are also expected to incur recurring O&M costs related to notification and reporting of compliance attainment.

Zero and Near-Zero Emission Truck Acquisition and Usage

Capital costs of Diesel, NZE, and ZE trucks are presented in the tables below. Diesel and NZE capital costs are assumed to remain constant across the entire compliance period. Incremental costs for NZE Class 8 and NZE Class 6 acquisitions are assumed to be $65,000 and $30,000, respectively, based on analysis included in the WAIRE Technical Report. The incremental acquisition cost for ZE trucks is set equal to the difference between the capital cost of each ZE truck and its diesel equivalent. An 8% sales tax is also applied to each ZE truck purchase and an additional 12% federal excise tax applies to all ZE Class 8 purchases.

Capital Costs for Diesel Truck Acquisitions

Vehicle Class	Diesel
Class 2b-3	$50,000
Class 6	$85,000
Class 8	$130,000

Capital Cost by ZE Truck Class and Year (Pre-Tax)

Year	ZE Class 8	ZE Class 6	ZE Class 2b-3
2022	$292,544	$155,055	$71,920
2023	$246,948	$143,904	$68,318
2024	$201,351	$133,554	$64,896
2025	$194,134	$128,321	$63,635
2026	$188,312	$124,112	$62,599
2027	$183,371	$120,563	$61,684
2028	$178,870	$117,345	$60,829
2029	$174,809	$114,456	$60,035
2030	$170,748	$111,568	$59,241
2031	$170,748	$111,568	$59,241

Recurring costs associated with the use/visits of facility-owned NZE and ZE trucks is done on a per-mile basis. Per-mile usage costs resulting from fuel consumption and other costs (including maintenance, fees, insurance, and mid-life costs) were calculated for all truck classes and fuel types.

ZE and NZE Emission Truck Visits from a Non-Owned Fleet

The cost of hiring visits from clean trucks is assumed to be based on the per mile total cost of ownership (TCO) for each truck class and fuel type. More specifically, the incremental cost resulting from third-party owned ZE and NZE trucks is assumed to be

the incremental per mile TCO cost (or savings) of clean trucks when compared to the per mile TCO cost of diesel trucks.

A TCO analysis was performed for each truck class and fuel type used for compliance. A 12-year useful life is assumed for all trucks, with a 3-year payback period for equipment costs. The TCO for all diesel and NZE trucks is constant over the compliance period and does not vary based on the year purchased. Because capital costs for ZE trucks are assumed to decline over time, the TCO does vary by purchase year.

Incremental Costs per Visit from a Non-Owned Fleet for All Truck Classes and Fuel Types Purchased in Year 2022

Truck	Cost per Visit
NZE Class 8	$11.43
NZE Class 6	$0.93
ZE Class 8	$98.13
ZE Class 6	-$0.21
ZE Class 2b-3	$10.98

Electric Vehicle Charger Acquisition and Usage
Electric vehicle charger costs are calculated on a per unit basis, where construction and permitting costs are incurred on a project basis. The cost is assumed to be $30,000 per charger. Construction mobilization cost is assumed to be $10,000 per project with permitting and charger energization costs are assumed to be $70,000 per project.

Hydrogen Filling Station Acquisition and Usage
Total installed cost is $2,000,000 per 700 kg/day project. Each Class 8 Truck is assumed to use 2,440 kg/year of hydrogen. Hydrogen usage costs are assumed to decline over time from roughly $9.75/kg in 2020 to $6.20/kg in 2031.

ZE Yard Truck Acquisition and Usage
The one-time incremental cost is assumed to be $210,000 per truck. ZE yard truck capital costs are expected to decline over time due to projected future decreases in battery costs. Each ZE yard truck is assumed to operate for 1,000 hours per year for a total annual usage cost of $6,250 per yard.

Solar Panel Acquisition and Usage
The price for a rooftop solar panel system (including installation) is set $2.80 per kW, resulting in a total installed cost of $280,000 for a 100 kW solar panel system. Solar panel usage is assumed to result in a net savings of $0.17 per kWh generated. Each 100 kW system has an estimated electrical generation of 165,000 kWh annually.

High-Efficiency Filter Systems Acquisition and Replacement Filters
The estimated costs analyzed for the installation of 25 air filter systems with MERV 16 air filters is $65,000. The cost for the replacement/installation of 200 MERV 16 air filters is $60,000.

	TRU Plug Acquisition and Usage The per unit cost of a TRU plug is assumed to be $1,600. Associated construction and permitting costs are assumed to be $4,700 and $7,000 per installation project, respectively. Each installed TRU is assumed to consume 10,658 kWh of electricity annually. Assuming a rate of $0.18/kWh, annual TRU usage cost is set to $1,918. **Pay Mitigation Fee** In lieu of earning WAIRE Points from equipment acquisitions and usage, all facilities may choose to pay a fee of $1,000 for each WAIRE Point in their WPCO attributed to their facility in every year of compliance. **Administrative Costs** All operators are also expected to incur expenses related to fees outlined in Rule 316 for Warehouse Operations Notifications ($29.51/submission), Initial Site Information Reports ($140.68/submission), and Annual WAIRE Reports ($392.50/submission). All warehouse operators are also expected to incur costs associated with the reporting related to compiling all relevant compliance data and submitting the information as required by PR 2305. This type of reporting is estimated to be no more than 25 hours of work totaling $1,250 per year. Many facilities already track and record the necessary truck trip information as part of their normal course of business. However, as a conservative approach for this study, all facilities are assumed to begin recording this data only due to PR 2305. To estimate truck traffic for determining compliance obligations, it is assumed all facilities will install two cameras at a one-time cost of $2,000 per facility. Staff time will also be required for reviewing recordings. It is conservatively estimated that 144 hours per year (at $50/hr.) for a total annual cost of $7,200 per facility. It is also expected that facilities that elect to meet compliance obligations through ZE or NZE truck visits will incur additional costs related to truck tracking. For this analysis, it is assumed that tracking will be done through truck driver surveys and is expected to take one hour of work per week (at $50/hr.) for a total annual cost of $2,600 per facility. Facilities that choose to meet their compliance obligations through payment of the mitigation fee are subject to an additional fee equal to 6.25% of the amount of mitigation fee paid as outlined in Proposed Rule 316(f). Total annual administrative costs are expected to range from approximately $8,900 to $11,500 per facility per year. Facilities are also expected to incur one-time costs for camera purchase and installation, a Warehouse Operations Notifications Fee, and an Initial Site Information Report Fee.
Scenario Compliance Costs	To estimate the potential impacts of PR 2305 and PR 316, cost estimates for 19 different scenarios were developed to show the range of potential compliance outcomes. A description of the 19 scenarios analyzed is included in Table 15 of this report.

Each scenario is structured to follow a series of choices a warehouse operator may make based on compliance choices from a previous year. As a bounding analysis approach, all warehouses were assumed to only comply with a single scenario approach from 2022 through 2031.

For these scenario analyses, all 2,902 potentially affected facilities were modeled for every year from 2022-2031 using their square footage and the applicable average trip generation rates to determine their compliance obligation. The amount of warehousing space was assumed to grow 1.8% per year, consistent with analysis from SCAG.

A cost summary for all 19 scenarios is included in the table below:

	Equipment	Discounted Total Cost - NPV 4% (in millions)	Average Annual Cost (in millions)	Average Annual Cost ($/sq. ft)
Sc1	NZE Class 8	$1,103	$127	$0.16
Sc2	NZE Class 8	$1,220	$139	$0.17
Sc3	NZE Class 8	$374	$45	$0.06
Sc4	NZE Class 8	$750	$94	$0.12
Sc5	ZE Class 8	$942	$112	$0.14
Sc6	ZE Class 6 & 8	$1,604	$187	$0.23
Sc7	Mitigation Fee	$5,264	$670	$0.83
Sc7a	Mitigation Fee	$985	$114	$0.14
Sc8	NZE Class 6	$1,627	$184	$0.23
Sc9	NZE Class 6	$468	$59	$0.07
Sc10	ZE Class 6	-$87	-$13	-$0.02
Sc11	Solar	$9,712	$979	$1.21
Sc12	ZE Class 8	$7,445	$837	$1.04
Sc13	ZE Class 2b-3	$753	$82	$0.10
Sc14	ZE Class 2b-3	$978	$119	$0.15
Sc15	Filter System	$5,057	$635	$0.79
Sc16	Filter	$4,953	$622	$0.77
Sc17	TRU	$46	$6	$0.70
Sc18	Yard Trucks	$1,029	$120	$0.15

Average annual costs range from -$12.6M/yr. (or -$0.02/sq. ft./yr.) for the lowest cost scenario (Scenario 10: ZE Class 6 Visits from a Non-owned Fleet) up to $979.0M/yr. (or $1.21/sq. ft./yr.) for the highest cost scenario (Scenario 11: Solar Panel Installations).

The costs presented here are default calculations broadly applicable to the industry, however individual warehouse operators may identify different specific costs for their operations. Warehouse operators are assumed to gravitate towards the lowest cost options

<table>
<tr><td></td><td>for their specific situations. The maximum cost warehouse operators would be expected to incur is $0.83/sq. ft./yr. resulting from the mitigation fee scenario.</td></tr>
<tr><td>Jobs and Other Socioeconomic Impacts</td><td>
PR 2305 Expected Annual Foregone Jobs (2022-2031)
<table>
<tr><th>Cost scenario</th><th>Annual foregone jobs
(% of total jobs in LA, OR, RV, and SB counties)</th></tr>
<tr><td>Low-cost scenario (4% interest rate)</td><td>-240 (-0.002%)</td></tr>
<tr><td>High-cost scenario (4% interest rate)</td><td>11,100 (0.10%)</td></tr>
</table>

Based on the above assumptions, the compliance cost of PR 2305, and the application of the Regional Economic Models, Inc. (REMI) model, it is projected -240 – 11,100 jobs will be forgone on average annually from 2022 - 2031 in total across all South Coast AQMD industries for the low-cost (Scenario 10) and high-cost (Scenario 7) scenarios. Scenario 10 assumes all potentially affected warehouse operators comply with PR 2305 through third party visits from Class 6 zero-emission vehicles, while Scenario 7 assumes all potentially affected warehouse operators comply with PR 2305 by paying a mitigation fee and not receiving any funds from the mitigation fee for future compliance with PR 2305. These projected job forgone impacts represent about -0.002% - 0.10% of total employment in the four-county region.

Retail trade (NAICS 44-45) and construction (NAICS 23) are expected to bear most of the estimated total compliance cost of PR 2305, with around an estimated total 0 – 3,100 jobs forgone on average annually between 2022 to 2031 for the low-cost (Scenario 10) and high-cost (Scenario 7) scenarios. These forgone jobs are estimated to occur from both direct rule compliance costs, as well as indirect effects of a large group of facilities directing funds away from projects/spending into sectors like retail trade and construction.

Estimated forgone jobs are not currently existing jobs which are lost in the future. Rather they are jobs which were expected to be created in the future which no longer are expected to be created, as the total number of jobs in the compliance period is higher than the total number of jobs before the compliance period. Additionally, the negative jobs forgone values presented for Scenario 10 are indicative of estimated additional jobs created if all facilities complied in the manner modeled in Scenario 10.</td></tr>
<tr><td>Competitiveness</td><td>As a result of PR 2305 being implemented, South Coast AQMD staff expects no warehouse relocation and minimal goods movement diversion. These conclusions are made from warehouse relocation estimation work performed by Industrial Economics, Inc. for South Coast AQMD, along with the Port of Los Angeles (POLA) and Port of Long Beach (POLB) clean truck fund rate study.

Minimal effects on warehousing demand is expected as evidenced from historical trends in industrial rent prices and warehouse availability. Industrial rental prices in the South Coast AQMD jurisdiction have risen around 63% from 2012 to 2019, from $5.88 per square foot to $9.60 per square foot. Over the same time overall warehouse capacity within the South Coast AQMD jurisdiction has risen from 500 million square feet to around 700 million, with vacancy rates falling from around 6% to around 4%. These trends in warehousing operation costs with a concurrent increase in warehouse capacity</td></tr>
</table>

<table>
<tr><td></td><td>and decrease in warehouse vacancy lead South Coast AQMD staff to believe PR 2305 would have little effect on regional competitiveness.

One competitiveness concern is how PR 2305 may increase annual operating costs in an example warehouse affected by PR 2305. Consider a hypothetical 500,000 sq. ft. warehouse operator. Further consider a low- and high-cost compliance scenario, e.g. Scenario 7a with an average annual compliance cost of $0.14/sq. ft. and Scenario 7 with an average annual compliance cost of $0.83/sq. ft. This warehouse is expected to incur an annual PR 2305 compliance cost between $70,000 and $415,000. In comparison, annual operating expenses for this warehouse are estimated to be $13 million according to a 2015 Boyd Company report. This implies the cost of complying with PR 2305 for this example warehouse falls between 0.5% - 3.2% of average annual operating expenses.</td></tr>
<tr><td>Impacts of CEQA Alternatives</td><td>There are five CEQA alternatives associated with PR 2305. Alternative A, the no project alternative, would mean PR 2305 would not be adopted. Alternative B (less stringent with less emission reduction) increases minimum square feet required to be affected by PR 2305, delays the initial compliance date by one year, and relaxes the rule stringency down to 0.0001. Alternative C (more stringent with more emission reductions) increases rule stringency to 0.005 and increases the stringency phase-in period to seven years. Alternative D (no zero emission) allows for all compliance actions except for zero-emission ones. Alternative E (no natural gas) allows for all compliance actions except for natural gas ones.

<table>
<tr><th></th><th colspan="3">Average Annual, 2022-2031</th></tr>
<tr><th>Alternatives</th><th>Cost</th><th>Jobs Foregone</th><th>DCF Cost-Effectiveness, 4%; $ per ton NOx</th></tr>
<tr><td>Proposed Amendments</td><td>-$12,600,000 - $670,200,000</td><td>-240 – 11,100</td><td>-$11,000 - $101,000</td></tr>
<tr><td>Alternative A - No Project</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>Alternative B - Decreased Emission Reductions</td><td>$20,600,000 - $37,300,000</td><td>150 – 490</td><td>$139,000 - $181,000</td></tr>
<tr><td>Alternative C - Increased Emission Reductions</td><td>-$60,000,000 - $1,015,000,000</td><td>-670 – 16,100</td><td>-$35,000 - $100,000</td></tr>
<tr><td>Alternative D - All Natural Gas Options Only</td><td>$45,000,000 - $670,200,000</td><td>410 – 11,100</td><td>$32,000 - $101,000</td></tr>
<tr><td>Alternative E - All Electric Options Only</td><td>-$12,600,000 - $670,200,000</td><td>-240 - 11,100</td><td>-$11,000 - $101,000</td></tr>
</table>
</td></tr>
<tr><td>Public Health Benefits</td><td>Public health benefits resulting from compliance with PR 2305 are calculated using an incidence per ton (IPT) methodology, developed by the U.S. Environmental Protection Agency. The IPT methodology is an approximation based on the general assumption that the relationship between emissions and adverse health outcomes is linear. IPT factors for</td></tr>
</table>

NOx and direct PM emissions were generated based on the detailed air quality and health impact modeling completed for the 2016 Air Quality Management Plan.

PR 2305 is expected to result in 150 to 300 fewer deaths, 2,500 to 5,800 fewer asthma attacks, and 9,000 to 20,000 fewer work loss days from 2022-2031. Expected total discounted monetized public health benefits range from $1.2 to $2.7 billion over the compliance period. The corresponding expected total discounted costs of complying with PR 2305 are $0.8 to $1.1 billion over the compliance period of 2022-2031. Most scenarios modeled show about a 3:1 ratio of public health benefits compared to rule costs. Discounted total monetized health benefits and total discounted costs for each modeled scenario are included in the table below.

	Equipment	Discounted Total Costs NPV (4%)	Discounted Total Benefits NPV (4%)
Sc1	NZE Class 8	$1,103	$2,713
Sc2	NZE Class 8	$1,220	$2,954
Sc3	NZE Class 8	$374	$3,615
Sc4	NZE Class 8	$750	$2,613
Sc5	ZE Class 8	$942	$2,611
Sc6	ZE Class 6 & 8	$1,604	$1,101
Sc7	Mitigation Fee	$5,264	$13,474
Sc7a	Mitigation Fee	$985	$2,473
Sc8	NZE Class 6	$1,627	$1,905
Sc9	NZE Class 6	$468	$2,239
Sc10	ZE Class 6	-$87	$2,449
Sc11	Solar	$9,712	$7,744
Sc12	ZE Class 8	$7,445	$1,372
Sc13	ZE Class 2b-3	$753	$1,212
Sc14	ZE Class 2b-3	$978	$1,340
Sc15	Filter System	$5,057	-
Sc16	Filter	$4,953	-
Sc17	TRU	$46	$221
Sc18	Yard Trucks	$1,029	$136

The linearity assumption underpinning the IPT and BPT methodologies employed here is an approximation which ignores complex chemistry, precursor pollutant interactions, and finer-scale geographical effects. To get a refined estimate of the expected reduction in adverse health outcomes resulting from PR 2305, one would need to undertake a detailed analysis similar to the CMAQ and BenMAP modeling performed for the 2016 AQMP, however the level of information needed for that style of analysis is not available given the wide variety of options available for compliance. The screening analysis shown here is therefore the most appropriate and consistent with similar analyses conducted by CARB and EPA.

INTRODUCTION

Proposed Rule (PR) 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program and PR 316 – Fees for Rule 2305 would apply to operators and owners of existing and new warehouses. These warehouses are used to receive, store, and serve as a distribution point for goods. The majority of emissions associated with warehouses are from on-road vehicles such as trucks that deliver goods, and off-road vehicles such as cargo handling equipment. PR 2305 would require warehouses subject to the rule to annually take actions which directly reduce or facilitate reduction of regional and local emissions and/or pollution exposure.

If adopted, PR 2305 would be applicable to any existing or new warehouse located in South Coast AQMD's jurisdiction with an indoor warehouse floor space of 100,000 square feet or above within a single building usable for warehousing activities by one or more warehouse operators. Warehouse operators are applicable to PR 2305 if their indoor warehouse floor space is 50,000 square feet or above within one of these warehouses. At the time of this analysis, approximately 3,320 facilities located throughout South Coast AQMD's jurisdiction would be subject to PR 2305. An estimated 418 of these facilities are expected to only be subject to reporting requirements, and the remaining 2,902 warehouses would be required to comply with additional air quality improvement measures.

Warehouse owners or operators of these 2,902 warehouses would be subject to an annual WAIRE Points Compliance Obligation (WPCO). WAIRE Points can be earned by selecting from the following implementation measures in the WAIRE Menu: 1) acquiring and/or using near-zero emissions (NZE) and zero emission (ZE) trucks; 2) acquiring and/or using ZE yard trucks; 3) installing and/or using ZE charging/fueling infrastructure (e.g., electric charger, hydrogen fuel station) for cars, trucks, and/or transport refrigeration units (TRUs); 4) installing and/or using onsite solar panels; and 5) installing MERV 16 or greater filters or filter systems in residences, schools, daycares, hospitals, or community centers. In addition, warehouse operators may apply to earn WAIRE Points through a Custom WAIRE Plan specific to their operations that satisfies prescribed performance metrics. Custom WAIRE Plans could include measures like installing offsite fueling/charging infrastructure or implementing new onsite practices to reduce air quality impacts from electricity consumption (such as installing and operating battery storage, or energy management systems to shift when electricity is used).[1]

WAIRE Points may be earned only for "surplus" actions that go beyond existing federal and state regulations with which warehouse owners or operators earning WAIRE Points must comply. In lieu of satisfying the WPCO via implementation measures, warehouse owners or operators may choose the option to pay a mitigation fee to the South Coast AQMD that would be used in a mitigation program to achieve emissions reductions in the community of the facility using this compliance option. Similar to the measures used to earn WAIRE Points, the mitigation program would implement measures such as subsidizing the purchase of NZE ZE trucks and/or the installation of charging and fueling infrastructure for ZE trucks. The environmental impacts

[1] Given the uncertainty regarding Custom WAIRE Plans, they are not included as a part of the cost analysis performed in this Socioeconomic Impact Assessment.

associated with the mitigation program are similar to implementation of measures to earn WAIRE Points from the WAIRE Menu.

In addition, South Coast AQMD staff has developed PR 316 – Fees for Rule 2305 to establish fees to recover South Coast AQMD administrative costs associated with ensuring compliance, such as submittal and review of various notifications and reports, Custom WAIRE Plan application evaluation, implementing an incentive program using fees from warehouse operators that choose to pay a mitigation fee,[2] as well as compliance activities such as conducting desktop audits, onsite inspections, and reviewing records.

Implementation of the proposed project is expected to result in NOx and PM, including DPM, emission reductions and reduced associated public health impacts from warehouse activities which is expected to vary depending on the implementation measures employed.

LEGISLATIVE MANDATES

The legal mandates directly related to the assessment of the proposed rule include South Coast AQMD Governing Board resolutions and various sections of the California Health & Safety Code.

South Coast AQMD Governing Board Resolutions

On March 17, 1989 the South Coast AQMD Governing Board adopted a resolution that calls for an economic analysis of regulatory impacts that includes the following elements:

- Affected industries
- Range of probable costs
- Cost-effectiveness of control alternatives
- Public health benefits

Health & Safety Code Requirements

The state legislature adopted legislation which reinforces and expands the Governing Board resolutions for socioeconomic impact assessments. California Health and Safety Code section 40440.8, which became effective on January 1, 1991, requires a socioeconomic impact assessment be performed for any proposed rule, rule amendment, or rule repeal which "will significantly affect air quality or emissions limitations."

Specifically, the scope of the socioeconomic impact assessment should include the following:

- Type of affected industries;
- Impact on employment and the regional economy;
- Range of probable costs, including those to industry;
- Availability and cost-effectiveness of alternatives to the rule;

[2] A 6.25% charge is added to each mitigation fee paid to cover administrative costs of implementing the incentive program from collected mitigation fees.

- Emission reduction potential; and
- Necessity of adopting, amending, or repealing the rule in order to attain state and federal ambient air quality standards.

Health and Safety Code section 40728.5, which became effective on January 1, 1992, requires the South Coast AQMD Governing Board to actively consider the socioeconomic impacts of regulations and make a good faith effort to minimize adverse socioeconomic impacts. It also expands socioeconomic impact assessments to include small business impacts, specifically it includes the following:

- Type of industries or business affected, including small businesses; and
- Range of probable costs, including costs to industry or business, including small business.

Finally, Health and Safety Code section 40920.6, which became effective on January 1, 1996, requires incremental cost-effectiveness be performed for a proposed rule or amendment which imposes Best Available Retrofit Control Technology or "all feasible measures" requirements relating to ozone, carbon monoxide (CO), oxides of sulfur (SOx), oxides of nitrogen (NOx), and their precursors.

COMMUNITY PROFILE

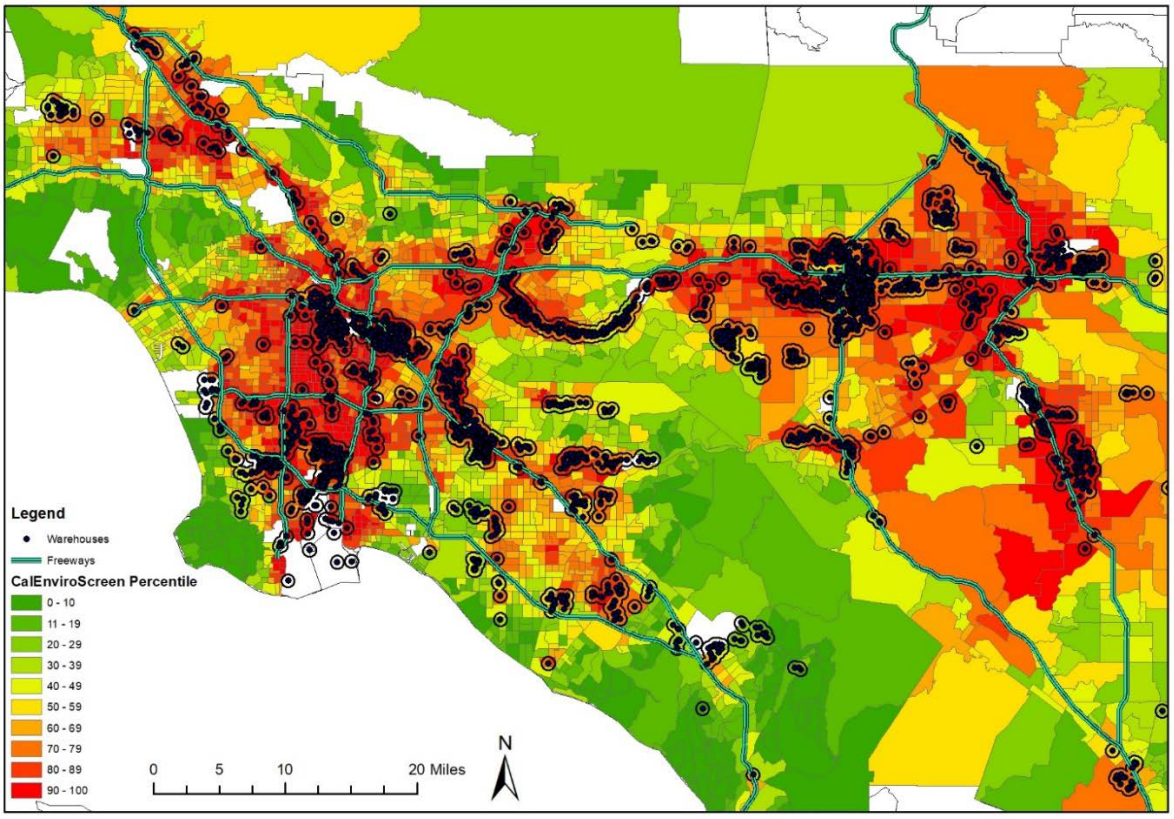
To analyze the existing environmental burdens facing communities adjacent to large warehouse facilities, we rely on CalEnviroScreen 3.0 (CES 3.0) data published by the California Office of Environmental Health Hazard Assessment (OEHHA). CES 3.0 combines local environmental, health, and socioeconomic data to generate an aggregate score for individual census tracts within the state. In general, census tracts with more sensitive populations (high prevalence of asthma, cardiovascular disease, low-birth weight infants) and elevated exposure to environmental pollution (air, groundwater, toxics) tend to have the highest CES 3.0 aggregate scores and are generally considered to be at the highest risk.[3,4]

The census tract map in Figure 1 displays the location of the 2,902 large warehouse facilities potentially required to take actions to reduce emissions by PR 2305. The census tracts are color-coded with their CES 3.0 percentile, where dark green represents lower aggregate scores and less environmental burden, while dark red represents higher scores and higher burden. A buffer area of 0.5 miles around all warehouse locations is also shown.

[3] Additional information on CalEnviroScreen 3.0 can be found here: https://oehha.ca.gov/media/downloads/calenviroscreen/report/ces3report.pdf

[4] The analysis contained in this section identifies a correlation between proximity to PR 2305 warehouses and increased CES 3.0 scores, it does not attempt to demonstrate a causal relationship. Higher levels of diesel PM have been identified around warehouses relative to other areas, due primarily to the sources of emissions associated with warehouses like trucks and TRUs (CARB 2005, 2020). In addition, trucks are the largest source of NOx in the air basin, and some of the higher regional ozone and secondary PM levels found in communities near warehouses will therefore be attributable to truck emissions. (South Coast AQMD, 2017)

Figure 1: Map of Warehousing Facilities in the South Coast AQMD Jurisdiction



Using buffers of 0.5, 1, and 2 miles around potentially affected warehouse facilities, spatial statistics were calculated using ArcGIS to quantify the environmental burdens, prevalence of existing health conditions, and the population demographics in adjacent communities. Table 1 below summarizes some of the environmental burdens facing communities located near large warehousing facilities in the South Coast AQMD jurisdiction.

Based on population-weighted averages, these communities face substantially higher burden than the district as a whole (including both warehouse-adjacent and non-warehouse-adjacent communities).[5] The population within 0.5 miles of a large warehouse has a population weighted average CES 3.0 Score of 46.6 (85th percentile statewide), while the South Coast AQMD jurisdiction as a whole has a population weighted average CES 3.0 Score of 33.9 (67th percentile statewide).[6] Risks posed from PM2.5 and diesel PM are also higher for populations located within 0.5 miles of warehousing facilities. The higher South Coast AQMD average for ozone compared to warehouse adjacent communities reflects the regional nature of ozone formation.

[5] Population-weighted average calculations assume population is uniformly distributed within census tracts.

[6] Preliminary results presented at the October 9, 2020 PR 2305 Working Group Meeting and the February 16, 2021 Public Workshop reported that the population within 0.5 miles of a large warehouse was in the 80th percentile of CES 3.0 scores, while the population of the South Coast AQMD as a whole was in the 61st percentile. These results were based on taking a population-weighted average of CES 3.0 score percentiles directly. The updated percentiles reported in this document are based on a calculated population-weighted average CES 3.0 Score that is then compared to all statewide CES 3.0 Scores to determine the percentile.

Trucks are the largest source of NOx emissions in the air basin and truck activity is focused at warehouses. However, since NOx emissions spread out along an entire truck's journey to/from a warehouse and ozone is formed from secondary reactions in the atmosphere, ozone does not have as pronounced localized effects as pollutants like diesel PM.

Table 1: Population-Weighted Average CES 3.0 Scores, Ambient Concentrations of Ozone and PM2.5, and Diesel PM Emissions[7]

	Population	CES 3.0 Score (percentile)	Ozone, ppm (percentile)	PM2.5, µg/m3 (percentile)	Diesel PM, kg/day (percentile)
SCAQMD - ALL	16,114,899	33.9 (67)	0.052 (72)	11.3 (66)	21.1 (65)
Within 0.5 miles of at least one PR 2305 warehouse	2,401,554	46.6 (85)	0.051 (69)	11.9 (69)	25.5 (77)
Within 1 mile of at least one PR 2305 warehouse	6,200,544	43.2 (80)	0.050 (65)	11.8 (69)	25.0 (76)
Within 2 miles of at least one PR 2305 warehouse	11,589,892	38.4 (74)	0.051 (69)	11.7 (69)	23.8 (73)

Additionally, the prevalence of preexisting health conditions is higher on average in communities near PR 2305 warehouses. See Table 2 below. Those communities within 0.5 miles have an average asthma rate of 56 per 10,000 individuals (64th percentile) and experience heart attacks at a rate of 9.2 per 10,000 individuals (65th percentile). Comparably, the district-wide percentiles for asthma and cardiovascular incidence rates are 53rd and 57th, respectively.

Tables 3 and 4 below summarize socioeconomic and ethnic characteristics of adjacent and non-adjacent communities. Warehouse-adjacent communities are 62.1% Hispanic and 7.6% African American, while the district-wide population is 45.4% Hispanic and 6.5% African American. In addition, the warehouse-adjacent communities experience poverty at a higher rate (46.7%) than non-warehouse-adjacent communities (38.2%).

[7] Population data is from 2010 US Census. Ozone scores reported as mean of summer months (May-October) of the daily maximum 8-hour ozone concentration (ppm), averaged over three years (2012 to 2014). PM2.5 scores reported annual mean concentration of PM2.5 (average of quarterly means, µg/m3), over three years (2012 to 2014). Diesel PM scores reported as gridded diesel PM emissions from on-road and non-road sources for a 2012 summer day in July (kg/day).

Table 2: Population-Weighted Average Incidence Rates of Asthma, Cardiovascular Issues and Low Birth Weight (per 10,000 individuals) in Warehouse-Adjacent Communities

	Asthma (percentile)	Cardiovascular (percentile)	Low Birth Weight (percentile)
SCAQMD - ALL	47.6 (53)	8.5 (57)	5.1 (55)
Within 0.5 miles of at least one PR 2305 warehouse	55.5 (64)	9.2 (65)	5.4 (63)
Within 1 mile of at least one PR 2305 warehouse	55.0 (63)	9.1 (64)	5.4 (62)
Within 2 miles of at least one PR 2305 warehouse	52.3 (59)	8.8 (61)	5.3 (60)

Table 3: Poverty and Unemployment Rates in Warehouse Adjacent Communities

	Poverty Rate (percentile)	Unemployment (percentile)
SCAQMD - ALL	38.2 (57)	10.2 (58)
Within 0.5 miles of at least one PR 2305 warehouse	46.7 (69)	11.1 (64)
Within 1 mile of at least one PR 2305 warehouse	45.2 (67)	10.9 (63)
Within 2 miles of at least one PR 2305 warehouse	42.1 (63)	10.6 (61)

Table 4: Ethnicity Rates in Warehouse Adjacent Communities

	Hispanic %	White %	African American %	Native American %	Asian American %
SCAQMD - ALL	45.4	32.3	6.5	0.2	13.1
Within 0.5 miles of at least one PR 2305 warehouse	62.1	17.5	7.6	0.2	10.9
Within 1 mile of at least one PR 2305 warehouse	59.1	19.9	7.4	0.2	11.6
Within 2 miles of at least one PR 2305 warehouse	52.4	25.1	7.4	0.2	12.8

AFFECTED INDUSTRIES/FACILITIES

Affected Industries and Industry Profile

PR 2305 covers warehousing operations with greater than 100,000 square feet due to their associated emissions of nitrogen oxide and particulate matter from fossil-fuel combustion of off-site and on-site trucks. Warehouse operators are applicable to PR 2305 if their indoor warehouse floor space is 50,000 square feet or above within one of these warehouses. Examples of these operations are visitations of diesel trucks of sizes varying from light and medium Class 2b-3 trucks to larger heavy Class 8 trucks, as well as on-site usage of hostler/yard trucks.

Using CoStar data of warehousing operations within the South Coast AQMD jurisdiction, South Coast AQMD staff expects PR 2305 to affect 2,902 warehousing locations, consisting of 3,995 warehouse operators, in that they would be required to earn WAIRE Points to meet their WPCO.[8] More operators are expected affected than warehousing locations, i.e. physical addresses of warehouses, because many warehouses host multiple tenants/businesses. An estimated additional 418 warehouses are expected to only be subject to reporting requirements of PR 2305.

Currently industry categories are recorded and reported as numerical codes coming from the North American Industry Classification System, or NAICS. NAICS codes are hierarchical, and are as long as six digits, with the first digit indicating broad industry categories, and each additional digit indicates a more refined industry within the prior digit's relative broader industry.

[8] CoStar data provides both warehouse locations and historical operator data, which South Coast AQMD staff believes includes historical operators no longer in operation. Consequently, South Coast AQMD staff estimates the number of PR 2305 potentially affected operators as the number of single-tenant warehouses (1,777 single-tenant and 32 unknown # of tenants) plus an assumed two operators for each multi-tenant warehouse (1,093 multi-tenant warehouses, or 2,186 warehouse operators), for a total of 3,995.

Although NAICS information of all estimated 3,995 warehouse operators potentially affected by PR 2305 would ideally be presented, several factors complicate that analysis here. First, the 3,995 estimated potentially affected warehouse operators comes from 1,809 single-tenant warehouses (1,777 single-tenant and 32 unknown number of tenants) and 1,093 multi-tenant warehouses. Warehouse operator data from CoStar does not distinguish from historical and current operators, South Coast AQMD staff was therefore unable to definitively assign operators to multi-tenant warehouses. Single-tenant warehouse information is more readily available (and these facilities are more prevalent) and this report presents NAICS information of those operators below.

Using facility-specific information collected from Dun and Bradstreet, as well as South Coast AQMD staff internet searches, South Coast AQMD staff believes it has reliable industry (NAICS) information for 1,714 of the assumed 3,995 warehouse operators potentially affected by PR 2305.[9] Table 5 presents the industries covering these identified warehouse operators potentially affected by PR 2305. Approximately 89% of these warehouse operators are associated with NAICS codes belonging to the "goods movement" sector.[10]

Table 6 lists the industries within the "goods movement" sector, each industry's estimated total number of facilities potentially subject to PR 2305, and total number of facilities in each industry.[11,12] Approximately 2.3% of all facilities in the potentially affected "goods movement" sector are expected to be affected by PR 2305, with 7.1% of all facilities in the transportation and warehousing sector expected to be affected.

[9] South Coast AQMD staff merged CoStar warehouse owner and operator data, specifically warehouse size, with Dun and Bradstreet facility data. The number of "reliable" potentially affected warehouse operators combined with Dun and Bradstreet data was determined by using Microsoft Excel's "Fuzzy Lookup" add-in (https://www.microsoft.com/en-us/download/details.aspx?id=15011), matching CoStar warehouse operator and Dun and Bradstreet warehouse operator data. "Reliable" matches are those matches occurring for single-tenant warehouses with matches found to be greater than 85% similar when matching on operator name and warehouse address. This provided 967 "reliable" matches. South Coast AQMD staff performed internet searches to determine the NAICS for the remaining single-tenant warehouse operators. This resulted in an additional 747 matches, for a total of 1,714 single-tenant warehouse operators with NAICS information.

[10] Construction (NAICS 23), manufacturing (NAICS 31-33), wholesale trade (NAICS 42), retail trade (NAICS 44-45), and transportation and warehousing (NAICS 48-49) are identified by the Southern California Association of Governments (SCAG) as the industries which make up the "goods movement" sector (https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal_goods-movement.pdf).

[11] Total facilities is estimated and provided by Economic Modeling Specialists International (EMSI), accessed February 25th, 2021, https://www.economicmodeling.com/. This data relies on payroll information provided by facilities for the U.S. Bureau of Labor Statistics' Quarterly Census of Employment and Wages.

[12] Total potentially affected facilities is estimated for each industry by multiplying its identified potentially affected operators by the number of total assumed potentially affected operators divided by the number of total identified potentially affected operators (3,995/1,714 = 2.331).

Table 5: PR 2305 Identified Potentially Affected Warehouse Operators		
NAICS	**Industry description**	**Identified potentially affected operators**
11	Agriculture, Forestry, Fishing and Hunting	3
22	Utilities	1
23	Construction	33
31-33	Manufacturing	455
42	Wholesale Trade	389
44-45	Retail Trade	216
48-49	Transportation and Warehousing	425
51	Information	14
52	Finance and Insurance	9
53	Real Estate and Rental and Leasing	26
54	Professional, Scientific, and Technical Services	49
56	Administrative and Support and Waste Management and Remediation Services	61
61	Educational Services	5
62	Health Care and Social Assistance	6
81	Other Services (except Public Administration)	19
92	Public Administration	3
	Total	**1,714**

Note: This table presents the subset of single-tenant warehouse operators expected to earn WAIRE points to comply with PR 2305 for which South Coast AQMD staff believes reliable industry information exists from Dun and Bradstreet or South Coast AQMD staff web searches as of 03/26/2021.

Table 6: PR 2305 Estimated Potentially Affected Warehouse Operators and Regional Industry Comparison for "Goods Movement" Sector

NAICS	Industry	Estimated potentially affected operators	Total facilities in 2020	Percent of facilities potentially affected by PR 2305
23	Construction	77	34,266	0.22%
31-33	Manufacturing	1,061	21,646	4.90%
42	Wholesale Trade	907	33,596	2.70%
44-45	Retail Trade	503	48,904	1.03%
48-49	Transportation and Warehousing	991	14,272	6.94%
	TOTAL	3,538	152,683	2.32%

Note: Total potentially affected facilities is estimated for each industry by multiplying its identified potentially affected operators by the number of total assumed potentially affected operators divided by the number of total identified potentially affected operators (3,995/1,714 = 2.331). Data on total facilities estimated and provided by Economic Modeling Specialists International. Individual operator values may not sum to total due to rounding of estimates.

Of the 3,995 PR 2305 potentially affected warehouse operators expected to earn WAIRE Points to comply with PR 2305, 1,964 are estimated to be in Los Angeles (LA) County, 468 estimated to be in Orange (OR) County, 470 estimated to be in Riverside (RV) County, and 1,093 estimated to be in San Bernardino (SB) County.

Although detailed economic information about specific PR 2305 potentially affected warehousing operators is unavailable, economic information about the broader industries which include these facilities is available. Table 7 presents a 2018 economic profile of the "goods movement" industries potentially affected by PR 2305 located in LA, OR, RV, and SB counties. These industries consist of about 147,000 facilities; facilities which earn an average annual revenue of about $4.9 million. These industries employ about 3,160,000 employees with an average annual salary of about $63,000.

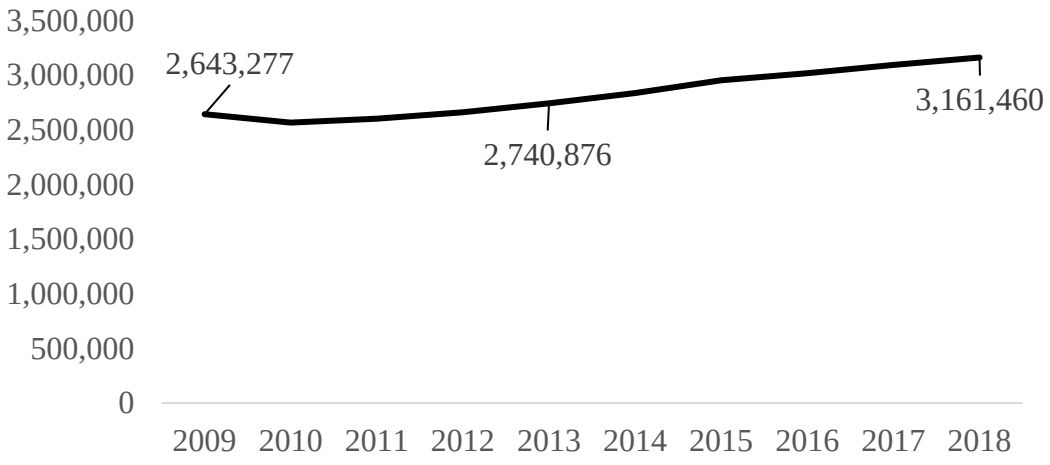
Table 7: PR 2305 Potentially Affected Industries - Industry Profile in LA, OR, RV, and SB counties (2018)

Approximate Number of Facilities	147,473
Approximate Number of Employees	3,161,460
Approximate Average Number of Employees per Facility	21
Approximate Annual Average Salary per Employee	$63,010
Approximate Annual Average Revenue per Facility	$4,868,717

Note: Data estimated and provided by Economic Modeling Specialists International for all "goods movement" industries with facilities expected to be affected by PR 2305, specifically NAICS 23, 31-33, 42, 44-45, and 48-49.

As illustrated by Figure 1, total employment in LA, OR, RV, and SB counties in the "goods movement" industries potentially affected by PR 2305 was around 2.64 million in 2009, and around 3.16 million in 2018. This indicates about a 20 percent growth in employment in the "goods movement" industries potentially affected by PR 2305 from 2009-2018, which is in line with the broader trends within California.

Figure 1: PR 2305 Potentially Affected Industries Employment 2009-2018



Small Businesses

South Coast AQMD defines a "small business" in Rule 102 as one which employs 10 or fewer persons and which earns less than $500,000 in gross annual receipts. South Coast AQMD also defines “small business” for the purpose of qualifying for access to services from the South Coast AQMD’s Small Business Assistance Office as a business with an annual receipt of $5 million or less, or with 100 or fewer employees.

U.S. Small Business Administration (SBA) definitions of small businesses vary by six-digit North American Industrial Classification System (NAICS) code. For PR 2305 potentially affected industries, a firm is considered a “small business” by SBA if it has under a certain number of employees or a certain amount of revenue, which can be found on the SBA website.[13]

In addition to South Coast AQMD and SBA's definitions of a small business, the federal Clean Air Act Amendments (CAAA) of 1990 also provides a definition of a small business. The CAAA classifies a business as a "small business stationary source" if it: (1) employs 100 or fewer employees, (2) emits less than 10 tons per year of any single pollutant and less than 20 tons per year of all pollutants, and (3) is a small business as defined under the federal Small Business Act (15 U.S.C. Sec. 631, et seq.). Given most PR 2305 potentially affected facilities would be newly regulated by South Coast AQMD if PR 2305 is passed by the South Coast AQMD Governing Board, South Coast AQMD staff does not have readily available pollution information to present this small business classification.

Of the 1,714 PR 2305 identified potentially affected operators, revenue and employee data from the Dun and Bradstreet Enterprise Database (D&B) was available and reasonable for 904. A facility’s D&B revenue data was considered unreliable if its reported/estimated annual revenue was less than expected annual rent. Expected annual rent for each single-tenant warehouse operator was estimated as warehouse rentable business area times the South Coast AQMD jurisdictional annual average rental price of $10.56/sq. ft. ($0.88/sq. ft. is the South Coast AQMD jurisdictional monthly average rental price).[14] The number of these facilities potentially affected by PR 2305 classified as small business by classification definition are listed in Table 8 below:

Table 8: PR 2305 Potentially Affected Facilities Small Business Tabulation

Small Business Definition	# Small Businesses
South Coast AQMD (Rule 102)	0 out of 904
South Coast AQMD (Small Business Assistance Office)	197 out of 904
U.S. Small Business Administration (SBA)	292 out of 904

Note: Total number of potentially affected warehouse operators considered in each small business classification is based on those single-tenant warehouse operators with valid employee and revenue information from Dun and Bradstreet Enterprise Database.

[13] The latest SBA definition of small businesses by industry can be found at the following website: http://www.sba.gov/content/table-small-business-size-standards.

[14] Industrial Economics, Inc., 2020. http://www.aqmd.gov/docs/default-source/planning/fbmsm-docs/iec_pr-2305-warehouse-relocation-report-(12-23-20).pdf?sfvrsn=8.

The smallest warehouse PR 2305 could directly affect would have 100,000 square feet of warehousing space, resulting in an estimated annual rental cost of $1,056,000. To be in operation, these facilities are expected to earn more than $1 million in revenue, ruling them out from South Coast AQMD's Rule 102 definition of small business.

COMPLIANCE COSTS

Methods and Sources of Data

Analysis Timeframe

This analysis considers an analysis timeframe from 2022-2031, as PR 2305 would be implemented starting 2022. Although a sunset of PR 2305 is presented within its rule language, that is likely to occur beyond the 2022-2031 timeframe of this analysis and thus is not analyzed within this report.

Cost Estimate Year

All costs presented in this report are estimated 2018 dollars. The per-unit dollar figures used for any cost/benefit resulting from PR 2305 passing are either 2018 reported costs/benefits, or costs/benefits from earlier years inflated to 2018 values using the all-industry producer price index reported by the CoreLogic® Marshall & Swift® Equipment Cost Index (M&S index).

One-Time and Recurring Costs

Potentially affected facilities can meet their compliance obligation through the purchase or usage of near-zero emission (NZE) and zero emission (ZE) equipment or equipment that facilitates its use. Facilities can opt to pay a mitigation fee in lieu of the purchase and/or usage of equipment. Purchases of ZE and NZE emission equipment is modeled as a one-time capital cost. Costs/savings resulting from the subsequent use of ZE and NZE equipment is modeled as recurring operating and maintenance (O&M) costs.

The potential menu options available to facilities to meet compliance obligations are:

- ZE and NZE truck acquisitions (capital cost) and Usage (O&M cost);
- ZE and NZE truck visits from a third-party fleet (O&M);
- Electric vehicle charger acquisition (capital) and usage (O&M);
- Hydrogen filling station acquisition (capital) and usage (O&M);
- ZE and NZE yard truck acquisition (capital) and usage (O&M);
- Solar panel acquisition (capital) and usage (O&M);
- High-efficiency filter systems acquisition (capital) and replacement filters (O&M);
- Transportation refrigeration unit (TRU) plug acquisition (capital) and usage (O&M); and
- Paying mitigation fee (O&M).

Additionally, facilities are expected to incur recurring O&M costs related to notification and reporting of compliance attainment.

Below is a summary of the cost assumptions underlying this socioeconomic impact assessment. More detailed information on the analysis underlying these assumptions can be found in the WAIRE Menu Technical Report provided in Appendix B of the PR 2305 & PR 316 Draft Staff Report.

Zero and Near-Zero Emission Truck Acquisition and Usage

Table 9 below presents capital costs of Diesel and NZE trucks. These costs are assumed to remain constant across the entire compliance period.[15,16] Per unit incremental acquisition costs of NZE Class 8 and Class 6 trucks are assumed to be $65,000 and $30,000, respectively. These costs are inclusive of state and local sales and federal excise taxes and based on research documented in the WAIRE Menu Technical Report.

Capital costs of ZE trucks are expected to decrease over time as a result of decreased battery costs. Projected capital costs over time for each ZE vehicle class can be found in Table 10 below.[17,18] The incremental acquisition cost is set equal to the difference between the capital cost of each ZE truck and its diesel equivalent. An 8% sales tax and 12% federal excise tax is also applied to each ZE truck acquisition.

When the number of NZE or ZE truck purchases for a given class in any compliance year falls below the expected number of truck purchases in CARB's EMFAC 2017 projections, the incremental acquisition cost for each truck class and fuel type is used. However, if the number of truck purchases in a given year exceeds EMFAC 2017 projections, the full capital cost associated with each truck type is used for those trucks above projections.

Table 9: Capital Costs for Diesel and NZE Truck Acquisitions

Vehicle Class	Diesel	NZE
Class 2b-3	$50,000	N/A
Class 6	$85,000	$115,000
Class 8	$130,000	$195,000

Note: Capital costs for diesel trucks listed here are pre-tax. NZE capital costs include sales taxes (Class 8 and Class 6) and federal excise taxes (Class 8 only).

[15] Capital costs for diesel trucks can be found in Table C-6 of the CARB ACT Appendix C-1 – SRIA submitted to DoF: https://ww3.arb.ca.gov/regact/2019/act2019/appc.pdf

[16] Capital costs for NZE Class 8 trucks can be found in Table 31 of the 2018 Feasibility Assessment for Drayage Trucks: https://cleanairactionplan.org/documents/final-drayage-truck-feasibility-assessment.pdf/. Class 6 capital costs were calculated by taking the ratio of capital costs for NZE Class 6 and 8 trucks found in the WAIRE Menu Technical Report.

[17] Capital costs for each ZE truck class (2b-3, 6, 8) for model years 2024-2030 are taken from CARB's ACT Appendix C-1 – SRIA as submitted to DoF (Table C-7): https://ww3.arb.ca.gov/regact/2019/act2019/appc.pdf.

[18] To fill in missing years (2022, 2023), ZE capital costs were linearized between 2018 and 2024. 2031 costs are assumed equal to 2030 costs.

Table 10: Capital Cost by ZE Truck Class and Year

Year	ZE Class 8	ZE Class 6	ZE Class 2b-3
2022	$292,544	$155,055	$71,920
2023	$246,948	$143,904	$68,318
2024	$201,351	$133,554	$64,896
2025	$194,134	$128,321	$63,635
2026	$188,312	$124,112	$62,599
2027	$183,371	$120,563	$61,684
2028	$178,870	$117,345	$60,829
2029	$174,809	$114,456	$60,035
2030	$170,748	$111,568	$59,241
2031	$170,748	$111,568	$59,241

Note: Capital costs for all ZE trucks listed here are pre-tax

Recurring costs associated with the use/visits of facility-owned NZE and ZE trucks is done on a per-mile basis. Per-mile usage costs resulting from fuel consumption and other costs (including maintenance, fees, insurance, and mid-life costs) were calculated for all truck classes and fuel types.[19,20,21] A detailed breakdown of total usage costs for Class 8, 6, and 2b-3 trucks for all relevant fuel types can be found in Tables 11, 12, and 13 below. Per-mile usage costs (not considering capital costs) of Class 6 and 8 NZE trucks is slightly lower than diesel, and results in a modest net savings to facilities. Per-mile usage costs of Class 2b-3, 6, and 8 ZE trucks is significantly lower than diesel and results in a net savings to facilities.

[19] Data on maintenance costs, mid-life costs, fuel cost and fuel economy for diesel, ZE and NZE trucks is taken from the WAIRE Menu Technical Report.
[20] Vehicle fees for all ZE and diesel truck classes are taken from CARB's ACT Total Cost of Ownership document: https://ww3.arb.ca.gov/regact/2019/act2019/apph.pdf. Fees for NZE trucks are assumed to be the same as diesel trucks.
[21] Annual insurance costs assumed to be equal to 3% of vehicle value. Vehicle value assumed to decrease by 10% in years 2-8 and an additional 5% in years 9-11. The average annual cost is included in the per mile cost analysis.

Table 11: Usage Costs for Class 8 Trucks by Fuel Type

	Diesel	ZE	NZE
Annual Miles	54,000	42,000	54,000
Fuel Cost	$3.74	$0.15	$2.92
Fuel Efficiency (miles per)	5.9	0.48	5.1
$/mile	$0.63	$0.31	$0.57
Total Fuel Cost	$34,231	$13,125	$30,918
Maintenance Cost (per mile)	$0.19	$0.14	$0.21
Total Maintenance Cost	$10,260	$5,985	$11,340
Annualized Mid-life Cost	-	$3,579	-
Fees	$3,112	$2,847	$3,112
Insurance Costs	$1,934	$3,950	$2,389
Total Other Cost	$15,306	$16,361	$16,841
Total Fuel + Other Cost	$49,536	$29,486	$47,759
$/mile	**$0.92**	**$0.70**	**$0.88**

Table 12: Usage Costs for Class 6 Trucks by Fuel Type

	Diesel	ZE	NZE
Annual Miles	24,000	24,000	24,000
Fuel Cost	$3.74	$0.17	$2.42
Fuel Efficiency (miles per)	7.4	1.04	6.3
$/mile	$0.51	$0.16	$0.38
Total Fuel Cost	$12,130	$3,923	$9,219
Maintenance Cost (per mile)	$0.22	$0.17	$0.24
Total Maintenance Cost	$5,280	$3,960	$5,760
Annualized Mid-life Cost	-	-	-
Fees	$1,300	$1,272	$1,300
Insurance Costs	$1,264	$2,006	$1,466
Total Other Cost	$7,844	$7,238	$8,525
Total Fuel + Other Cost	$19,974	$11,161	$17,744
$/mile	**$0.83**	**$0.47**	**$0.74**

Table 13: Usage Costs for Class 2b-3 Trucks by Fuel Type

	Diesel	ZE
Annual Miles	15,000	15,000
Fuel Cost	$3.74	$0.18
Fuel Efficiency (miles per)	23.2	1.79
$/mile	$0.16	$0.10
Total Fuel Cost	$2,418	$1,508
Maintenance Cost (per mile)	$0.17	$0.13
Total Maintenance Cost	$2,550	$1,913
Annualized Mid-life Cost	-	-
Fees	$927	$861
Insurance Costs	$744	$1,070
Total Other Cost	$4,221	$3,843
Total Fuel + Other Cost	$6,639	$5,351
$/mile	**$0.44**	**$0.36**

ZE and NZE Emission Truck Visits from a Non-Owned Fleet

Facilities can earn points toward their compliance obligation by arranging visits from ZE or NZE trucks owned by a third-party. The cost of hiring visits from clean trucks is assumed to be based on the per mile total cost of ownership (TCO) for each truck class and fuel type. More specifically, the incremental cost resulting from third-party owned ZE and NZE trucks are is assumed to be the incremental per mile TCO cost (or savings) of clean trucks when compared to the per mile TCO cost of diesel trucks.

A TCO analysis was performed for each truck class and fuel type for each compliance year using the assumed acquisition and usage costs outlined in Tables 9-13. Tables 14, 15, and 16 below include a breakdown of the total cost of ownership for all Class 8, Class 6, and Class 2b-3 trucks purchased in year 2022, respectively. A 4% financing rate is used over a five-year financing period. A 12-year useful life is assumed for all trucks and a 4% discount rate is used to discount all costs in years beyond 2022. The TCO for all diesel and NZE trucks is constant over the compliance period and does not vary based on the year purchased. Because capital costs for ZE trucks are assumed to decline over time, the TCO does vary by purchase year.

Table 14: Total Cost of Ownership for All 2022 Class 8 Trucks

	Diesel	ZE	NZE
Annual Miles	54000	42000	54000
Total Capital Cost (with Taxes + Financing)	$162,240	$365,095	$202,800
Total Fuel Cost	$334,106	$128,106	$301,771
Total Maintenance	$100,142	$58,416	$110,684
Midlife Cost	$0	$34,934	$0
Total Fees	$30,375	$27,786	$30,375
Insurance Costs	$18,874	$38,555	$23,317
Total Other Cost	$149,392	$159,692	$164,376
Residual	-$15,453	-$7,727	-$15,453
Total Cost of Ownership	$630,285	$645,166	$653,494
TCO $/mile	$0.97	$1.28	$1.01

Table 15: Total Cost of Ownership for All 2022 Class 6 Trucks

	Diesel	ZE	NZE
Annual Miles	24000	24000	24000
Total Capital Cost (with Taxes + Financing)	$95,472	$174,158	$119,600
Total Fuel Cost	$118,392	$38,291	$89,982
Total Maintenance	$51,535	$38,651	$56,220
Midlife Cost	$0	$0	$0
Total Fees	$12,684	$12,412	$12,684
Insurance Costs	$12,341	$19,582	$14,305
Total Other Cost	$76,560	$70,646	$83,209
Residual	-$10,477	-$5,239	-$10,477
Total Cost of Ownership	$279,947	$277,856	$282,314
TCO $/mile	$0.97	$0.96	$0.98

Table 16: Total Cost of Ownership for All 2022 Class 2b-3 Trucks

	Diesel	ZE
Annual Miles	15000	15000
Total Capital Cost (with Taxes + Financing)	$56,160	$80,781
Total Fuel Cost	$23,602	$14,723
Total Maintenance	$24,889	$18,667
Midlife Cost	$0	$0
Total Fees	$9,053	$8,400
Insurance Costs	$7,259	$10,442
Total Other Cost	$41,201	$37,509
Residual	-$8,207	-$4,104
Total Cost of Ownership	$112,756	$128,908
TCO $/mile	$0.63	$0.72

The incremental cost analysis assumes incremental cost is absorbed over a 3-year period, instead of the full 12-year useful life. The incremental cost is therefore multiplied by four (12 ÷ 3 = 4) to determine the default cost for truck visits. Therefore, to calculate the incremental cost of visits from a non-owned fleet you begin by taking the difference in the TCO per mile cost between the clean vehicle and it's diesel equivalent (TCO $/mile$_{clean}$ – TCO $/mile$_{diesel}$), then multiplying by the average number of miles per visit (79.8 miles per visit for Class 8, 28.4 for Class 6, and 30.6 for Class 2b-3), and then multiplying by four. If the difference in the TCO per mile cost between the clean vehicle and its diesel equivalent is less than zero (cost savings), then we do not assume a 3-year payback and, thus, do not multiply by 4. See Table 17 below for a summary of incremental costs (in $/visit) for visits from a non-owned fleet by fuel type, truck class, and year of purchase.

Table 17: Incremental Cost per Visit from a Non-Owned Fleet for All Truck Classes and Fuel Types by Year of Purchase

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
NZE Class 8	$11.43	$11.43	$11.43	$11.43	$11.43	$11.43	$11.43	$11.43	$11.43	$11.43
NZE Class 6	$0.93	$0.93	$0.93	$0.93	$0.93	$0.93	$0.93	$0.93	$0.93	$0.93
ZE Class 8	$98.13	$62.09	$26.05	$20.35	$15.75	$11.84	$8.28	$5.07	$1.86	$1.86
ZE Class 6	-$0.21	-$1.44	-$2.59	-$3.17	-$3.63	-$4.03	-$4.38	-$4.70	-$5.02	-$5.02
ZE Class 2b-3	$10.98	$8.23	$5.62	$4.66	$3.86	$3.17	$2.51	$1.91	$1.30	$1.30

Electric Vehicle Charger Acquisition and Usage

One-time capital costs resulting from Level 3 electric vehicle charger acquisition include the cost of the charger, as well as the construction, permitting, and charger energization costs related to charger installation. Chargers costs are calculated on a per-unit basis, where construction and permitting costs are incurred on a project basis. The cost is assumed to be $30,000 per charger. Construction mobilization cost is assumed to be $10,000 per project with permitting and charger energization costs are assumed to be $70,000 per project. Costs are taken from the WAIRE Menu Technical Report Appendix B. Each charger is expected to dispense 165,000 kWh per year.

Electricity costs are accounted for in the per-mile usage costs of Class 6 and Class 8 ZE Trucks. To avoid double-counting, it is assumed no costs are incurred for charger usage in this analysis.

Hydrogen Filling Station Acquisition and Usage

The one-time cost of hydrogen station acquisition and installation and the recurring costs of subsequent usage are taken from the WAIRE Menu Technical Report. Total installed cost is $2,000,000 per 700 kg/day project. Each Class 8 Truck is assumed to use 2,440 kg/year of hydrogen. It is assumed that hydrogen usage costs decline over time from roughly $9.75/kg in 2020 to $6.20/kg in 2031.[22]

ZE Yard Truck Acquisition and Usage

ZE yard trucks currently cost about $310,000 while their diesel equivalent costs about $100,000.[23] The one-time incremental cost is assumed to be $210,000 per truck. ZE yard truck capital costs are expected to decline over time due to projected future decreases in battery costs. However, ZE yard truck capital cost projections are not available for future years. Staff applied a yearly cost multiplier based on ZE Class 2b-3 capital costs to the incremental cost of ZE yard trucks.[24] Annual usage cost for ZE yard trucks is expected be lower than their diesel equivalent. Each ZE yard truck is assumed to operate for 1,000 hours per year for a total annual usage cost of $6,250 per yard truck based on analysis included in the WAIRE Menu Technical Report.

Solar Panel Acquisition and Usage

Based on the analysis provided in the WAIRE Menu Technical Report, the price for a rooftop solar panel system (including installation) is set $2.80 per kW, resulting in a total installed cost of $280,000 for a 100-kW solar panel system. Electricity generated from rooftop solar panel systems is assumed to save operators on grid power costs. Solar panel usage is assumed to result in a net savings of $0.17 per kWh generated. Each 100-kW system has an estimated electrical generation of 165,000 kWh annually.

High-Efficiency Filter Systems Acquisition and Replacement Filters

The estimated costs analyzed for the installation of 25 air filter systems with MERV 16 air filters is $65,000 based on the analysis provided in the WAIRE Menu Technical Report. The cost for the replacement/installation of 200 MERV 16 air filters is $60,000.

TRU Plug Acquisition and Usage

The per unit cost of a TRU plug is assumed to be $1,600. Associated construction and permitting costs are assumed to be $4,700 and $7,000 per installation project, respectively. Each installed TRU is assumed to consume 10,658 kWh of electricity annually. Assuming a rate of $0.18/kWh, annual TRU usage cost is set to $1,918.

[22] Hydrogen cost projections can be found in CARB ACT Appendix C-1 – SRIA submitted to DoF (Figure C-5): https://ww3.arb.ca.gov/regact/2019/act2019/appc.pdf

[23] https://cleanairactionplan.org/documents/final-cargo-handling-equipment-che-feasibility-assessment.pdf/

[24] A cost multiplier is generated by taking ratio of difference in capital cost in each year (2022 -2031) to the difference in capital costs in year 1 (2022).

Pay Mitigation Fee

The cost calculation for the mitigation fee scenario is straightforward. In lieu of earning WAIRE Points from equipment acquisitions and usage, all facilities choose to pay a fee of $1,000 for each WAIRE Point in their WPCO attributed to their facility in every year of compliance (final cost is $1,062.5 due to PR 316 6.25% addition to mitigation fees paid for administrative cost recovery).

Administrative Costs

In addition to costs expected from compliance actions outlined above, all operators are also expected to incur expenses related to fees outlined in Rule 316 for Warehouse Operations Notifications ($29.51/submission), Initial Site Information Reports ($140.68/submission), and Annual WAIRE Reports ($392.50/submission).

All warehouse operators are also expected to incur costs associated with the reporting related to compiling all relevant compliance data and submitting the information as required by PR 2305. This type of reporting is expected to be similar to the kind of reporting required in CARB's ACT regulation, specifically for large entity reporting, and is estimated to be no more than 25 hours of work totaling $1,250 per year.[25]

To estimate truck traffic for determining compliance obligations, it is assumed that all facilities will install two cameras at a one-time cost of $2,000 per facility. Staff time will also be required for reviewing recordings. It is estimated that 1,152 hours of video will need to be reviewed per year (48 hours per month x 2 driveways per operator x 12 months). Speeding the video up to 8x results in a total staff time of 144 hours per year (at $50/hour) for a total annual cost of $7,200 per facility.

It is also expected that facilities that elect to meet compliance obligations through ZE or NZE truck visits will incur additional costs related to truck tracking. For this analysis, it is assumed that tracking will be done through truck driver surveys and drivers visiting a warehouse will be required to provide basic information such as license plate and/or VIN, trucking company, and contact info.[26] The compilation of truck surveys is expected to take one hour of work per week (at $50/hour) for a total annual cost of $2,600 per facility.

Facilities that choose to meet their compliance obligations through payment of the mitigation fee are subject to an additional fee equal to 6.25% of the amount of mitigation fee paid as outlined in Proposed Rule 316(f). This fee is necessary to cover the reasonable costs incurred by South Coast AQMD staff and/or its consultants to administer the Mitigation Program.

Total annual administrative costs are expected to range from approximately $8,900 to $11,500 per facility per year. The lower end of the range includes Annual WAIRE Report fees, reporting costs, and costs incurred due to video review. The higher end the range those same costs plus truck survey costs only attributable to those facilities who choose to track NZE/ZE truck visits to meet

[25] https://ww3.arb.ca.gov/regact/2019/act2019/isor.pdf

[26] Under PR 2305, a typical 250,000 sq. ft warehouse would be expected to receive anywhere from five visits per day (for larger Class 8 trucks) up to 24 visits per day (from smaller trucks).

compliance obligations. Additionally, facilities are expected to incur one-time costs for camera purchases, a Warehouse Operations Notifications Fee, and an Initial Site Information Report Fee.

Scenario Analysis

With an estimated 3,995 warehouse operators and 32 potential compliance actions, it is not possible to determine the precise cost of PR 2305 and PR 316. In addition, due to annual compliance obligations, the potential compliance approach may vary from year to year.

Table 18: Scenario Descriptions

#	Scenario Description	Notes
1	NZE Class 8 truck acquisitions and subsequent visits from those trucks	
2	NZE Class 8 truck acquisitions and subsequent visits from those trucks (early purchase)	One additional truck is acquired earlier than required, thus increasing WAIRE Points earned from truck visits in subsequent years.
3	NZE Class 8 truck acquisitions (funded by Carl Moyer program) and subsequent visits from those trucks	No WAIRE Points earned for truck acquisitions. Mitigation fees paid to earn WAIRE Points in first year of compliance.
4	NZE Class 8 truck visits from non-owned fleets	No WAIRE Points earned for truck acquisitions.
5	ZE Class 8 truck visits from non-owned fleets	No WAIRE Points earned for truck acquisitions. ZE Class 8 trucks are assumed to not be commercially available until late 2022. Mitigation fees paid to earn WAIRE Points until then.
6	Level 3 charger installations followed by ZE Class 6 & Class 8 truck acquisitions and subsequent visits from those trucks, using installed chargers	Chargers provide ~30,000 kWh/year per Class 6 truck, and ~90,000 kWh/yr per Class 8 truck. Class 8 trucks only acquired if 25 Class 6 trucks had been previously purchased for one warehouse.
7	Pay Mitigation Fee	
7a	Pay Mitigation Fee and account for NZE trucks visiting the facility incentivized from the WAIRE Mitigation Program	Incentivized trucks earn WAIRE Points and reduce mitigation fees paid.
8	NZE Class 6 truck acquisitions and subsequent visits from those trucks	
9	NZE Class 6 truck visits from non-owned fleets	No WAIRE Points earned for truck acquisitions.
10	ZE Class 6 truck visits from non-owned fleets	No WAIRE Points earned for truck acquisitions.
11	Rooftop solar panel installations and usage	Solar panel coverage limited to 50% of building square footage. Mitigation fees used to make up any shortfall in WAIRE Points.
12	Hydrogen station installations followed by ZE Class 8 truck acquisitions and subsequent visits from those trucks, using the hydrogen station	System installation in first year is followed by a truck acquisition. In subsequent years trucks are only acquired if needed to earn WAIRE Points.
13	ZE Class 2b-3 truck acquisitions and subsequent visits from those trucks	
14	ZE Class 2b-3 truck visits from non-owned fleets	
15	Filter System Installations	
16	Filter Purchases	
17	TRU plug installations and usage in cold storage facilities	Scenario is only applied to cold storage warehouses. Plugs limited to 1:10,000 sq. ft. of building space.
18	ZE Hostler Acquisitions and Usage	

To estimate the potential impacts of PR 2305 and PR 316, 19 different scenarios were developed in an attempt to show the range of potential compliance outcomes. A description of the 19 scenarios analyzed is included in Table 18.

The scenarios were developed to show potential cost and emissions impacts from all 32 WAIRE Menu actions, as well as using mitigation fees. Each scenario is structured to follow a series of choices a warehouse operator may make based on compliance choices from a previous year. For example, if a warehouse operator purchased an NZE Class 8 truck in their first year complying with PR, they were assumed to use that same truck in subsequent years to meet future compliance obligations. As a bounding analysis approach, all warehouses were assumed to only comply with a single scenario approach from 2022 through 2031. No single scenario in this bounding analysis is expected to occur. Rather, they present possible extreme compliance outcomes.

For these scenario analyses, all 2,902 potentially affected facilities were modeled for every year from 2022-2031 using their square footage and the applicable average trip generation rates to determine their compliance obligation. All results presented in this section assume a rule stringency of .0025 and three-year phase-in period. The amount of warehousing space was assumed to grow 1.8% per year, consistent with analysis from SCAG.[27,28] In addition, the scenario analysis attempts to isolate and attribute capital and O&M costs for only the equipment incremental to current CARB regulations such as CARB's ACT and Low NOx Omnibus regulations.[29]

Tables 19 – 24 below present the total number of each compliance action for each scenario over the 2022-2031 compliance period. Table 19 presents the number of ZE and NZE truck acquisitions by scenario by year, and Table 20 presents the associated usage in vehicle miles traveled (VMT). Projected ZE and NZE truck visits from a non-owned fleet are shown in Table 21. Truck visits in Scenario 7a earn points toward compliance obligation but do not result in additional costs to facilities.

The number of equipment acquisitions in each compliance year for Scenario 6 (level 3 chargers), Scenario 12 (hydrogen stations), Scenario 17 (TRU plugs), and Scenario 18 (ZE yard trucks) are presented in Table 22. The number of equipment acquisitions for Scenario 11 (rooftop solar), Scenario 15 (filter systems), and Scenario 16 (filters) are shown in Table 23.

Table 24 presents the total annual mitigation fees paid for Scenarios 3, 5, 6, 7, 7a, 11, and 17 inclusive of the additional 6.25% Mitigation Program Fee outlined in PR 316. These mitigation fee payments represent warehouses voluntarily choosing this compliance action over a variety of other compliance actions allowed to comply with PR 2305. Table 25 lists projected administrative costs associated with PR 316 fees, reporting, camera installations, video review, and truck surveys

[27] For information on average trip generation rates, see PR 2305 (d)(1)(C)
[28] https://scag.ca.gov/sites/main/files/file-attachments/final_report_03_30_18.pdf
[29] Scenario modeling assumptions regarding the impacts of CARB regulations on facility's compliance point obligation have changed since the release of the previous PR2305 Draft Socioeconomic Impact Assessment dated March 2021. As a result of the changes, the number of compliance actions necessary has decreased, resulting in decreases in both compliance costs and emissions reductions.

for every scenario except Scenario 17. Scenario 17 applies only to cold-storage facilities and total administrative costs are proportionate to the number of facilities in each compliance year. Total annual average administrative costs across all potentially affected facilities are expected to range from $34.7M to $44.6M per year in all scenarios excluding Scenario 17.

Table 19: ZE and NZE Truck Acquisitions by Scenario by Year.

	Equipment	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Sc1	NZE Class 8	2,092	2,654	4,022	1,474	731	322	369	163	129	109
Sc2	NZE Class 8	3,015	2,423	4,317	1,224	825	362	176	151	130	110
Sc3	NZE Class 8	2,092	7,162	1,951	1,178	212	178	163	143	117	478
Sc6	ZE Class 8	0	4	50	111	105	34	5	0	0	0
Sc6	ZE Class 6	0	3,471	5,448	4,355	4,242	2,606	1,162	726	260	199
Sc8	NZE Class 6	4,403	7,300	10,589	7,158	5,007	1,679	649	481	415	339
Sc12	ZE Class 8	0	955	1,003	1,160	2,284	1,013	628	159	117	91
Sc13	ZE Class 2b-3	7,066	11,521	15,325	9,347	5,056	1,765	765	676	574	478

Table 20: ZE and NZE Truck VMT (in millions) by Scenario by Year.

	Equipment	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Sc1	NZE Class 8	43.4	141.9	280.4	394.4	440.2	462.0	476.4	487.4	493.4	498.4
Sc2	NZE Class 8	62.6	175.4	315.2	430.2	472.7	497.3	508.5	515.3	521.1	526.1
Sc3	NZE Class 8	43.4	235.4	424.5	489.4	518.2	526.3	533.4	539.8	545.2	557.5
Sc6	ZE Class 8	0.0	0.0	0.2	2.1	4.6	4.4	1.4	0.2	0.0	0.0
Sc6	ZE Class 6	0.0	0.0	51.3	80.5	64.3	62.6	38.5	17.2	10.7	3.8
Sc8	NZE Class 6	32.5	118.9	251.0	382.1	471.9	521.3	538.4	546.8	553.4	559.0
Sc12	ZE Class 8	0.0	19.8	60.4	105.3	176.8	245.2	279.2	295.6	301.3	305.6
Sc13	ZE Class 2b-3	56.2	204.1	417.7	614.0	728.6	782.8	803.0	814.4	824.4	832.7

Table 21: ZE and NZE Truck Visits (Non-Owned Fleet) by Scenario by Year (in millions)

	Equipment	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Sc4	NZE Class 8	1.18	2.76	4.63	5.37	5.62	5.48	5.23	4.87	4.40	3.79
Sc5	ZE Class 8	0.00	2.28	3.82	4.42	4.63	4.51	4.31	4.01	3.63	3.12
Sc7a	NZE Class 8	0.00	1.30	2.77	4.30	5.34	5.39	5.42	5.44	5.45	5.46
Sc7a	NZE Class 6	0.00	0.00	0.28	0.79	0.79	0.79	0.79	0.79	0.79	0.78
Sc9	NZE Class 6	4.12	9.67	16.22	18.78	19.66	19.17	18.31	17.06	15.41	13.26
Sc10	ZE Class 6	4.12	9.67	16.22	18.78	19.66	19.17	18.31	17.20	15.53	13.42
Sc14	ZE Class 2b-3	5.49	12.89	21.62	25.04	26.21	25.56	24.41	22.74	20.55	17.68

Table 22: Equipment Acquisitions by Year - Scenarios 6, 12, 17, and 18

	Equipment	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Sc6	Chargers	1,857	1,023	1,192	119	132	127	119	110	99	85
Sc12	H2 Stations	955	1,003	1,160	54	54	54	54	54	54	54
Sc17	TRU Plugs	158	322	286	179	24	22	22	22	21	19
Sc18	ZE Yard Trucks	974	1,101	1,372	162	158	176	40	34	31	28

Table 23: Equipment Acquisitions by Year - Scenarios 11, 15, and 16 (in thousands)

	Equipment	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Sc11	Solar (kW)	903.0	1752.6	1702.2	1154.4	705.4	154.7	103.9	102.6	101.4	96.7
Sc15	Filter Systems	62.0	145.4	243.7	282.0	295.0	317.1	275.0	256.2	231.7	199.5
Sc16	Filters	531.5	1247.7	2092.2	2422.9	2535.4	2473.3	2362.0	2200.3	1988.2	1710.8

Table 24: Mitigation Fee Paid by Scenario by Year (Inclusive of 6.25% Mitigation Program Fees) (in millions)

	Equipment	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Sc3	NZE Class 8	$77.19	$6.95	$6.85	$9.36	$10.76	$9.80	$9.23	$8.49	$7.70	$5.19
Sc5	ZE Class 8	$143.87	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Sc6	ZE Class 6 & 8	$0.00	$0.00	$0.00	$0.00	$0.01	$0.01	$0.01	$0.02	$0.02	$0.02
Sc7	Mitigation Fee	$143.87	$341.98	$581.76	$682.29	$733.40	$747.07	$760.75	$774.43	$788.11	$801.78
Sc7a	Mitigation Fee	$143.87	$197.84	$236.17	$114.12	$2.31	$0.12	$0.00	$0.00	$0.00	$0.00
Sc11	Solar	$0.00	$45.48	$7.04	$389.33	$465.76	$516.93	$548.19	$505.08	$448.72	$375.17
Sc17	TRU	$0.00	$0.07	$3.57	$6.23	$8.46	$7.98	$6.98	$5.62	$3.85	$1.62

Note: Warehouse operators have a variety of options outside of paying a mitigation fee to comply with PR 2305. Values presented in this table encompass possible mitigation fee totals paid if all warehouse operators choose to comply with PR 2305 voluntarily choosing the compliance method specific to each listed scenario.

Table 25: Administrative Costs by Year (millions) (excluding Scenario 17)

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
316 Fees	$1.03	$1.53	$2.05	$1.87	$1.87	$1.87	$1.87	$1.87	$1.87	$1.87
Reporting	$1.67	$3.37	$5.09	$5.15	$5.21	$5.27	$5.33	$5.39	$5.44	$5.50
Cameras	$2.67	$2.72	$2.76	$0.09	$0.09	$0.09	$0.09	$0.09	$0.09	$0.09
Reviewing Video	$9.60	$19.40	$29.33	$29.66	$30.00	$30.34	$30.68	$31.02	$31.36	$31.69
Truck Surveys	$3.47	$7.01	$10.59	$10.71	$10.83	$10.96	$11.08	$11.20	$11.32	$11.45

Table 26 presents total annual costs by scenario. Total costs include one-time costs resulting from equipment acquisition, recurring costs associated with equipment usage, mitigation fees paid, and administrative costs and fees. Table 27 below shows a cost summary for each compliance scenario including net present value (assuming 1% and 4% discount rates), average annual cost, and the weighted average annual cost per square foot of warehouse space after taking into account equipment acquisition from CARB's ACT and Low NOx Omnibus regulations. The total costs presented here are inclusive of all administrative costs and fees related to compliance. Average annual costs range from -$12.6M/yr. (or -$0.02/sq. ft./yr.) for the lowest cost scenario (Scenario

10: ZE Class 6 Visits from a Non-owned Fleet) up to $979.0M/yr. (or $1.21/sq. ft./yr.) for the highest cost scenario (Scenario 11: Solar Panel Installations).

Scenario costs are typically highest in the initial years of the compliance period due to the fact that the scenarios assume that capital equipment acquisitions take place early in the analysis timeframe. Later in the analysis timeframe, costs are typically much lower due to the fact that compliance obligations can be met much more cheaply through equipment usage. Staff believes that the scenario cost estimates are conservative for two reasons, (1) the compliance period analyzed is shorter than the assumed useful life of the majority of equipment, and (2) fuel and maintenance savings resulting from NZE/ZE truck usage are only accrued for the mileage associated with warehouse visits. Extending the analysis timeframe further and accounting for the per mile savings of all truck mileage would result in the accrual of significant savings to warehouse operators using NZE/ZE truck acquisition and usage to meet their compliance obligations.

The costs presented here are default calculations broadly applicable to the industry, however individual warehouse operators may identify different specific costs for their operations. Warehouse operators are assumed to gravitate towards the lowest cost options for their specific situations. As such, the maximum average cost warehouse operators would be expected to incur is $0.83/sq. ft./yr. resulting from the mitigation fee scenario. However, based on the cost analysis, it is likely that in most situations warehouse operators will identify substantially cheaper options that work within their operations.

Table 26: Total Annual Costs by Scenario (in millions)

	Equipment	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Sc1	NZE Class 8	$153	$202	$466	$130	$81	$54	$57	$44	$42	$41
Sc2	NZE Class 8	$272	$186	$512	$113	$86	$56	$44	$42	$41	$40
Sc3	NZE Class 8	$94	$33	$43	$41	$42	$41	$41	$40	$40	$37
Sc4	NZE Class 8	$32	$66	$103	$109	$112	$111	$109	$105	$100	$94
Sc5	ZE Class 8	$162	$175	$149	$137	$121	$102	$85	$70	$57	$56
Sc6	ZE Class 6 & 8	$149	$365	$473	$239	$220	$137	$86	$76	$63	$64
Sc7	Mitigation Fee	$159	$369	$621	$719	$771	$785	$799	$813	$827	$841
Sc7a	Mitigation Fee	$162	$232	$286	$162	$50	$49	$49	$50	$50	$51
Sc8	NZE Class 6	$147	$391	$698	$350	$154	$50	$18	$13	$11	$9
Sc9	NZE Class 6	$22	$43	$65	$65	$66	$66	$66	$65	$64	$63
Sc10	ZE Class 6	$18	$20	$8	-$12	-$23	-$29	-$31	-$31	-$28	-$17
Sc11	Solar	$2,543	$4,727	$4,067	$2,436	$932	-$756	-$910	-$986	-$1,074	-$1,189
Sc12	ZE Class 8	$1,928	$2,180	$2,472	$272	$357	$274	$248	$217	$210	$209
Sc13	ZE Class 2b-3	$181	$244	$260	$132	$54	$4	-$11	-$13	-$15	-$16
Sc14	ZE Class 2b-3	$79	$140	$171	$164	$149	$129	$110	$93	$77	$74
Sc15	Filter System	$176	$405	$673	$770	$804	$862	$753	$705	$641	$558
Sc16	Filter	$174	$401	$667	$764	$798	$780	$747	$698	$635	$552
Sc17	TRU	$1	$2	$6	$8	$10	$9	$8	$7	$5	$3
Sc18	Yard Trucks	$219	$226	$248	$79	$79	$81	$67	$67	$67	$67

Table 27: Total Cost Summary for All Scenarios

	Equipment	Discounted Total Costs - NPV (1%) (in millions)	Discounted Total Costs - NPV (4%) (in millions)	Average Annual Cost (in millions)	Average Annual Cost ($/sq. ft)
Sc1	NZE Class 8	$1,225.7	$1,102.6	$127.2	$0.16
Sc2	NZE Class 8	$1,345.1	$1,219.9	$139.2	$0.17
Sc3	NZE Class 8	$430.2	$374.4	$45.2	$0.06
Sc4	NZE Class 8	$887.4	$749.5	$94.1	$0.12
Sc5	ZE Class 8	$1,067.2	$941.8	$111.5	$0.14
Sc6	ZE Class 6 & 8	$1,799.3	$1,603.8	$187.3	$0.23
Sc7	Mitigation Fee	$6,298.0	$5,264.0	$670.2	$0.83
Sc7a	Mitigation Fee	$1,097.7	$985.5	$114.0	$0.14
Sc8	NZE Class 6	$1,785.0	$1,627.1	$184.3	$0.23
Sc9	NZE Class 6	$553.6	$467.6	$58.7	$0.07
Sc10	ZE Class 6	-$114.9	-$87.3	-$12.6	-$0.02
Sc11	Solar	$9,796.9	$9,712.2	$979.0	$1.21
Sc12	ZE Class 8	$8,117.5	$7,445.5	$836.7	$1.04
Sc13	ZE Class 2b-3	$803.2	$752.8	$82.1	$0.10
Sc14	ZE Class 2b-3	$1,128.8	$978.3	$118.7	$0.15
Sc15	Filter System	$5,985.7	$5,056.7	$634.7	$0.79
Sc16	Filter	$5,862.9	$4,953.4	$621.6	$0.77
Sc17	TRU	$54.2	$45.8	$5.7	$0.70
Sc18	Yard Trucks	$1,152.6	$1,028.7	$120.0	$0.15

JOBS AND OTHER SOCIOECONOMIC IMPACTS

The REMI model (PI+ v2.4.1) was used to assess the total socioeconomic impacts of the regulatory change from PR 2305.[30] The model links the economic activities in the counties of Los Angeles, Orange, Riverside, and San Bernardino, and for each county, it is comprised of five interrelated blocks: (1) output and demand, (2) labor and capital, (3) population and labor force, (4) wages, prices and costs, and (5) market shares.[31]

Given the uncertain nature of compliance action taken by each potentially affected warehouse operator potentially subject to PR 2305, a bounding analysis was performed in estimating jobs affects estimated due to implementation of PR 2305. This bounding analysis analyzes scenarios

[30] Regional Economic Modeling Inc. (REMI). Policy Insight® for the South Coast Area (160-sector model). Version 2.4.1, 2020.

[31] Within each county, producers are made up of 156 private non-farm industries and sectors, three government sectors, and a farm sector. Trade flows are captured between sectors as well as across the four counties and the rest of U.S. Market shares of industries are dependent upon their product prices, access to production inputs, and local infrastructure. The demographic/migration component has 160 ages/gender/race/ethnicity cohorts and captures population changes in births, deaths, and migration. (For details, please refer to REMI online documentation at http://www.remi.com/products/pi.)

wherein all warehouse operators are assumed to comply using the same compliance action. South Coast AQMD staff modeled and presents the results of those scenarios which they believe to be high- and low-cost scenarios, along with a few additional scenarios to provide a more complete picture of the range of jobs impacts due to implementation of PR 2305.

The scenarios modeled to estimate the range of jobs impacts due to implementation of PR 2305 are scenarios 3, 6, 7, 7a, 10, and 13. Scenarios 3 and 10 are low-cost natural gas and zero-emission scenarios respectively. Scenarios 7 and 7a are high-cost scenarios from all warehouse operators complying with PR 2305 through paying a mitigation fee. Scenario 6 was included to consider a scenario involving electric vehicle charger installations. Scenario 13 is maintained for comparison to an earlier draft of this socioeconomic impact assessment, wherein Scenario 13 was the low-cost zero-emission scenario. Each scenario is described in Table 15.

Each assessment herein is performed relative to a baseline ("business as usual") where PR 2305 would not be adopted. Adoption of PR 2305 would create a regulatory scenario under which the potentially affected facilities would incur average annual compliance costs estimated to range from about -$13 to $670 million for low- and high-cost scenarios respectively.

Direct effects of proposed rules/amendments must be estimated and used as inputs into the REMI PI+ model in order for the model to assess secondary and induced impacts for all actors in the four-county economy on an annual basis and across a user-defined horizon (2022 - 2031). Direct effects of PR 2305 include additional costs to the potentially affected facilities and additional sales by local vendors of equipment, devices, or services supplying the necessary goods/services to help the potentially affected facilities meet the proposed requirements of PR 2305.

While compliance expenditures may increase the cost of doing business for affected facilities, the purchase and installation of additional equipment combined with spending on operation and maintenance may increase sales in other sectors. Table 25 lists the sectors modeled in REMI PI+ which incur a cost/benefit from compliance expenditures.[32]

All expected PR 2305 compliance costs are included in the REMI PI+ model as increased demand/spending in the industry categories listed in Table 25. This could substantially mute negative regional effects on employment if the REMI PI+ model assumed all spending from any industry in the South Coast AQMD jurisdiction was spent within the South Coast AQMD jurisdiction. This worry is mitigated as each industry is provided a set of "regional purchase coefficients," which account for regional spending/final demand to be met by companies within and outside the South Coast AQMD jurisdiction.

[32] Improved public health due to reduced criteria and toxic air pollution may improve worker productivity and other economic factors. Including these factors in a jobs/REMI analysis would only increase the desire of individuals to relocate or stay in the South Coast AQMD jurisdiction. Thus the jobs estimates provided are conservative estimates, and would likely be less after accounting for this improved "amenity" value.

Table 25: Industries Incurring Costs or Benefitting from PR 2305 Compliance

Compliance Cost Source	Industries Incurring Compliance Costs (NAICS in REMI)	Industries with Adjusted Demand (NAICS in REMI)
NZE and/or ZE truck purchases[3,6,7,7a,13]	Total annual compliance cost split amongst all industries potentially affected by PR 2305 proportional to total warehouse square footage.[33]	*One-time Capital:* Motor Vehicle Manufacturing (NAICS 3361)
Reduced purchase of diesel fuel[3,6,7,7a,10,13]		*Recurring:* Petroleum and Coal Products Manufacturing (NAICS 324)
Purchase of natural gas fuel[3,7,7a]		*Recurring:* Oil and Gas Extraction (NAICS 211)
Purchase of electricity as fuel[6,7,10,13]		*Recurring:* Electric Power Generation, Transmission, and Distribution (NAICS 2211)
Net change in maintenance cost[3,6,7,7a,10,13]		*Recurring:* Automotive Repair and Maintenance (NAICS 8111)
Net change in insurance cost[3,6,7,7a,10,13]		*Recurring:* Insurance Carriers (NAICS 5241)
Net change in DMV fees[6,7,10,13]		*Recurring:* State Government (NAICS 92)
Level 3 charger purchase[6,7]		*One-time Capital*: Other Electrical Equipment and Component Manufacturing (NAICS 3359)
Level 3 charger construction[6,7]		*One-time Capital*: Construction (NAICS 23)
Level 3 charger permitting[6,7]		*Recurring:* Local Government (NAICS 92)
Level 3 charger energization[6,7]		*One-time Capital*: Electric Power Generation, Transmission, and Distribution (NAICS 2211)
Administrative costs for reporting requirements[3,6,7,7a,10,13]		*Recurring:* Other professional, scientific, and technical services (NAICS 5419)

Note: Superscript values indicate scenarios including each compliance cost source and respective demand.

As presented in Figure 2, PR 2305 is expected to result in an industry-wide average of about 240 net jobs added to 11,100 net jobs foregone annually from 2022 to 2031 for the low-cost (Scenario 10) and high-cost (Scenario 7) scenarios respectively. The projected job impacts represent about a

[33] Warehouse operator NAICS and square footage used from CoStar warehouse single-tenant operators and Dun and Bradstreet data matching described in the "Affected Industries/Facilities" section of this report. Industry-by-county shares of total compliance costs were estimated from this data based on total square footage. Any industry-by-county-by-year expected compliance cost was estimated from total annual compliance cost multiplied by the industry's respective industry-by-county square-footage share relative to total square footage of warehouse space potentially affected by PR 2305.

0.002% increase to a 0.1% decrease of total employment in the four-county region for both low- and high-cost scenarios.

Figure 2: PR 2305 Projected Regional Foregone Jobs, 2022 – 2031

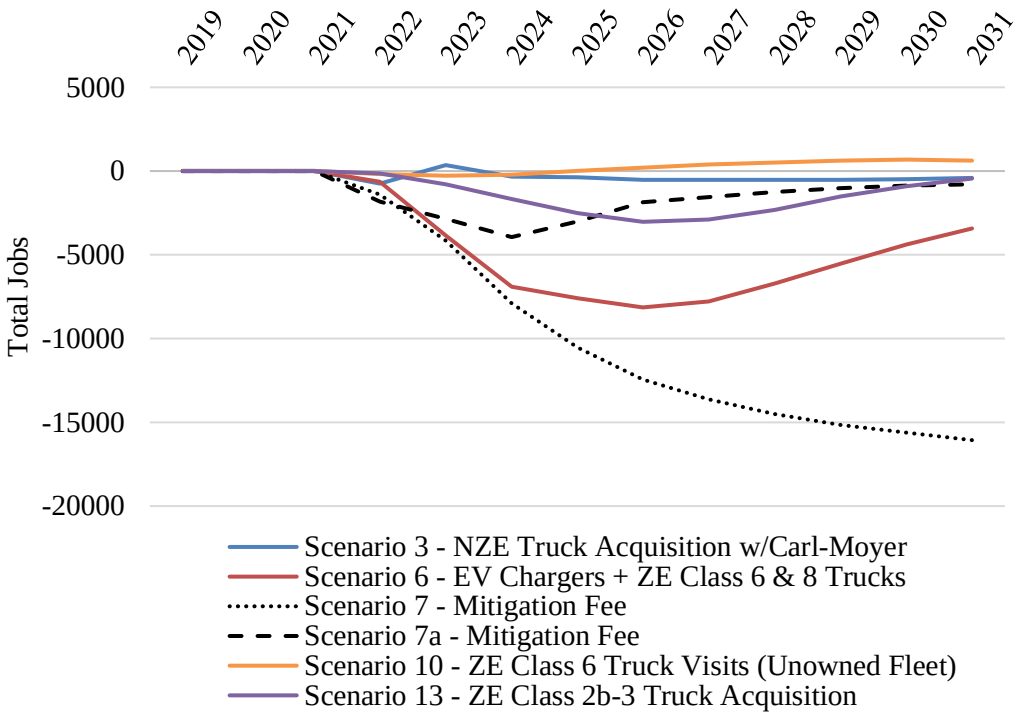
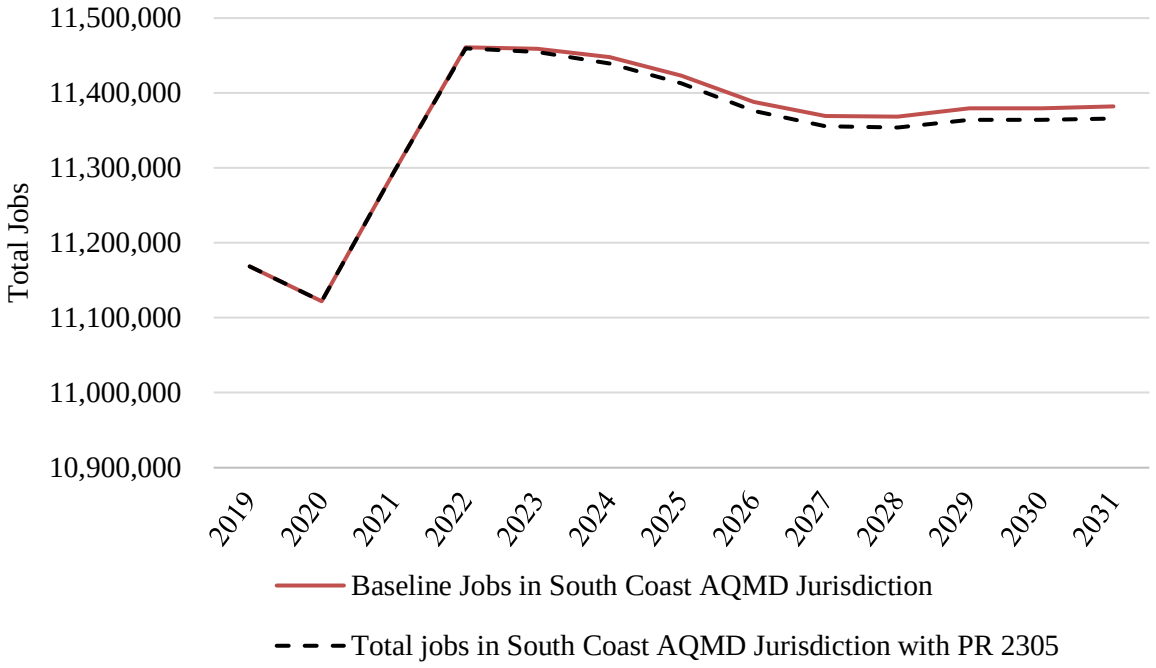


Figure 3 plots predicted foregone jobs, baseline jobs, and total jobs following adoption of PR 2305 through Scenario 7 (high-cost scenario) in 2019 to 2031. Figure 3 illustrates the predicted job impacts from PR 2305 are small relative to the total predicted jobs. Moreover, job reductions estimated from PR 2305 are viewed as foregone jobs, in that the total number of jobs in the compliance period is higher than the total number of jobs before the compliance period.

Tables 26-31 present expected job impacts of PR 2305 for each scenario modeled, presenting the top 10 industries with negative job impacts, and the top three industries with expected positive job impacts, and the remaining industries grouped together. For all scenarios except Scenario 10, job losses are expected from 2022 to 2031 due to PR 2305. Retail trade (NAICS 44-45) and construction (NAICS 23) are expected to bear most of the estimated total compliance cost of PR 2305, with an estimated total 410 jobs forgone on average annually between 2022 to 2031 for the NZE low-cost scenario (Scenario 3), and an estimated total 11,100 jobs forgone on average annually between 2022 to 2031 for the high-cost scenario (Scenario 7).

Figure 3: PR 2305 Projected Regional Job Impact 2019 – 2031 (High-Cost Scenario)



Job losses in retail trade and construction are highest across all scenarios for two reasons. First, and most importantly, retail trade and construction are sectors that are highly linked to all other sectors. Since this rule imposes costs on a broad group of industries, each of those industries is expected to have less money to spend on other projects/activities, affecting to a greater proportion retail trade and construction. Historically around 10% of jobs losses predicted in many socioeconomic impact assessments performed by the South Coast AQMD come from construction, and another 10% from retail trade, even for rules not directly affecting facilities in those sectors. This same occurrence is estimated to occur for implementation of PR 2305. Second, some of the warehouse operators affected by PR 2305 are in the retail trade or construction sector.

In all scenarios warehousing and storage (NAICS 493) is also estimated to experience a reduction in jobs.[34] Interestingly, the automotive repair and maintenance sector (NAICS 8111) is expected to see notable job gains in scenarios where NZE vehicles are adopted to comply with PR 2305, and forgone jobs where ZE vehicles are adopted to comply with PR 2305.

For sectors experiencing job gains, two groupings are notable. First the sectors of electric power generation, transmission, and distribution (NAICS 2211) and other electrical equipment and component manufacturing (NAICS 3359).[35] These sectors experience job gains when there is ZE

[34] Although this is a rule designed to affect trucking activities going to warehouses, most businesses with warehousing activities are not classified formally as being in the "warehousing and storage" industry. Thus the largest job reductions occur from indirect effects of a large group of facilities directing funds away from projects/spending into sectors like retail trade and construction.

[35] Scenario 7 assumes collected mitigation fee revenue is spent 50% on electric vehicle chargers and 50% on natural-gas and electric trucks. Spending on trucks scales linearly from 100% spent on natural-gas trucks in 2022, to 100% spent on electric trucks in 2031.

infrastructure and ZE vehicle charging expected due to PR 2305. The second grouping of note is other professional, scientific, and technical services (5419). The increase in this sector represents expected job increases due to reporting and other administrative requirements of PR 2305. Admittedly these additional jobs may be seen not in the other professional, scientific, and technical services sector, but rather in the industries directly affected by PR 2305.

Table 26: PR 2305 Job Impacts (NZE Low-Cost Scenario, Scenario 3)

Industry	REMI NAICS	2022	2024	2027	2031	Average annual jobs change (2022-2031)	Baseline annual jobs (2022-2031)	% Change from average baseline (2022-2031)
Retail trade	**44-45**	-181	-114	-121	-110	-117	947,862	-0.01%
Construction	**23**	-136	-111	-117	-69	-100	505,066	-0.02%
Warehousing and storage	**493**	-28	-42	-53	-53	-46	130,131	-0.04%
Wholesale trade	**42**	-40	-41	-57	-49	-45	422,236	-0.01%
Food services and drinking places	**722**	-39	-27	-35	-33	-30	795,336	0.00%
Apparel, leather and allied product manufacturing	**315, 316**	-19	-23	-28	-29	-26	62,634	-0.04%
Truck transportation	**484**	-15	-24	-30	-27	-25	105,660	-0.02%
Petroleum and coal products manufacturing	**324**	-3	-24	-28	-26	-23	4,950	-0.46%
State and local government	**92**	25	16	-70	-66	-23	945,760	0.00%
Real estate	**531**	-36	-25	-22	-17	-21	588,058	0.00%
Oil and gas extraction	**211**	1	8	8	7	7	6,974	0.10%
Automotive repair and maintenance	**8111**	-9	82	102	107	84	99,205	0.08%
Other professional, scientific, and technical services	**5419**	97	303	305	311	275	61,257	0.45%
	Other	-367	-304	-390	-341	-322	6,730,678	0.00%
	Total	-748	-326	-534	-395	-410	11,405,806	0.00%

Note: Adding all industry values may not add to total amount due to rounding.

Table 27: PR 2305 Job Impacts (ZE with Infrastructure Scenario, Scenario 6)

Industry	REMI NAICS	2022	2024	2027	2031	Average annual jobs change (2022-2031)	Baseline annual jobs (2022-2031)	% Change from average baseline (2022-2031)
Retail trade	**44-45**	-256	-1,309	-1,149	-550	-896	947,862	-0.09%
Construction	**23**	49	-950	-1,023	33	-612	505,066	-0.12%
State and local government	**92**	143	2	-543	-405	-307	945,760	-0.03%
Wholesale trade	**42**	-62	-358	-387	-205	-288	422,236	-0.07%
Food services and drinking places	**722**	-44	-331	-385	-240	-287	795,336	-0.04%
Warehousing and storage	**493**	-43	-277	-368	-250	-272	130,131	-0.21%
Apparel, leather and allied product manufacturing	**315, 316**	-31	-201	-265	-186	-198	62,634	-0.32%
Real estate	**531**	-44	-288	-265	-102	-197	588,058	-0.03%
Offices of health practitioners	**6211-6213**	-26	-178	-159	-71	-120	394,661	-0.03%
Business support services; Investigation and security services; Other support services	**5614, 5616, 5619**	-20	-141	-159	-84	-116	235,512	-0.05%
Motor vehicle manufacturing	**3361**	0	2	0	0	1	308	0.21%
Electric power generation, transmission and distribution	**2211**	11	12	-1	-3	2	9,465	0.02%
Other professional, scientific, and technical services	**5419**	97	270	270	295	250	61,257	0.41%
	Other	-420	-3,149	-3,361	-1,661	-2,458	6,307,521	-0.04%
	Total	-646	-6,895	-7,794	-3,428	-5,497	11,405,806	-0.05%

Note: Adding all industry values may not add to total amount due to rounding.

Table 28: PR 2305 Job Impacts (High-Cost Scenario, Scenario 7)

Industry	REMI NAICS	2022	2024	2027	2031	Average annual jobs change (2022-2031)	Baseline annual jobs (2022-2031)	% Change from average baseline (2022-2031)
Retail trade	**44-45**	-307	-1,372	-2,045	-2,337	-1,711	947,862	-0.18%
Construction	**23**	-193	-1,239	-1,864	-1,364	-1,373	505,066	-0.27%
State and local government	**92**	11	-249	-789	-1,183	-642	945,760	-0.07%
Food services and drinking places	**722**	-69	-368	-660	-850	-552	795,336	-0.07%
Wholesale trade	**42**	-76	-384	-659	-775	-541	422,236	-0.13%
Warehousing and storage	**493**	-47	-277	-588	-793	-487	130,131	-0.37%
Real estate	**531**	-64	-314	-481	-524	-393	588,058	-0.07%
Apparel, leather and allied product manufacturing	**315, 316**	-32	-196	-416	-555	-343	62,634	-0.55%
Automotive repair and maintenance	**8111**	-31	-111	-236	-726	-283	99,205	-0.29%
Offices of health practitioners	**6211-6213**	-40	-197	-292	-339	-245	394,661	-0.06%
Electric power generation, transmission and distribution	**2211**	1	-5	7	62	15	9,465	0.16%
Other electrical equipment and component manufacturing	**3359**	21	73	84	80	72	6,654	1.08%
Other professional, scientific, and technical services	**5419**	70	193	168	160	157	61,257	0.26%
	Other	-647	-3,440	-5,868	-6,920	-4,814	6,437,482	-0.07%
	Total	-1,402	-7,884	-13,640	-16,063	-11,141	11,405,806	-0.10%

Note: Adding all industry values may not add to total amount due to rounding.

Table 29: PR 2305 Job Impacts (High-Cost Scenario, Scenario 7a)

Industry	REMI NAICS	2022	2024	2027	2031	Average annual jobs change (2022-2031)	Baseline annual jobs (2022-2031)	% Change from average baseline (2022-2031)
Retail trade	**44-45**	-338	-681	-250	-178	-334	947,862	-0.04%
Construction	**23**	-285	-698	-152	31	-249	505,066	-0.05%
State and local government	**92**	-70	-157	-200	-128	-146	945,760	-0.02%
Wholesale trade	**42**	-92	-201	-110	-70	-115	422,236	-0.03%
Warehousing and storage	**493**	-52	-156	-118	-81	-108	130,131	-0.08%
Food services and drinking places	**722**	-83	-186	-99	-72	-107	795,336	-0.01%
Apparel, leather and allied product manufacturing	**315, 316**	-33	-108	-78	-54	-73	62,634	-0.12%
Real estate	**531**	-76	-156	-51	-28	-70	588,058	-0.01%
Truck transportation	**484**	-29	-75	-49	-30	-47	105,660	-0.04%
Business support services; Investigation and security services; Other support services	**5614, 5616, 5619**	-34	-80	-44	-28	-46	235,512	-0.02%
Oil and gas extraction	**211**	-1	3	6	4	4	6,974	0.06%
Automotive repair and maintenance	**8111**	-35	-15	73	48	35	99,205	0.04%
Other professional, scientific, and technical services	**5419**	92	286	300	309	268	61,257	0.44%
	Other	-783	-1,718	-804	-525	-913	6,500,116	-0.01%
	Total	-1,817	-3,942	-1,574	-802	-1,901	11,405,806	-0.02%

Note: Adding all industry values may not add to total amount due to rounding.

Table 30: PR 2305 Job Impacts (Low-Cost Scenario, Scenario 10)

Industry	REMI NAICS	2022	2024	2027	2031	Average annual jobs change (2022-2031)	Baseline annual jobs (2022-2031)	% Change from average baseline (2022-2031)
Automotive repair and maintenance	**8111**	-75	-282	-316	-214	-253	99,205	-0.26%
Petroleum and coal products manufacturing	**324**	-5	-20	-22	-14	-18	4,950	-0.36%
Oil and gas extraction	**211**	-5	-17	-18	-11	-15	6,974	-0.21%
Truck transportation	**484**	-6	-13	-5	3	-5	105,660	0.00%
Management of companies and enterprises	**55**	-2	-4	-3	0	-2	125,367	0.00%
Pipeline transportation	**486**	0	-2	-2	-1	-1	1,269	-0.10%
Warehousing and storage	**493**	-8	-18	0	15	-1	130,131	0.00%
Waste management and remediation services	**562**	-1	-2	-2	0	-1	21,709	-0.01%
Natural gas distribution	**2212**	0	-1	-1	-1	-1	8,486	-0.01%
Specialized design services	**5414**	-1	-2	-1	0	-1	43,593	0.00%
Electric power generation, transmission and distribution	**2211**	10	40	46	31	37	9,465	0.39%
Construction	**23**	-30	-24	98	84	51	505,066	0.01%
Other professional, scientific, and technical services	**5419**	101	308	315	320	283	61,257	0.46%
	Other	-163	-165	297	429	168	10,282,674	0.00%
	Total	-185	-203	387	641	240	11,405,806	0.00%

Note: Adding all industry values may not add to total amount due to rounding.

Table 31: PR 2305 Job Impacts (Scenario 13)

Industry	REMI NAICS	2022	2024	2027	2031	Average annual jobs change (2022-2031)	Baseline annual jobs (2022-2031)	% Change from average baseline (2022-2031)
Automotive repair and maintenance	**8111**	-35	-228	-393	-372	-299	99,205	-0.30%
Retail trade	**44-45**	-84	-342	-409	-69	-263	947,862	-0.03%
Construction	**23**	-43	-284	-360	158	-170	505,066	-0.03%
State and local government	**92**	69	20	-221	-118	-102	945,760	-0.01%
Warehousing and storage	**493**	-12	-73	-132	-58	-84	130,131	-0.06%
Wholesale trade	**42**	-8	-82	-141	-35	-83	422,236	-0.02%
Food services and drinking places	**722**	-12	-80	-134	-44	-82	795,336	-0.01%
Apparel, leather and allied product manufacturing	**315, 316**	-10	-53	-91	-42	-59	62,634	-0.09%
Real estate	**531**	-12	-72	-94	-4	-55	588,058	-0.01%
Offices of health practitioners	**6211-6213**	-8	-47	-61	-10	-37	394,661	-0.01%
Insurance carriers	**5241**	1	6	13	20	12	50,524	0.02%
Electric power generation, transmission and distribution	**2211**	3	21	38	40	30	9,465	0.31%
Other professional, scientific, and technical services	**5419**	101	299	298	316	273	61,257	0.45%
	Other	-93	-754	-1,200	-231	-704	6,393,612	-0.01%
	Total	-144	-1,668	-2,887	-449	-1,625	11,405,806	-0.01%

Note: Adding all industry values may not add to total amount due to rounding.

The foregone jobs estimates from PR 2305 implementation come about due to less investment spending and less future production, i.e. forgone output. Tables 32 and 33 present estimated forgone output by industry from the lower-cost scenario of Scenario 7a and the high-cost scenario of Scenario 7. Similar to tables presenting forgone jobs, Tables 32 and 33 show the top 10 most adversely impacted industries, and the top three most benefitting industries due to PR 2305. Relative to total economic output within the South Coast AQMD four-county region, PR 2305 may reduce average annual output between 0.02% and 0.10%.

Table 32: PR 2305 Estimated Impact on Output (Scenario 7a) ($2018 million)

Industry	REMI NAICS	2022	2024	2027	2031	Average annual output change (2022-2031)	Baseline average annual output (2022-2031)	% Change in average annual output (2022-2031)
Petroleum and coal products manufacturing	**324**	-$4	-$102	-$179	-$128	-$127	$39,109	-0.33%
Retail trade	**44-45**	-$39	-$82	-$33	-$25	-$42	$116,864	-0.04%
Wholesale trade	**42**	-$29	-$67	-$40	-$28	-$41	$153,720	-0.03%
Construction	**23**	-$44	-$108	-$25	$4	-$39	$82,318	-0.05%
Real estate	**531**	-$40	-$85	-$28	-$15	-$38	$309,889	-0.01%
Apparel, leather and allied product manufacturing	**315, 316**	-$6	-$21	-$17	-$13	-$15	$7,767	-0.20%
Warehousing and storage	**493**	-$5	-$14	-$11	-$8	-$10	$11,454	-0.09%
Truck transportation	**484**	-$5	-$14	-$10	-$7	-$9	$20,932	-0.04%
Food services and drinking places	**722**	-$6	-$13	-$7	-$5	-$8	$57,676	-0.01%
Scenic and sightseeing transportation and support activities for transportation	**487, 488**	-$3	-$10	-$7	-$5	-$7	$15,192	-0.04%
Automotive repair and maintenance	**8111**	-$4	-$2	$8	$5	$4	$10,518	0.03%
Motor vehicle manufacturing	**3361**	-$2	$37	-$2	-$2	$12	$9,062	0.13%
Other professional, scientific, and technical services	**5419**	$12	$37	$40	$42	$36	$9,170	0.39%
	Other	-$142	-$325	-$193	-$132	-$195	$1,396,285	-0.01%
	Total	-$316	-$767	-$505	-$316	-$480	$2,239,957	-0.02%

Table 33: PR 2305 Estimated Impact on Output (Scenario 7) ($2018 million)

Industry	REMI NAICS	2022	2024	2027	2031	Average annual output change (2022-2031)	Baseline average annual output (2022-2031)	% Change in average annual output (2022-2031)
Petroleum and coal products manufacturing	**324**	-$3	-$75	-$275	-$521	-$246	$39,109	-0.63%
Retail trade	**44-45**	-$36	-$165	-$262	-$326	-$222	$116,864	-0.19%
Real estate	**531**	-$34	-$170	-$269	-$301	-$220	$309,889	-0.07%
Construction	**23**	-$30	-$192	-$296	-$225	-$219	$82,318	-0.27%
Wholesale trade	**42**	-$24	-$127	-$237	-$311	-$198	$153,720	-0.13%
Apparel, leather and allied product manufacturing	**315, 316**	-$6	-$37	-$87	-$130	-$74	$7,767	-0.95%
Warehousing and storage	**493**	-$4	-$25	-$56	-$77	-$46	$11,454	-0.40%
Food services and drinking places	**722**	-$5	-$26	-$48	-$63	-$40	$57,676	-0.07%
Truck transportation	**484**	-$4	-$24	-$47	-$63	-$39	$20,932	-0.19%
Offices of health practitioners	**6211-6213**	-$5	-$26	-$41	-$51	-$35	$54,736	-0.06%
Other professional, scientific, and technical services	**5419**	$9	$25	$22	$21	$20	$9,170	0.22%
Other electrical equipment and component manufacturing	**3359**	$7	$24	$29	$29	$25	$2,385	1.03%
Motor vehicle manufacturing	**3361**	$14	$54	$65	$70	$57	$9,062	0.62%
	Other	-$100	-$618	-$1,199	-$1,572	-$995	$1,364,874	-0.07%
	Total	-$220	-$1,383	-$2,701	-$3,521	-$2,234	$2,239,957	-0.10%

Competitiveness

PR 2305 may raise the cost of operating a warehouse in the South Coast AQMD jurisdiction relative to warehouses operating outside the South Coast AQMD jurisdiction, both near and far. South Coast AQMD staff examined the potential for warehouse operators possibly relocating their operations outside the South Coast AMQD jurisdiction, as well as warehouse operators that remain in the South Coast AQMD jurisdiction possibly losing customers due to the desire of warehouse operators to pass on some of the regulatory costs of PR 2305 to their customers.

South Coast AQMD staff is aware of two studies which consider the effects of heightened costs on the goods movement sector, and how those heightened costs might affect warehouse relocation or goods diversion from the ports of Los Angeles and Long Beach.

The first study was completed in 2020 by Industrial Economics, Inc. (IEc) on behalf of the South Coast AQMD. IEc's study investigates the likelihood warehouses within the South Coast AQMD jurisdiction may relocate due to PR 2305 implementation to other regions in southern California, southern Nevada, and western Arizona. A warehouse is estimated to relocate to another region if the estimated cost of operating within the South Coast AQMD jurisdiction is higher than the estimated cost of performing the same operations in the relocation region considered, constrained by available warehouse space.

The IEc study considers the costs of operating each warehouse in the South Coast AQMD jurisdiction for another 20 years. The IEc study includes warehouse rental, labor, power, and goods transportation costs of operating in both the South Coast AQMD jurisdiction along with each relocation region. The cost of operating in the South Coast AQMD jurisdiction is raised by the $ per square foot cost of complying with PR 2305, conservatively assuming the annual compliance cost occurs immediately upon rule passage for all warehouses greater than 100,000 square feet. The cost of operating after relocating outside the South Coast AQMD jurisdiction is raised due to estimated moving costs, as well as a possibility of new warehouse development costs when considering a scenario where land yet to be zoned for warehousing may become zoned and built on over the next 20 years.

The IEc analysis results indicate at compliance cost ranges of $0.00-$1.50 per square foot, no warehouses in the South Coast AQMD jurisdiction would relocate. The IEc analysis results also indicate approximately five to six warehouses may relocate to the Bakersfield region of California if PR 2305 compliance costs were in the range of $1.50-$2 per square foot. South Coast AQMD staff interprets the IEc analysis as indicating no warehouses would relocate outside the South Coast AQMD jurisdiction under the currently proposed PR 2305 stringency which could result in a high end mitigation fee of about $0.82 per square foot.

In preparation for implementing a clean truck fund rate at the Port of Los Angeles (POLA) and Port of Long Beach (POLB), POLA and POLB hired Davies Transportation Consulting Inc. to perform a study estimating the amount of goods diversion away from the POLA/POLB due to a range of clean truck fund rates, considering $0 to $70 per twenty-foot-equivalent unit (TEU) container. The latest draft of this report was released December 2019. Based on the results of this study, the ports of Los Angeles and Long Beach have decided to implement a $10 per TEU clean truck fund rate.

South Coast AQMD staff's current high-cost estimate of PR 2305 is approximately $650 million annually assuming all warehouses subject to PR 2305 complied with PR 2305 by paying a mitigation fee.[36] Estimates of TEUs through POLA and POLB in 2020 total approximately 17.3

[36] This scenario assumes a compliance cost of $0.75 per square foot, a mitigation fee of $1,000 per WAIRE point, and no usage of mitigation fee revenue to replace trucks visiting warehouses with near-zero-emission or zero-emission vehicles.

million annually.[37] Thus PR 2305 could be viewed as adding on a cost of around $55/TEU for TEUs which move through the South Coast AQMD jurisdiction. As estimated by the POLA/POLB commissioned study, a $55/TEU fee would likely result in about one percent of goods diverted away from POLA/POLB to other ports.

The POLA/POLB commissioned study did not allow for the possibility of warehousing goods to be performed outside the South Coast AQMD jurisdiction to avoid the cost of paying the clean truck fund rate as containers landing at the San Pedro Bay Ports would pay the fee whether the warehouse is in the South Coast AQMD jurisdiction or outside it. In contrast, warehouses and/or warehouse operators can potentially relocate in response to PR 2305 to avoid paying the costs to comply with PR 2305.

As noted in the POLA/POLB commissioned study, shipping goods to other ports, e.g. ports in Texas, the U.S. Southeast, and New York/New Jersey ports could increase shipment times by over a week. Thus, if goods suppliers wished to avoid paying the compliance costs of PR 2305, it is more likely they would relocate to a nearby air district's jurisdiction than shipping their goods to another port entirely. South Coast AQMD staff expects if any goods diversion were to occur away from POLA/POLB due to PR 2305, it would be a diversion of less than one percent.

Figure 4 below presents regional industrial property rental prices. The data in Figure 4 comes from the CoStar Analytics™ module's quarterly reporting only for industrial properties with more than 100,000 square feet. Industrial is the most refined category within this CoStar module which contains warehouses, and recent discussions with our consultant Industrial Economics, Inc. indicate almost all of the industrial category is likely warehousing. As Figure 4 shows, industrial rental prices in the South Coast AQMD jurisdiction have risen around 63% from 2012 to 2019, from $5.88 per square foot to $9.60 per square foot.[38]

Over the same time industrial rental prices in the San Diego region rose around 31% from $8.40 per square foot to $11.04 per square foot. Before 2010 industrial rental prices in San Diego seem to have maintained a price premium of between $3-$4.

Even though rental prices have been rising in both San Diego and the South Coast AQMD jurisdiction, the rental price premium has fallen by over half to $1.40 by 2019. The industrial rental price premium which previously existed in the coastal areas north of the South Coast AQMD jurisdiction, e.g. Santa Barbara, is now gone, and it is now costlier to rent industrial space in the South Coast AQMD jurisdiction.

[37] South Coast AQMD staff calculations from POLA and POLB data; https://www.portoflosangeles.org/business/statistics/container-statistics/historical-teu-statistics-2020; https://polb.com/business/port-statistics/#yearly-teus;

[38] Industrial Economics, Inc., 2020. http://www.aqmd.gov/docs/default-source/planning/fbmsm-docs/iec_pr-2305-warehouse-relocation-report-(12-23-20).pdf?sfvrsn=8.

Figure 4: Annual Rental Prices for Industrial Properties (in 2019 $)

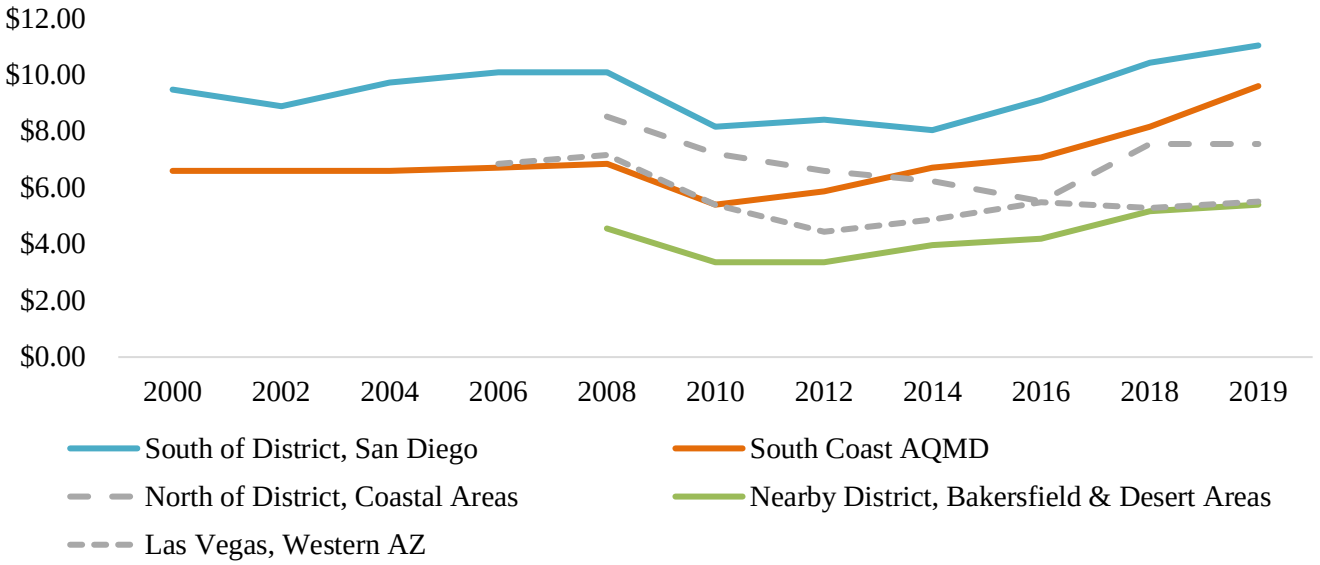
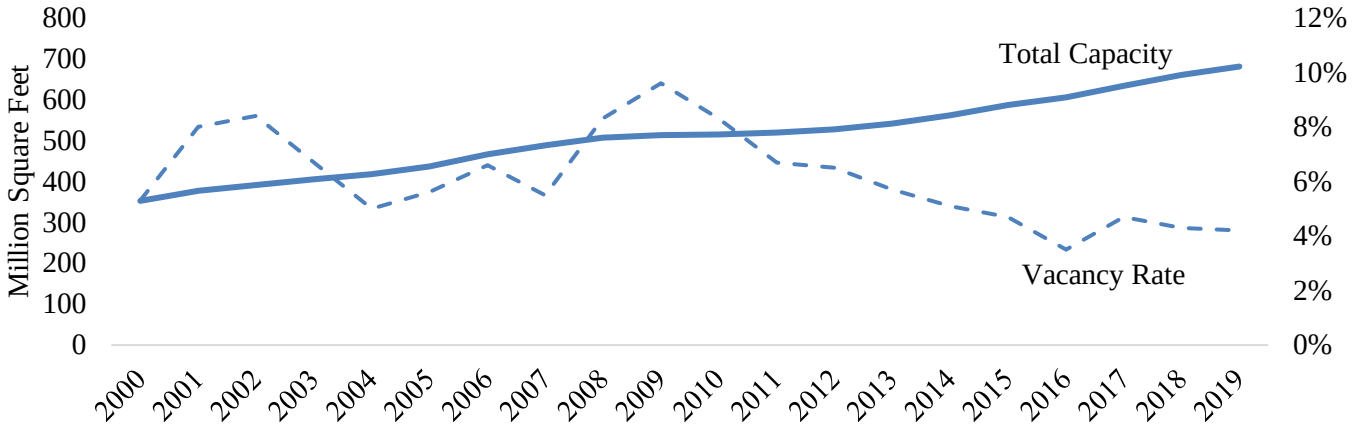


Figure 5 below presents regional warehouse vacancy rates along with available capacity. The data in Figure 5 also comes from the CoStar Analytics™ module's quarterly reporting only for industrial properties with more than 100,000 square feet. As Figure 5 shows, available warehouse capacity in the South Coast AQMD jurisdiction has been around four percent from 2014-2019. Over the same time total warehouse capacity in the South Coast AQMD jurisdiction has grown by about 120 million square feet. Even though warehouse capacity located in the South Coast AQMD jurisdiction has grown about 20% over the past five years, available capacity has consistently maintained its lowest level observed over the past 20 years at four percent.

Figure 5: South Coast AQMD Vacant Industrial Property and Capacity



Source: CoStar Analytics™

South Coast AQMD staff interprets this combination of sizably higher increases in warehouse space rental prices over the past decade, along with a maintained low amount of available warehouse capacity while total warehouse capacity grew within the South Coast AQMD

jurisdiction, as a strong indication the South Coast AQMD jurisdiction is highly competitive for warehousing operations.[39]

PR 2305 proposes a stringency/compliance cost of *at most* $0.83 per square foot on warehouses with at least 100,000 square feet of space. This $0.83 per square foot compliance cost represents an increase in the rental cost of doing business for warehouses operating in the South Coast AQMD jurisdiction that is less than 30% of the increase in rental cost this same industry has experienced over the past seven years while showing little evidence of relocation.[40]

With all the above points in mind, South Coast AQMD staff believes it is highly unlikely that warehouses located in the South Coast AQMD jurisdiction would relocate outside the South Coast AQMD jurisdiction due to PR 2305. Moreover, South Coast AQMD staff believes it is highly unlikely that any goods diversion would occur away from POLA/POLB due to PR 2305.

Warehouses operating in the South Coast AQMD jurisdiction have seen rental price increases of around $3.70 per square feet over the past decade, which has not seemed to deter expansion of warehousing operations in the South Coast AQMD jurisdiction over the past decade as indicated by vacancy and capacity data presented in Figure 2. Since PR 2305 is expected to at most raise the price of warehouse rent by 30% compared to the increases warehouses in the region have experienced over the past decade, South Coast AQMD staff believes it highly unlikely warehouse relocation and goods-movement relocation would occur due to PR 2305 implementation.[41]

CEQA ALTERNATIVES

Five alternatives to the proposed project have been developed for PR 2305. Alternative A – No Project, Alternative B – Decreased Emission Reductions, Alternative C – Increased Emission Reductions, Alternative D – All Natural Gas Options Only, Alternative E – All Electric Options Only. The primary components of the alternatives that have been modified are the WAIRE Program applicability in terms of warehouse size in square feet, the proposed rule stringency, the proposed initial compliance period, and the actions available on the WAIRE menu, which could make the WAIRE Program more prescriptive by including a limited number of actions that warehouse operators can select and implement.

For purposes of this document, the no project alternative assumes that the WAIRE Program would not be implemented. This means warehouse operators operating at least 50,000 square feet of warehousing activity located in existing or new warehouses in the South Coast AQMD's jurisdiction with an indoor warehouse floor space equal to or greater than 100,000 square feet within a single building would not be required to meet their WPCO. The WPCO compliance strategies in the form of WAIRE Menu actions, a Custom WAIRE Plan, and/or the payment of the optional mitigation fee would not be implemented.

[39] This point was also made by warehouse staff interviewed by Industrial Economics, Inc during development of PR 2305. Warehouse staff pointed out the South Coast AQMD jurisdiction has several hard to monetize benefits, specifically the very developed transportation network of multiple ports, railways, and interstate highways, along with a large labor pool that is difficult to access in more remote regions.

[40] Average rent in the South Coast AQMD jurisdiction for industrial properties from 2000-2008 and again in 2014 was around $6.70 per square foot, while the same average rent figure was $9.60 in 2019.

[41] $0.75/sq.ft./$3.20/sq.ft. = 20.27% increase.

Under Alternative B, the warehouse size requirement is increased from "greater than or equal to 100,000 square feet" to "greater than or equal to 200,000 square feet", such that the number of affected warehouses under Alternative B would decrease. Second, the beginning of the initial compliance and reporting dates are delayed by one year, such that the regulated warehouses would have a longer time period to plan for and phase in any actions that they would need to undertake to meet their WPCO. Third, the rule stringency is relaxed, such that the rule stringency factor for the proposed project is below 0.0025 WAIRE Points per WATT and could be as low as 0.0001 WAIRE Points per WATT. The WPCO compliance strategies such as the WAIRE Menu (all of the actions), a Custom WAIRE Plan, and/or the payment of optional mitigation fee at a cost of $1,000 per WAIRE Point to South Coast AQMD would not change.

Alternative C consists of a version of the proposed project that would result in greater emission reductions of NOx and PM2.5. To accomplish this, the rule stringency has increased, such that the rule stringency factor for the proposed project is set to 0.0050 WAIRE Points per WATT. Additionally, the three-year phase-in has been increased to a seven-year phase-in period. The WPCO compliance strategies such as the WAIRE Menu (all of the actions), a Custom WAIRE Plan, and/or the payment of optional mitigation fee at a cost of $1,000 per WAIRE Point to South Coast AQMD would not change.

Alternative D is based on the currently proposed applicability and rule stringency factor for the proposed project 0.0025 WAIRE Points per WATT. However, this alternative limits the number of actions on the WAIRE Menu that warehouse operators could select and implement to earn WAIRE Points. Specifically, the only actions allowed to earn WAIRE Points under Alternative D are related to the use of all natural gas equipment such as the acquisition and/or use of natural gas. Alternative D limits the range of compliance actions on the WAIRE Menu as constraints. Other WPCO compliance strategies such as a Custom WAIRE Plan and/or the payment of optional mitigation fee at a cost of $1,000 per WAIRE Point to South Coast AQMD would still be available to use by warehouse operators to comply with the proposed project.

Alternative E limits the number of actions on the WAIRE Menu that warehouse operators could select and implement to earn WAIRE Points. Specifically, the only actions allowed to earn WAIRE Points under Alternative E are related to the use of all electric equipment such as the acquisition and/or use of all electric trucks and installation and/or use of ZE fueling or charging infrastructure. Alternative E limits the range of compliance actions on the WAIRE Menu as constraints. Other WPCO compliance strategies such as a Custom WAIRE Plan and/or the payment of optional mitigation fee at a cost of $1,000 per WAIRE Point to South Coast AQMD still be available to use by warehouse operators to comply with the proposed project.

Table 34 provides a summary of the elements of each of the alternatives and compares them to the proposed project. Assuming a 4% real interest rate, average annual compliance costs for the CEQA alternatives range from -$670 million to $1 billion between 2022 and 2031. Jobs forgone for the CEQA alternatives range from -240 to 16,100 between 2022 and 2031.

Table 34: Average Annual Cost and Job Impacts of CEQA Alternatives

	Average Annual, 2022 - 2031		Cost-Effectiveness ($/ton)[1]
Alternatives	**Cost**	**Jobs Foregone**	
Proposed Amendments	-$12,600,000 - $670,200,000	-240 – 11,100	-$11,000 - $101,000
Alternative A - No Project	-	-	-
Alternative B - Decreased Emission Reductions	$20,600,000 - $37,300,000	150 – 490	$139,000 - $181,000
Alternative C - Increased Emission Reductions	-$60,000,000 - $1,015,000,000	-670 – 16,100	-$35,000 - $100,000
Alternative D - All Natural Gas Options Only	$45,000,000 - $670,200,000	410 – 11,100	$32,000 - $101,000
Alternative E - All Electric Options Only	-$12,600,000 - $670,200,000	-240 - 11,100	-$11,000 - $101,000

Note: High cost option is the highest-cost mitigation fee option (Scenario 7), as no warehouse operator is expected to comply in a costlier manner than the mitigation fee. The low-cost option in the proposed amendments, and CEQA Alternatives C and E is Scenario 10. The low-cost option in CEQA Alternatives B and D is Scenario 3.

[1] Cost-effectiveness is calculated using the discounted cash flow method (DCF) and a 4% real interest rate. This method is consistent with prior South Coast AQMD rules and the 2016 AQMP.

PUBLIC HEALTH BENEFITS

Public health benefits resulting from compliance with PR 2305 are calculated using an incidence per ton (IPT) methodology, developed by the U.S. Environmental Protection Agency (Fann et al. 2009, 2012, 2018). The IPT methodology is an approximation based on the general assumption that the relationship between emissions and adverse health outcomes is linear. In addition, the IPT methodology relies on the following assumptions, (1) changes in health incidence are proportional to ambient PM = concentrations; (2) changes in primary pollutant concentrations (PM2.5) are proportional to changes in emissions (PM2.5); and (3) changes in secondary pollutant concentrations (nitrate PM2.5) are also proportional to changes in emissions (NOx). This final assumption can vary for individual actions due to the complex chemical reactions that occur to create regional pollutants. However, as warehouse ISR is part of a larger emission reduction strategy, a simplifying assumption is that the health benefits for every ton of NOx reduction in that strategy yields equal benefits.

Incidence Per Ton Methodology

Because of the assumed linear relationship between emissions and health outcomes, estimates of reductions in health endpoints resulting from PR 2305 can be found by multiplying expected

PM2.5 and NOx emission reductions by an IPT factor for each health endpoint.[42] The IPT factors for each health endpoint were estimated using estimated control strategy emissions reductions, air quality modeling in the U.S. EPA's Community Multiscale Air Modeling System (CMAQ), and public health benefits estimation using the U.S. EPA's Environmental Benefits Mapping and Analysis Program – Community Edition (BenMAP-CE) from the 2016 Air Quality Management Plan (AQMP).

For example, a NOx IPT factor is calculated by dividing the estimated reduction in incidence of a given health endpoint by the total NOx emission reductions in the years 2023 and 2031.[43] Linear interpolation is used to generate IPT factors for the remaining years (2022, 2024-2030). IPT factors for PM2.5 are calculated similarly.[44]

NOx contributes to the formation of ambient concentrations of PM2.5. For the sake of calculating contribution to ambient PM2.5 concentrations, it was assumed that each ton of NOx emitted is equivalent to 0.03 tons of directly emitted PM2.5.[45,46]

Total emissions reductions in years 2023 and 2031 resulting from 2016 AQMP control strategies are shown in Table 35 below, while the corresponding reductions in modeled health outcomes in 2023 and 2031 are shown in Table 36 below.

Table 35: 2016 AQMP Projected Emission Reductions by Pollutant (in TPD)

	2023	2031
VOC	64	72
NOX	124	128
PM2.5	0.22	3.4

Note: Projected emission reductions are average of summer planning period (May 1 to September 30).

[42] https://ww2.arb.ca.gov/sites/default/files/2019-08/Estimating%20the%20Health%20Benefits%20Associated%20with%20Reductions%20in%20PM%20and%20NOX%20Emissions%20-%20Detailed%20Description.pdf

[43] Reductions in health incidence were estimated for 2023 and 2031 in the 2016 AQMP.

[44] IPT factors also increase over time reflecting the projected increases in population by age class underpinning health effects modeling.

[45] U.S. EPA's February 2018 Technical Support Document, "Estimating the Benefit per Ton of Reducing PM2.5 Precursors from 17 Sectors," estimates the average monetary public health benefits of NOx emissions is roughly 3% of direct PM emissions (https://www.epa.gov/sites/production/files/2018-02/documents/sourceapportionmentbpttsd_2018.pdf).

[46] The ratio of NOx to PM2.5 could potentially be higher than the 0.03 assumed here. Previous work done on the 2007 AQMP suggested that each ton of NOx emitted is equivalent to 0.1 tons of directly emitted PM2.5 in regards to annual PM2.5 concentrations. A higher NOx to PM2.5 ratio would lead to an increase in IPT factors for NOx and corresponding decrease in IPT factors for directly emitted PM2.5. Given that NOx emission reductions from PR 2305 are projected to be over 100 times greater than directly emitted PM2.5, an increase in the NOx IPT factor will outweigh the corresponding decrease in PM2.5 IPT factors and result in an overall increase in total benefits. In this analysis we present results assuming a ratio of 0.03 in an attempt to provide conservative estimate of public health benefits.

Table 36: 2016 AQMP Modeled Reductions in Incidence Due to PM2.5 Exposure

	2023	2031	Average Annual
Premature Deaths Avoided, All Cause			
Long-Term PM2.5 Exposure	1,394	2,716	1,512
Short-Term PM2.5 Exposure[1]	100	194	108
Reduced Morbidity Incidence			
Long-Term PM2.5 Exposure			
Acute Bronchitis	1,039	1,890	1,087
Short-Term PM2.5 Exposure			
Acute Myocardial Infarction, Nonfatal	33	71	38
Asthma Exacerbation (Wheeze, Cough, Shortness of Breath)	23,321	42,780	24,495
Asthma, New Onset (Wheeze)	2,956	5,577	3,151
HA, All Cardiovascular (less Myocardial Infarctions)	164	337	183
HA, All Respiratory (less Asthma)[2]	136	290	155
HA, Ischemic Stroke	79	171	91
HA and ED Visits, Asthma	142	260	149
Lower Respiratory Symptoms	12,268	22,387	12,850
Upper Respiratory Symptoms	24,342	44,720	25,587
Minor Restricted Activity Days[3]	528,869	961,248	552,809
Work Loss Days[3]	91,689	166,826	95,892

* Each health effect represents the point estimate of a statistical distribution of potential outcomes. Please see Appendix 3-B of the 2016 AQMP Final Socioeconomic Report where the 95-percent confidence intervals are reported. Health effects for other years during the period 2017 to 2031 were based on interpolated, as opposed to modeled, air quality changes. The study population of each C-R function utilized can be found in Appendix 3-B of the 2016 AQMP Final Socioeconomic Report.

[1] Premature deaths avoided due to short-term exposure to PM2.5 are likely to partially overlap with those due to long-term PM2.5 exposure. Therefore, the total premature deaths associated with PM2.5 will be lower than simply summing across mortality effects from both short-term and long-term exposure (Industrial Economics and Thurston 2016a; Kunzli et al. 2001).

[2] This is the pooled estimate of two health endpoints: HA, Chronic Lung Disease (less Asthma) (18-64 years old) and HA, All Respiratory (65 or older).

[3] Expressed in person-days. Minor Restricted Activity Days (MRAD) refer to days when some normal activities are avoided due to illness.

IPT factors for NOx and directly emitted PM2.5 were calculated using the modeled emission reductions and corresponding health outcomes in Tables 35 and 36 above. These estimated IPT factors were then used to generate estimates of the reductions in health incidence resulting from expected emission reductions resulting from PR 2305 compliance. Emission reduction estimates vary based on the modeled compliance scenario.

Projected emission reductions vary by modelled scenario, as a result a range of health impacts are presented below. Tables 37 and 38 below show NOx and diesel PM (DPM) emissions reductions in tons per day (TPD) in each compliance year for Scenario 13 (ZE Class 2b-3 Truck Acquisitions

and Subsequent Usage) and Scenario 1 (NZE Class 8Truck Acquisitions and Subsequent Usage) net of existing CARB regulations, respectively. Scenario 13 is representative of the anticipated lower range of potential emission reductions resulting from PR 2305 compliance actions, while Scenario 1 represents the projected higher end of potential emission reductions. Scenario 13 is expected to result in approximately 3,218 cumulative tons of NOx reductions and 48 tons of direct PM reductions over the course of the ten-year compliance periods, while Scenario 1 is expected to cumulatively reduce NOx emissions by 8,609 tons and direct PM emissions by 64 tons.

Table 37: Estimated Modeled Emissions Reductions for Compliance Scenario 13 (Total ISR Emissions Net of Existing CARB Regulations)

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
NOx Reductions (TPD)	0.150	0.487	0.889	1.165	1.230	1.177	1.075	0.973	0.878	0.791
DPM Reductions (TPD)	0.001	0.005	0.010	0.014	0.016	0.017	0.017	0.017	0.017	0.017

Table 38: Estimated Modeled Emissions Reductions for Compliance Scenario 1 (Total ISR Emissions Net of Existing CARB Regulations)

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
NOx Reductions (TPD)	0.465	0.959	1.881	2.608	2.857	2.954	2.988	2.989	2.958	2.929
DPM Reductions (TPD)	0.004	0.007	0.014	0.019	0.021	0.022	0.022	0.023	0.023	0.023

Tables 39 and 40 show the corresponding reductions in health incidence derived using IPT factors for Scenario 13 and Scenario 1, respectively.[47] Emissions reductions from Scenario 13 are expected to cumulatively result in 151 fewer mortalities resulting long- and short-term PM2.5 exposure. Scenario 13 is also expected to result in approximately 2,500 fewer asthma attacks and nearly 9,000 fewer work loss days. Cumulatively, scenario 1 is projected to result in 341 fewer mortalities resulting from PM2.5 exposure, 5,800 fewer asthma attacks, and 20,000 fewer work loss days.

[47] To calculate PM2.5 emission reductions, DPM emission reductions are multiplied by a scaling factor (0.92). Scaling factor can be found in "Final –Methodology to Calculate Particulate Matter (PM) 2.5 and PM 2.5 Significance Thresholds", http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/particulate-matter-(pm)-2.5-significance-thresholds-and-calculation-methodology/final_pm2_5methodology.pdf?sfvrsn=2

Table 39: Estimated Reductions in Incidence Resulting from Compliance Scenario 13 Emission Reductions (Total ISR Emissions Net of Existing CARB Regulations)

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Premature Deaths Avoided, All Cause										
Long-Term PM2.5 Exposure	2	7	13	17	19	19	18	17	16	15
Short-Term PM2.5 Exposure	0	0	1	1	1	1	1	1	1	1
Reduced Morbidity Incidence										
Long-Term PM2.5 Exposure										
Acute Bronchitis	2	5	9	13	14	13	13	12	11	10
Short-Term PM2.5 Exposure										
Acute Myocardial Infarction, Nonfatal	0	0	0	0	0	0	0	0	0	0
Asthma Exacerbation (Wheeze, Cough, Shortness of Breath)	35	114	212	285	308	303	285	266	248	232
Asthma, New Onset (Wheeze)	4	14	27	36	39	39	37	34	32	30
HA, All Cardiovascular (less Myocardial Infarctions)	0	1	2	2	2	2	2	2	2	2
HA, All Respiratory (less Asthma)	0	1	1	2	2	2	2	2	2	2
HA, Ischemic Stroke	0	0	1	1	1	1	1	1	1	1
HA and ED Visits, Asthma	0	1	1	2	2	2	2	2	2	1
Lower Respiratory Symptoms	18	60	112	149	162	159	149	139	130	121
Upper Respiratory Symptoms	36	119	222	297	322	316	297	277	259	242
Minor Restricted Activity Days	784	2585	4810	6438	6959	6830	6417	5980	5576	5208
Work Loss Days	136	448	834	1116	1207	1185	1113	1038	968	904

Table 40: Estimated Reductions in Incidence Resulting from Compliance Scenario 1 Emission Reductions (Total ISR Emissions Net of Existing CARB Regulations)

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Premature Deaths Avoided, All Cause										
Long-Term PM2.5 Exposure	6	12	25	34	38	40	40	41	41	41
Short-Term PM2.5 Exposure	0	1	2	2	3	3	3	3	3	3
Reduced Morbidity Incidence										
Long-Term PM2.5 Exposure										
Acute Bronchitis	5	9	18	25	28	28	29	29	29	28
Short-Term PM2.5 Exposure										
Acute Myocardial Infarction, Nonfatal	0	0	1	1	1	1	1	1	1	1
Asthma Exacerbation (Wheeze, Cough, Shortness of Breath)	105	208	408	566	620	642	651	653	648	642
Asthma, New Onset (Wheeze)	13	26	52	72	79	83	84	85	84	84
HA, All Cardiovascular (less Myocardial Infarctions)	1	1	3	4	5	5	5	5	5	5
HA, All Respiratory (less Asthma)	1	1	2	3	4	4	4	4	4	4
HA, Ischemic Stroke	0	1	1	2	2	2	2	3	3	3
HA and ED Visits, Asthma	1	1	2	3	4	4	4	4	4	4
Lower Respiratory Symptoms	55	109	214	297	326	337	341	342	339	336
Upper Respiratory Symptoms	109	217	426	591	648	671	680	682	677	671
Minor Restricted Activity Days	2376	4720	9239	12798	14017	14496	14679	14707	14578	14418
Work Loss Days	412	818	1602	2219	2431	2515	2547	2552	2530	2502

Valuation of Public Health Benefits

Monetary valuations of all reductions in adverse health outcomes were calculated. The 2016 AQMP calculated total monetary valuation for each endpoint by multiplying the number of reduced outcomes for each endpoint by an estimate of the economic value of reducing individual outcome for each endpoint. For reductions in premature mortalities, an estimate of the value of a statistical life (VSL) was used. To generate value estimates for morbidities such as hospital admissions or emergency room visits, a cost-of-illness (COI) methodology was typically used. A detailed description of VSL and COI estimates can be found in Chapter 3 of the 2016 AQMP Final Socioeconomic Report. A summary of all monetary values and their associated reference(s) can be found in Appendix 3B of the 2016 AQMP Final Socioeconomic Report.

Staff estimated benefits per ton (BPT) factors for each health endpoint analyzed in the 2016 AQMP. BPT factors are calculated by dividing monetized public health benefits by modelled emission reductions from the AQMP. For example, a NOx BPT factor is calculated by dividing the estimated monetized health benefits of a given health endpoint by the total NOx emission reductions in the years 2023 and 2031. Linear interpolation is used to generate BPT factors for the remaining years (2022, 2024-2030). BPT factors for PM2.5 are calculated similarly.[48] Table 41 below shows total monetized health benefits for each modeled compliance scenario summed over the entire compliance period (2022-2031). All dollar figures are in millions of 2018 dollars.[49,50]

[48] BPT factors increase over time reflecting the projected increases in population by age class and increases in VSL due to projected increases in future incomes.

[49] 2015 dollar figures presented in the 2016 AQMP Final Socioeconomic Report have been adjusted using a price inflator of 4.64% based on the October 2020 Marshall & Swift price index (average, all industries).

[50] To avoid double-counting, total monetized public health benefits do not include monetized benefits from reduced mortalities due to short-term PM2.5 exposure.

Table 41: Projected Monetized Health Benefits for Each Compliance Scenario in Millions of 2018 Dollars (Total ISR Emissions Net of Existing CARB Regulations)

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	NPV (4%)
Sc1	$64	$129	$259	$366	$409	$432	$447	$457	$462	$466	$2,713
Sc2	$92	$160	$291	$399	$440	$465	$477	$483	$488	$491	$2,954
Sc3	$64	$437	$412	$475	$511	$526	$531	$536	$538	$547	$3,615
Sc4	$138	$201	$341	$397	$417	$409	$392	$364	$329	$282	$2,613
Sc5	$0	$595	$306	$357	$375	$367	$352	$327	$295	$254	$2,611
Sc6	$0	$18	$67	$121	$167	$201	$216	$219	$219	$217	$1,101
Sc7	$0	$414	$1,005	$1,744	$2,086	$2,286	$2,374	$2,463	$2,554	$2,646	$13,474
Sc7a	$0	$95	$212	$337	$417	$424	$427	$429	$430	$431	$2,473
Sc8	$52	$78	$164	$247	$300	$324	$326	$323	$320	$317	$1,905
Sc9	$186	$180	$301	$345	$355	$339	$315	$286	$253	$213	$2,239
Sc10	$199	$197	$330	$378	$388	$371	$345	$315	$278	$236	$2,449
Sc11	$0	$20	$191	$119	$1,303	$1,580	$1,775	$1,911	$1,808	$1,657	$7,744
Sc12	$0	$20	$61	$107	$179	$250	$286	$302	$307	$311	$1,372
Sc13	$21	$71	$135	$184	$203	$204	$195	$186	$177	$168	$1,212
Sc14	$63	$137	$213	$230	$224	$204	$182	$159	$135	$109	$1,340
Sc15	-	-	-	-	-	-	-	-	-	-	-
Sc16	-	-	-	-	-	-	-	-	-	-	-
Sc17	$0	$7	$21	$39	$48	$50	$43	$34	$23	$13	$221
Sc18	$3	$8	$15	$19	$20	$21	$22	$22	$23	$23	$136

Projected discounted total public health benefits range from $136M up to $13.5B for all scenarios with appreciable emission reductions (excluding Scenario 15: Filter Systems and Scenario 16: Filter Replacements). Based on the low and high representative scenarios (Scenario 13 and Scenario 1, respectively), total discounted public health benefits are expected to range from $1.2B to $2.7B. Table 42 contains a comparison of discounted total costs and benefits for each modelled scenario. Estimated total public health benefits exceed total costs in 13 out of the 19 modelled scenarios. Total costs exceed expected benefits in Scenarios 6, 11, 12, 15, 16, and 18.

Table 42: Comparison of Projected Discounted Total Costs and Benefits Compliance Scenario in Millions of 2018 Dollars

	Equipment	Discounted Total Costs NPV (4%)	Discounted Total Benefits NPV (4%)
Sc1	NZE Class 8	$1,103	$2,713
Sc2	NZE Class 8	$1,220	$2,954
Sc3	NZE Class 8	$374	$3,615
Sc4	NZE Class 8	$750	$2,613
Sc5	ZE Class 8	$942	$2,611
Sc6	ZE Class 6 & 8	$1,604	$1,101
Sc7	Mitigation Fee	$5,264	$13,474
Sc7a	Mitigation Fee	$985	$2,473
Sc8	NZE Class 6	$1,627	$1,905
Sc9	NZE Class 6	$468	$2,239
Sc10	ZE Class 6	-$87	$2,449
Sc11	Solar	$9,712	$7,744
Sc12	ZE Class 8	$7,445	$1,372
Sc13	ZE Class 2b-3	$753	$1,212
Sc14	ZE Class 2b-3	$978	$1,340
Sc15	Filter System	$5,057	-
Sc16	Filter	$4,953	-
Sc17	TRU	$46	$221
Sc18	Yard Trucks	$1,029	$136

Total discounted costs and monetized public health benefits were also calculated for each compliance scenario under the assumptions for CEQA Alternative B and CEQA Alternative C. Tables 43 and 44 below contain a comparison of total costs and benefits for CEQA Alternative B and CEQA Alternative C, respectively.

Table 43: CEQA Alternative B Comparison of Projected Discounted Total Costs and Benefits Compliance Scenario in Millions of 2018 Dollars

	Equipment	Total Costs NPV (4%)	Total Benefits NPV (4%)
Sc1	NZE Class 8	$247	$382
Sc2	NZE Class 8	$315	$763
Sc3	NZE Class 8	$166	$383
Sc4	NZE Class 8	$181	$21
Sc5	ZE Class 8	$191	$30
Sc6	ZE Class 6 & 8	$319	$2
Sc7	Mitigation Fee	$298	$426
Sc7a	Mitigation Fee	$190	$55
Sc8	NZE Class 6	$204	$97
Sc9	NZE Class 6	$179	$21
Sc10	ZE Class 6	$177	$23
Sc11	Solar	$301	$26
Sc12	ZE Class 8	$6,188	$734
Sc13	ZE Class 2b-3	$195	$46
Sc14	ZE Class 2b-3	$187	$12
Sc15	Filter System	$180	-
Sc16	Filter	$175	-
Sc17	TRU	$3	$4
Sc18	Yard Trucks	$446	$52

Uncertainty in Public Health Benefits Estimation

The IPT methodology employed in this analysis is a proven reduced-form tool to estimate public health benefits and currently utilized by CARB and the U.S. EPA. However, the linearity assumption underpinning the IPT and BPT methodologies employed here is necessarily an approximation, and does not account for complex chemistry, precursor pollutant interactions, and finer-scale geographical effects in the same way that detailed modeling can, as in the 2016 AQMP (using CMAQ and BenMAP). In addition, the relative contribution of NOx to PM2.5 concentrations is subject to uncertainty and may vary by location. Actual changes in PM2.5 concentration may be higher or lower than what is projected in this analysis. The approximations shown here however are consistent with the detailed and holistic 2016 AQMP analysis to the extent that the proposed rule is included as a part of that overall strategy.

Table 44: CEQA Alternative C Comparison of Projected Discounted Total Costs and Benefits Compliance Scenario in Millions of 2018 Dollars

	Equipment	Discounted Total Costs NPV (4%)	Discounted Total Benefits NPV (4%)
Sc1	NZE Class 8	$1,680	$3,735
Sc2	NZE Class 8	$1,660	$3,910
Sc3	NZE Class 8	$341	$5,074
Sc4	NZE Class 8	$982	$4,128
Sc5	ZE Class 8	$996	$3,934
Sc6	ZE Class 6 & 8	$2,081	$1,622
Sc7	Mitigation Fee	$7,755	$19,634
Sc7a	Mitigation Fee	$1,426	$3,612
Sc8	NZE Class 6	$3,115	$2,615
Sc9	NZE Class 6	$534	$3,417
Sc10	ZE Class 6	-$427	$3,738
Sc11	Solar	$12,561	$14,170
Sc12	ZE Class 8	$8,030	$2,075
Sc13	ZE Class 2b-3	$1,000	$1,631
Sc14	ZE Class 2b-3	$1,148	$1,993
Sc15	Filter System	$7,827	-
Sc16	Filter	$7,711	-
Sc17	TRU	$111	$372
Sc18	Yard Trucks	$1,192	$161

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Appendix I – Peer Review of PR 2305 Draft Socioeconomic Impact Assessment & South Coast AQMD Response to Comments

THIRD PARTY REVIEW: STAFF DRAFT SOCIOECONOMIC IMPACT ASSESSMENT FOR PROPOSED RULE 2305 (PR 2305)

Submitted to:
South Coast Air Quality Management District

Submitted by:

Robert A. Kleinhenz, Ph.D.
Kleinhenz Economics

April 2, 2021

INTRODUCTION AND PURPOSE OF THIS STUDY

The South Coast Air Quality Management District (South Coast AQMD or District) is responsible for regulating stationary sources of air pollution in the South Coast Air Basin of Southern California, which includes Los Angeles, Orange, Riverside, and San Bernardino counties, excluding less populated portions of Los Angeles, Riverside, and San Bernardino counties. The agency has determined that a significant share of the region's emissions emanate from the goods movement sector, which consists primarily of the region's transportation and warehousing sector.

As a part of its effort to achieve compliance with federal and state clean air standards within its jurisdiction, the District has developed an indirect source rule (ISR), the goal of which is to reduce mobile-source emissions associated with the operation of warehouses and distribution centers in the South Coast AQMD region. The rule is known as Proposed Rule (PR) 2305 or the Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program. If the rule is adopted, it would apply to any existing or new warehouse with an indoor warehouse floor space equal to or greater than 100,000 square feet within a single building located in the South Coast AQMD jurisdiction.

Under PR 2305, warehouse operators would be subject to an annual Warehouse Points Compliance Obligation (WPCO), which requires them to take actions to reduce NOx and PM emissions associated with their operations, including trucks and other vehicles that operate at or visit the warehouse facilities covered under PR 2305. In general, WAIRE points may be earned only for actions which go beyond existing federal and state regulations already applicable to warehouse owners or operators earning WAIRE Points. Alternatively, operators may pay a mitigation fee used to offset emissions in communities of warehouses which paid mitigation fees.

South Coast AQMD staff has conducted a socioeconomic impact analysis of PR 2305, the results of which are contained in the report, **"Draft Socioeconomic Impact Assessment for Proposed Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program and Proposed Rule 316 – Fees for Rule 2305,"** hereafter referred to as the Socioeconomic Impact Assessment Report or the SIA Report. The South Coast AQMD has engaged Kleinhenz Economics to serve as an independent reviewer of the SIA Report.

The present report contains the findings of the independent, third-party review of the SIA Report, as conducted by Kleinhenz Economics. The review examines the overall contents of the SIA Report with particular attention devoted to the data, assumptions, modeling, and the analytical results contained in the report.

GENERAL COMMENTS ON REPORT

The SIA Report does the following:

- Identifies affected industries, providing characteristics of these industries;
- Identifies and describes characteristics of communities within which warehouses are located;
- Evaluates the economic impact of PR 2305 on employment and the regional economy;

- Evaluates the potential impact of PR 2305 on emissions reduction and health benefits; and
- Evaluates cost-effectiveness of alternatives to PR 2305.

The SIA report describes the warehouse industry and the operators within the industry. This includes a high-level profile of warehouses in the region, as well as the operators who conduct business at warehouses. As summarized in the report, warehouse operators include firms from a number of industries, not just the narrowly defined transportation and warehousing industry. It also describes how trucks and other vehicles that are used in typical business operations of these industries are significant sources of emissions in the region. It also places the warehouse industry in the broader context of the region's goods movement sector and the overall economy.

Further, the report describes the communities in which the warehouses are located, both the socioeconomic characteristics and selected measures of adverse health outcomes in the communities, specifically those related to emissions of vehicles that are a part of the industry. The report also summarizes the legislative mandates related to PR 2305.

Given the difficulty in predicting actual behavioral responses on the part of warehouse operators to PR 2305, South Coast AQMD staff simulated a range of possible responses in the form of distinct scenarios, in terms of various compliance actions that operators may adopt as responses to PR 2305. In each scenario, operators were assumed to uniformly adopt the same response. One of the scenarios assumed that all operators would pay in lieu mitigation fees rather than seek to comply with PR 2305 through direct compliance actions. The economic impact of several scenarios on employment was modeled by using the REMI model.

In addition, health impact results were calculated and presented both in terms of improved health outcomes and the monetary value of the associated public health benefits. Finally, as required under the California Environmental Quality Act (CEQA), the report briefly describes and estimates the costs of five alternatives to PR 2305. The economic cost of each was evaluated.

The aggregate impacts described in the SIA Report imply that PR 2305 would impose minimal costs on the regional economy, yet it would generate positive net health benefits. In terms of jobs, the estimated economic impact of PR 2305 was small relative to the total number of jobs in the region, ranging between 1,700 and 11,400 or anywhere between 0.01% and 0.10% of all jobs in the four county region. By comparison, the monetary value of health benefits was estimated to range between $2.1 and $17.2 billion over the compliance period.

Given the difficulty of obtaining data directly from firms in the affected industries, the SIA Report relies on a combination of readily available data and proprietary data, a number of working assumptions, well-established, sophisticated economic and health benefit modeling tools, and cost estimates of various technology responses to PR 2305 to determine the overall socioeconomic impact of the rule on the affected industries, the regional economy, and its residents. As comprehensive as the analysis is, it might be improved by addressing the following concerns.

- While the net benefits justify the costs of compliance, it would be informative to compare the estimated costs and benefits of PR 2305 with the actual costs and benefits of other South Coast AQMD programs as a way of evaluating the cost effectiveness of PR 2305. On this point, if

1.

one assumes that the marginal cost of emissions reductions increases with additional emissions reduction efforts (start with "low hanging fruit" first), PR 2305 costs may very well be higher when compared with previously implemented programs. If so, then the question should be, how much higher and is that higher cost justified?

- The aggregate analysis was also used along with the results of the IEc study to establish a likely maximum compliance cost of $0.82 per square foot of warehouse space. In practice, researchers assume individual operators will choose some combination of compliance measures that will result in actual compliance costs no higher than the estimated maximum. The validity of the analysis could be reinforced if the estimated compliance costs were related in some manner to individual warehouse operator costs, whether actual or estimates such as those contained in business pro forma reports. 2.

- The analysis considers equity aspects of the health costs associated with warehouse-related emissions and the benefits of reducing those emissions. If possible, it may also consider the equity aspects of job losses, specifically the extent to which estimated job losses are more likely to occur among one or more disadvantaged segments of workers in the region. 3.

STRENGTHS AND WEAKNESSES OF THE STUDY

Strengths of the Study

- The community profile in the report presents data on the number and socioeconomic characteristics of residents living in the vicinity of the warehouses potentially subject to PR 2305. This includes the incidence of asthma, cardiovascular disease, and low birth-weights within 0.5, one, and two miles, with data on the broader region provided for comparison.

- The staff report draws information on the number and characteristics of warehouses within the region from the companion IEc report, which includes a detailed assessment of the warehouse industry in the region.

- The industry impact component of the analysis is based upon an extensive number of scenarios (19) that are used to simulate extreme outcomes that would result if all warehouse operators subject to PR 2305 in the region universally and uniformly adopted a single technology. This approach was warranted because of the difficulty required to obtain actual data about business operations and operating costs for any industry, including those affected by PR 2305. In the absence of such information, the rationale behind the simulation approach was a) at least one of the simulation scenarios involving uniform adoption of a single technology may be assumed to represent the highest cost outcome from PR 2305, thereby establishing an upper bound on industry-wide compliance costs, b) in practice, an individual operator can be assumed to select the compliance option or set of options that would minimize compliance costs for that operator's operations, c) given the choices made by individual operators, the actual industry-wide compliance cost would be less than the upper bound established by the simulation.

Weaknesses of the Study

The following potential weaknesses in the study may affect the validity of its findings.

- The distinction between warehouse owners and warehouse operators is blurred throughout the report. In general, the report ought to refer to "warehouse operators" as the relocation decision makers and not "warehouses" for the benefit of the reader. 4.

- It is difficult to critique the health outcomes based on CalEnviroScreen 3.0 (CES 3.0). There is no direct mention of the causal relationship between warehouse-related vehicle emissions adverse health outcomes. It is recommended that citations be included that affirm the validity of CES 3.0 for this study. It is also recommended that citations be included to affirm the linkage between warehouses/vehicle emissions and adverse health outcomes, thereby ruling out the possibility of a spurious relationship between the two. 5.

- In order to evaluate PR 2305, it was necessary to develop a profile of warehouse operators in the region, including such information as the operator's industry (NAICS code), operator size as represented by the number of employees, and operator revenues. In general, it is difficult to obtain establishment level characteristics of businesses, which tend to be proprietary.

  Official government data on establishments is collected and maintained by government sources such as the California Employment Development Department (EDD) or other federal/state agencies. While the data provides information on an establishment's industry, its employee headcount, payroll, and other details, it is generally confidential. This places limits on how the data may be used.

  Dun and Bradstreet (D&B) is a proprietary data source that collects and maintains data on businesses. While the original purpose of D&B data is to determine the creditworthiness of businesses, its business data records also include details such as the formal business name, business address, its officers, business size in terms of number of employees, and some financial data. AQMD used establishment data from D&B to develop operator the profile, matching warehouse facilities and operator data from CoStar to business establishment data from D&B.

  The resulting profile was based on 1,154 operators that was subsequently applied to the larger population of warehouses subject to PR 2305. This effort involves a large data collection and analysis effort and revealed important details about the collection of industries that make up the population of warehouse operators. However, using D&B data is problematic because it is known to contain incorrect or out-of-date information on a business employee count and available financial information, and to a lesser degree, the businesses industry classification. If available and if permitted for this use, it would be preferred to supplement D&B data with establishment information from the EDD. Moreover, County Business Patterns may be used as an alternative data source for certain questions such as the distribution of firms by size within and across industries. 6.

- The above discussion is particularly important when considering the incidence of PR 2305 on small businesses. There is considerable variation in business size across the individual industries. For example, data on the transportation and warehousing sector in the four-county region (Los Angeles, Orange, Riverside, and San Bernardino counties) from the 2018 County Business Patterns show that firms in the warehousing and storage industry (NAICS 493) have a substantially higher average employee count (63.2) than firms in the truck transportation industry (NAICS 484) where the average is 9.3 workers per firm. Moreover, financial and employment data for firms in the D&B database can be out of date by several quarters or years, leading to a less-than-accurate picture of the affected industries in general and small businesses in particular.

  It is recommended that South Coast AQMD staff consider the value of using other data sources to obtain better information on the sizes of the firms in the industries covered under PR 2305, and in particular, to determine how small businesses will be affected by the proposed rule. EDD data is one possible data source, but it reports annual payroll and not annual revenues. County Business Patterns data reports aggregate revenues, but not revenue per firm. Staff may consider whether there is a way to use payroll as an indirect measure of a firm's size in terms of revenues.

7.

DISCUSSION OF COMMUNITY PROFILE

The community profile section of the SIA Report presents data on selected socioeconomic and ethnic characteristics of residents living in the vicinity of the warehouses potentially subject to PR 2305. It also includes summary data on the incidence of adverse health outcomes within one-half, one, and two miles of warehouses. The health hazards cited include elevated occurrences of asthma, cardiovascular disease, and low birth-weights near warehouses when compared with data on the broader region provided for comparison. It also described the presence of higher levels of particulate matter (PM2.5 and diesel PM) within 0.5 miles of warehouse facilities compared to the broader region.

In simple terms, the community profile paints a picture of residents in the vicinity of warehouse facilities who are largely low income, minority residents, and who have higher incidences of adverse health outcomes that are related to emissions and air quality problems because of proximity to the facilities.

DISCUSSION OF AFFECTED INDUSTRIES

The SIA report uses available data from a number of sources to identify the affected industry groups (2-digit NAICS) and associated industries. The assembled profile showed how warehouse operators were distributed across an array of industries within the following major industry groups: construction, manufacturing, wholesale trade, retail trade, and transportation and warehousing. It also used data to estimate the likely number of facilities that would be subject to PR 2305.

Footnote 7 on page 7 states that multi-tenant facilities are assumed to be occupied by two operators. How prevalent are the multi-tenant facilities, specifically what is their share of total warehouses affected by PR 2305? If small, the working assumption may be satisfactory. If large, then it may be necessary to justify that assumption. 8.

As implied by the discussion above under Weaknesses of the Report, it is challenging to obtain hard data on individual firms that may be used to establish the number and size of businesses that will be affected by PR 2305. Therefore, South Coast AQMD staff used a variety of data to come up with a profile of affected industries in the aggregate, including their number, their distribution across various industries, and revenue information. Within that estimated population of affected industries, the analysis identified the subset of warehouses and warehouse operators that would fall under the jurisdiction of PR 2305.

DISCUSSION OF ECONOMIC IMPACT ANALYIS

Using available data, the number and locations of warehouses and associated warehouse operators that would be potentially affected by PR 2305 was established. The assembled profile also showed how warehouse operators were distributed across an array of industries within the following major industry groups (2-digit NAICS): construction, manufacturing, wholesale trade, retail trade, and transportation and warehousing.

In the absence of firm-specific data that could be used to estimate the economic impact of PR 2305, South Coast AQMD staff developed estimates of aggregate compliance costs over a ten-year time period based upon a set of 19 scenarios, each of which was predicated on adoption of one or more of the available 32 compliance actions by all affected warehouse operators. Payment of mitigation fees was one of the available compliance actions. Compliance costs were estimated for each of the scenarios and summarized in Table 24 on page 22 of the SIA report. South Coast AQMD staff then used REMI to produce a bounding analysis, estimating economic impacts of the following selected scenarios:

- Scenarios 3 and 13 which were considered to be the low-cost scenarios;
- Scenarios 7 and 7a which were considered to be the high-cost scenarios; and
- Scenario 6 which involved EV charger installations.

Economic impact analysis requires the estimation of initial or so-called direct effects. Under PR 2305, the direct effect is represented by compliance costs associated with acquisition, installation, operation, and monitoring of equipment, as well as the administrative costs of compliance.

To the extent that some compliance expenditures involve purchases from local vendors, there may be a positive multiplier effect on the regional economy that can partially offset the negative economic effects of the compliance costs themselves. The modeling process accounts for this possibility. For example, a warehouse operator may incur the cost of purchasing a zero emissions truck or other piece of equipment, but if it purchases that truck or piece of equipment from a local vendor (or local manufacturer), it may trigger a positive ripple effect on the local economy depending on the capacity of the local industry. The model is calibrated to account for capacity

limits on individual industries in the region, such that purchases in excess of the region's production capacity will "leak" out of the region in the form of purchases from vendors outside of the region.

The estimates of economic impact under the selected scenarios are represented in terms of jobs. Based on the low-cost and high-cost scenarios, job losses over the ten-year period are assumed to average between 1,700 and 11,400 per year, equivalent to job losses ranging between 0.01% and 0.1% of the region's total job base. While job losses are an important aspect of evaluating the impact of PR 2305, a more complete picture can be obtained by also reporting on the impacts in terms of output and value added, and to the extent possible, relating those impacts to the overall size of the economy and individual industries. 9.

One important finding of the analysis may be the array of industries across the economy that are ultimately affected by the implementation of PR 2305. In discussing the results, footnote 31 on page 27 indicates that although the rule is intended to affect trucking activities going to warehouses, most establishments with warehousing activities are not in the narrowly-defined "warehousing and storage" industry. Moreover, because of industry linkages across the industries of the regional economy as implied by the regional economic impact model, the largest estimated job reductions occur from indirect effects, and they have substantial impacts on sectors like retail trade and construction, both of which generally experience large effects regardless of the source of the (initial) direct expenditure. Put simply, PR 2305 compliance costs have impacts that extend well beyond the target industries themselves. 10.

DISCUSSION OF PUBLIC HEALTH BENEFITS ANALYSIS

Public health benefits are based upon a well-established incidence per ton (IPT) methodology that was developed by the U.S. EPA and has been used in many applications and project evaluations. South Coast AQMD staff relied on the IPT methodology and analysis from the 2016 Air Quality Management Plan to produce emission reduction estimates from PR 2305 and associated estimated reductions in health incidence. These estimates were used to calculate the monetary value of reduced adverse health outcomes for each scenario, measured in net present value terms over the ten-year period from 2022 through 2031.

The results are presented in Table 36 on page 43 of the report, but they are not discussed in any way. At a minimum, the monetary benefits of the presumed low-cost and high-cost scenarios should be summarized in the body of the report and the Executive Summary. Looking at the presumed low cost and high cost scenarios, the monetized health benefit of PR 2305 is estimated to range between $2.1 billion (Scenario 13) and $17.2 billion (Scenario 7). These figures may also be discussed in the context of the estimated compliance costs for these scenarios as summarized in Table 24 of the report. 11. 12.

South Coast AQMD Responses to Kleinhenz Economics Review of South Coast AQMD PR 2305 Draft Socioeconomic Impact Assessment

Response to Comment #1

It is not current practice to compare the expected costs and emissions reductions (cost-effectiveness) of proposed and existing rules/regulations in the Socioeconomic Impact Assessment for individual rules/regulations. Typically, the expected costs and emissions reductions for available control strategies (i.e. rules) are estimated and compared in South Coast AQMD long-term planning documents, such as in Air Quality Management Plan(s). Additionally, a comparison of PR 2305 cost-effectiveness to the cost-effectiveness of existing South Coast AQMD may be unwarranted given PR 2305 focuses on indirect sources whereas most South Coast AQMD rules focus on stationary sources. A better comparison might be to compare the cost-effectiveness of PR 2305 to California Air Resources Board (CARB) regulations. The Feasibility section in Chapter 3 of the PR 2305 & PR 316 draft staff report contains a detailed description of PR 2305 cost-effectiveness along with a comparison to the cost-effectiveness of a set of recently adopted CARB regulations, including Airport Shuttle Bus, Innovative Clean Transit, At-Berth, Low-NOx Omnibus, and Advanced Clean Trucks. The range of cost-effectiveness found for the varying scenarios for PR 2305 are consistent with those found for CARB regulations.

Response to Comment #2

The example below compares warehouse compliance costs with PR 2305 to an estimate of the underlying costs of running their operation.

Consider a hypothetical 500,000 sq. ft. warehouse operator. Further consider a low- and high-cost compliance scenario, e.g. Scenario 7a with an average annual compliance cost of $0.14/sq. ft. and Scenario 7 with an average annual compliance cost of $0.83/sq. ft. This warehouse is expected to incur an annual PR 2305 compliance cost between $70,000 and $415,000. In comparison, annual operating expenses for this warehouse are estimated to be $13 million according to a 2015 Boyd Company report. This implies the cost of complying with PR 2305 for this example warehouse falls between 0.5% - 3.2% of average annual operating expenses.

Response to Comment #3

The analysis of jobs impacts was conducted using the REMI model as described in the SIA. South Coast AQMD staff met with REMI staff, and was reassured by REMI staff that its modeling tool did not present jobs impacts by income grouping, ethnicity, or other socioeconomic factors considered when discussing equity. South Coast AQMD staff will maintain discussion with REMI staff on this topic for future inclusion.

Response to Comment #4

The draft socioeconomic impact assessment was reviewed to ensure proper delineation of warehouse owner versus warehouse operator. Warehouse operators are the primary

decision makers/facilities modeled within the draft socioeconomic impact assessment for PR 2305. This is emphasized throughout the draft socioeconomic impact assessment, for example the introduction, industry profile, and compliance cost sections all indicate their analysis accounts for the number of warehouse operators.

Response to Comment #5

The analysis contained in the Community Profile section of the PR 2305 & PR 316 draft socioeconomic impact assessment is not intended to show a causal relationship between emissions from warehouse activities and increased CES 3.0 scores in warehouse-adjacent communities. The intent of the analysis is to summarize the current environmental burdens, prevalence of preexisting health conditions, and socioeconomic characteristics of those communities located within close proximity of PR 2305 warehouses. Additional reference to analyses that document the linkage between air pollution associated with warehouses and health effects have been added to the SIA. The emissions from warehouse activities are one of multiple likely contributors leading to increased CES 3.0 scores, including but not limited to emissions from industrial activity and non-warehouse related mobile source emissions. To further clarify this point, staff has added footnote #4 to the draft socioeconomic impact assessment:

> The analysis contained in this section merely shows a correlation between proximity to PR 2305 warehouse operations and increased CES 3.0 scores, it does not attempt to demonstrate a causal relationship. Higher levels of Diesel PM have been identified around warehouses relative to other areas, due primarily to the sources of emissions associated with warehouses like trucks and TRUs (CARB 2005, 2020). In addition, trucks are the largest source of NOx in the air basin, and some of the higher regional ozone and secondary PM levels found in communities near warehouses will therefore be attributable to truck emissions. (South Coast AQMD, 2017).

Response to Comment #6

To improve the D&B data used within the small business analysis performed within the PR 2305 draft socioeconomic impact assessment, warehouse operators were screened out if their estimated annual rent payments were more than the reported revenue values from Dun and Bradstreet (D&B).

U.S. Census County Business Patterns were considered as suggested by the commenter, however this data is not specific to the individual facilities covered by PR 2305. As a result, it's use would not be able to improve the small business analysis already performed using the D&B data.

Response to Comment #7

To the extent D&B data may be out of date, South Coast AQMD staff is unaware of formal documentation showing this reality. Moreover, revenue and employee values at larger companies, even if out of date by several quarters or years, is unlikely to change enough to

sizably affect the current small business analysis results within the draft socioeconomic impact assessment. In addition, D&B data does include revenue and employee data on parent companies which is the appropriate data for determining whether or not a firm qualifies as a small business. Of the potentially affected PR 2305 warehouse operators possible for small-business determination, South Coast AQMD staff determined about 50% had reliable revenue data to credibly perform small-business determination.

There are potential issues with using the suggested alternatives, CA EDD and County Business Patterns, for small-business determination. CA EDD data is provided just for the local site within South Coast AQMD jurisdiction and not for the entire firm. County Business Pattern data is aggregated by industry and not specific to individual facilities.

Staff believes the small-business analysis contained in the PR 2305 Second Draft Socioeconomic Impact Assessment is a sufficiently representative analysis based on the data available.

Response to Comment #8

South Coast AQMD staff estimates the number of PR 2305 potentially affected warehouses that are expected to earn WAIRE Points to comply with PR 2305 to be 1,777 single-tenant warehouses, up to 1,093 multi-tenant warehouses, and 32 warehouses with an unidentified number of tenants, for a total of 2,902 warehouses. These estimates are derived primarily from CoStar data.

As described in Appendix C of the draft staff report for PR 2305, operator data from CoStar, Dun and Bradstreet, and other data sources was reviewed, however determining highly accurate data on the number of warehouse operators proves difficult with currently available data. For example, business listings are often out of date, and it is not possible to determine if a business listing is active. These warehouse operator datasets contain many companies which upon further review are understood to be companies which historically operated at a location and have either shut down or moved.

This uncertainty in warehouse operator data will be clearer if PR 2305 is approved, as warehouse owners and operators will be required to submit reports/notifications to South Coast AQMD.

Response to Comment #9

Tables 32 and 33 have been added to the draft socioeconomic impact assessment, presenting estimated forgone output by industry from the lower-cost scenario of Scenario 7a and the high-cost scenario of Scenario 7. Similar to tables presenting forgone jobs, Tables 32 and 33 show the top 10 most adversely impacted industries, and the top three most benefitting industries due to PR 2305. Relative to total economic output within the South Coast AQMD four-county region, PR 2305 may reduce average annual output between 0.02% and 0.10%.

Response to Comment #10

This point is addressed in the draft SIA in the paragraph proceeding this footnote (footnote #34 in the updated draft socioeconomic impact assessment).

Response to Comment #11

A range of estimated total discounted monetized public health benefits has been included in the Valuation of Public Health Benefits subsection for (1) all scenarios with appreciable NOx emission reductions (excluding Scenarios 15 and 16), and (2) those scenarios identified as representative of the expected low- and high-end of realizable NOx emission reductions (Scenario 13 and Scenario 1).

Response to Comment #12

An additional table has been added to the end of the Valuation of Public Health Benefits subsection (Table 42) that includes estimated total discounted costs (NPV 4%) and estimated total discounted monetized public health benefits (NPV 4%) for each modelled scenario, where applicable.

Appendix II – Peer Review of Industrial Economics, Inc. (IEc) Socioeconomic Analysis of Warehouse Relocations, IEc Response to Comments, and South Coast AQMD Response to Comments

THIRD PARTY REVIEW: SOCIOECONOMIC ANALYSIS OF ISR RULE (PR 2305) REPORT BY INDUSTRIAL ECONOMICS, INC. (IEc)

Submitted to:
South Coast Air Quality Management District

Submitted by:

Robert A. Kleinhenz, Ph.D.
Kleinhenz Economics

April 2, 2021

INTRODUCTION AND PURPOSE OF THIS STUDY

The South Coast Air Quality Management District (South Coast AQMD) is responsible for regulating stationary sources of air pollution in the Southern California region that includes Los Angeles, Orange, Riverside, and San Bernardino counties, excluding less populated portions of Los Angeles, Riverside, and San Bernardino counties. The South Coast AQMD has determined that a significant share of the region's emissions emanate from the goods movement sector, which consists primarily of the region's transportation and warehousing sector.

As a part of its effort to achieve compliance with federal and state clean air standards within its jurisdiction, the South Coast AQMD has developed an indirect source rule (ISR), the goal of which is to reduce mobile-source emissions associated with the operation of warehouses and distribution centers in the South Coast AQMD region. The rule is known as Proposed Rule (PR) 2305 or the Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program. If the rule is adopted, it would apply to any existing or new warehouse with an indoor warehouse floor space equal to or greater than 100,000 square feet within a single building located in the South Coast AQMD jurisdiction.

Under PR 2305, warehouse operators would be subject to an annual Warehouse Points Compliance Obligation (WPCO), which requires them to take actions to reduce NOx and PM emissions associated with their operations, including trucks and other vehicles that operate at, or visit, the warehouse facilities covered under PR 2305. Alternatively, operators may pay a mitigation fee used to offset emissions in communities of warehouses which paid mitigation fees.

Warehouse operators may evaluate whether it is more cost-effective to avoid PR 2305 compliance costs by moving their operations outside of the South Coast AQMD region. The operator's relocation decision would presumably weigh operating costs at the current location (including PR 2305 compliance costs) against the prospective operating costs at another location (including any changes in transportation costs), plus the one-time costs of moving. The calculation would likely account for the benefits of the current and prospective location as well.

The South Coast AQMD engaged Industrial Economics, Inc. (IEc) to perform a study with the goal of estimating PR 2305's likely costs to the warehouse industry in the region. One crucial aspect of IEc's study is to assess possible responses on the part of the warehouse industry, including the potential for warehouse operators to relocate outside the South Coast AQMD region.

The South Coast AQMD has engaged Kleinhenz Economics to serve as an independent reviewer of the IEc study. This report contains the findings of the independent, third-party review of the IEc report entitled, "Assessment of Warehouse Relocations Associated with the South Coast Air Quality Management District Warehouse Indirect Source Rule." The review examines the IEc's analysis of:

- Warehouse markets in the South Coast AQMD's jurisdiction and in nearby areas; and

- The decision analysis framework used to model relocation decisions of warehouse operators, and the results of IEc's analysis and their implications.

GENERAL COMMENTS ON REPORT

The IEc study is intended to evaluate the relocation decisions of warehouse operators in the South Coast AQMD region in response to the implementation of PR 2305. The study consists of three main components:

- Comparative market analysis of warehouse space in the South Coast AQMD region and other nearby regions to which warehouses may relocate in response to PR 2305 (competing regions).
- Survey of stakeholders to determine factors that may affect relocation decisions.
- Development and application of a model to simulate relocation decisions. This includes a separate pathways model of transportation costs that is used to determine how transportation costs affect the relocation decision.

Technically, the IEc study is a comprehensive analysis of the relocation decisions of warehouse operators. It makes extensive use of both publicly available data and proprietary data (CoStar data on properties). It also relies on a survey of stakeholders to identify variables that are likely to enter an operator's relocation decision. The study develops and uses a complex relocation decision model which is driven in part by the above-mentioned pathways model of transportation costs. Finally, IEc uses the model to estimate the likely number of warehouse relocations that would occur under a number of PR 2305 compliance-cost scenarios.

While the analysis is generally robust, there are at least a few areas where the IEc analysis can be augmented. Moreover, thought experiments and illustrative examples can be used as a "taste test" to determine whether the assumptions, analysis, and conclusions are reasonable. Details follow below. Some of the comments here may be addressed in South Coast AQMD's socioeconomic impact analysis or staff report for PR 2305, although summarizing them in this report will provide important context for the relocation decision analysis and results.

STRENGTHS AND WEAKNESSES OF THE STUDY

Strengths of the Study

- Warehouse market assessment and analysis is a robust discussion of both the local warehouse market and those of competing regions. The assessment describes the state of the warehouse markets in each of the regions in terms of commonly used market indicators, but it also goes to great lengths to assemble inventories of individual properties in each of the regions, including current warehouse space and prospective

space. However, while the study produces forecasts of future warehouse capacity, it relies on a 2018 forecast that may be dated as discussed in the third bullet under "Weaknesses of the Study."

- The stakeholder survey provides valuable insights regarding decisions to stay in the region or relocate. The survey results identify variables that would be taken into consideration during a relocation decision process. While the list of variables may not have been surprising, it is hoped that including the survey as part of the overall study ensures that no key decision variables would be overlooked.
- The pathway analysis used in the study is remarkable as a technical approach to simulating transportation costs and relocation decisions. In the end, relocation decisions in a regional setting must be viewed probabilistically: What is the probability that a given warehouse operator at a given warehouse will relocate? As described in the report, there is considerable variation in the types of warehouse space and their functions across the region; and there is considerable variation in the population of warehouse operators themselves. Simplifying assumptions are frequently needed to arrive at a tractable modeling methodology, but the pathway analysis goes a long way in replicating the complexity of the industry.

Weaknesses of the Study

The following potential weaknesses in the study may affect the validity of the study findings.

- The distinction between warehouse owners and warehouse operators is blurred throughout the report, yet these are two distinct groups of stakeholders whose interaction in response to PR 2305 may play a significant role in its rollout and effectiveness. Warehouse operators can quickly move in response to the new rule, but warehouses cannot. At a minimum, the report ought to explicitly identify the "warehouse operators" as the relocation decision makers and not "warehouses." Moreover, as described below, the market response to compliance costs associated with PR 2305 may be different for warehouse owners compared to warehouse operators, and the dynamic relationship between the two may result in compliance costs being shared. 1.
- Despite the extensive discussion on the warehouse market, the report does not include a sufficient amount of background information on the broader goods movement sector of the Southern California region, including the composition of the sector, long-run trends, and competitive pressures. As described below in the "Discussion of Warehouse Market Analysis" a more complete discussion of these details will give the reader much needed context. 2.
- While the survey of stakeholders is a strength of the analysis, it should be complemented by reference to the extensive literature on the relocation decisions of firms, including the key factors that commonly trigger relocation on the part of a firm. As one would expect, firm profitability is one factor that enters a firm's relocation decision. Relocation research shows that marginally profitable firms are more likely to 3.

relocate to improve profit margins, all else being equal. The literature also sheds light on the extent to which regulations and regulatory costs affect a firm's decision to move and adds context to the findings of the stakeholder survey. 3.

- Even with the detailed discussion of the stakeholder survey results, there is room in the report for a more complete profile of the warehouse/fleet operators by individual industry components. This may include the number of operators, payroll employment, and distribution by size, as well as number of self-employed independent operators. These details have implications for the socio-economic characteristics and equity aspects of PR 2305 implementation for the operators, not just the communities and residents. A closer look may show that some individual industries are more sensitive to changes in regulations and compliance costs, hence more susceptible to relocation than others. 4.

- The 2018 CoStar/Moody's forecasts to drive baseline scenarios (Attachment 2, p. 25) may result in out-of-date forecasts, analyses, and conclusions. Many decisions pertaining to warehouses (planning, development and construction, and operations) are long-run decisions on the part of firms, and as such, these decisions follow a deliberate and somewhat lengthy process. As a rule, long-run trends and forecasts are likely to prevail regardless of typical cyclical fluctuations in the economy. However, the current pandemic situation is neither typical nor cyclical, but rather a singular event that has caused unprecedented disruption to the local, national, and global economies, disrupted supply chains, and potentially changed consumption patterns of households and businesses. As such, it is advisable to compare the 2018 vintage forecasts with more recent long-run forecasts, identify their differences, and address the likely implications of these differences for the conclusions of the report. 5.

- The IEc report references the SCAG report entitled, "Industrial Warehousing in the SCAG Region-Final Report," which was published in 2018. This report summarizes the structure and geographic location of the warehouse industry in the SCAG jurisdiction. While industry structure and location tend to change slowly over several years' time, the warehouse sector in Southern California is still driven by a variety of market dynamics, not the least of which is the trend in cargo volumes passing through the region's ports. It may be advisable to bring the SCAG report "up to date" by briefly describing qualitatively or quantitatively how the structure of the industry in 2021 compares with that described in the 2018 report, which itself contains data from as far back as 2014. 6.

- The study cites the 2014 SCAQMD High Cube Warehouse Truck Trip Study. This study was based on a survey that was conducted in 2013-2014. Again, even though industry structure tends to change relatively slowly, changes do occur over a period of 5 to 7 years and may have accelerated in the wake of the pandemic. Thus, to the extent possible, it is advisable to check that the relevant contents of the 2014 report adequately represent present circumstances. 7.

- Having identified and discussed the variety of warehouse uses and warehouse operators in the report, one potential drawback of the study may be the need to make simplifying assumptions in order to move forward with simulations of relocation decision scenarios. The study's conclusions rely heavily on the results of the simulations, which imply that there would be minimal relocation activity once PR 2305 is implemented. If the analysis is correct, compliance costs will generally be spread over the existing number of operators in the existing warehouses. However, if the analysis underestimates the effects of PR 2305 and there is a larger than predicted exodus of warehouse operators, compliance costs may have to be spread over a smaller number of operators/warehouses, possibly resulting in a higher average compliance cost per operator. One possible "taste test" would be to conduct a sensitivity analysis, independent of the scenario analysis, to evaluate the implications from hypothetical relocation shares, for example 1%, 2%, 5%, and 10%. The results may shed additional light on how compliance costs will be borne by warehouse operators and owners. 8.

DISCUSSION OF WAREHOUSE MARKET ANALYSIS

The comparative warehouse market analysis carefully lays out recent historical and current market conditions in the South Coast AQMD region (Attachment 1) and in other nearby regions to which warehouse operators may move in response to PR 2305 (Attachment 2). The report goes to great lengths to produce an inventory of warehouses and potential warehouse space, with particular attention given to warehouses of at least 100,000 square feet that would be subject to PR 2305. Relying on such measures as capacity, absorption, lease rates, and sales prices, the study describes the advantages and disadvantages of operating in the South Coast AQMD region.

It is difficult to discuss the region's warehouse sector without including more background on the broader goods movement industry of which it is a part. A significant share of jobs and economic activity in the region are tied to the goods movement sector, which includes both transportation and warehousing. Attachment 1 in the report could improve on its discussion of recent dynamics of the region's goods movement sector, by presenting a more complete profile of the industry. This can be accomplished by reporting the region's total building area as shown in first two columns of Exhibit 4 on page 9 of Attachment 2 in Attachment 1, which shows a breakdown of building area by type of warehouse. This may be complemented by including the table "Goods Flow Categories Defined Based on the Commodity Flow Survey" shown in Exhibit 1 on page 8 of Attachment 4, which describes the various flow of goods, inbound and outbound, and internal. 2.

This background information provides important data that can be used to describe the local transportation and warehousing sector, including broad industry trends that may provide valuable context to the reader. This includes trends in cargo volumes at the local ports, recent investments in infrastructure, the role of labor in the industry, and so on.

It also includes a discussion of the global goods market within which the local ports operate, including the competitive pressures they face and how they affect other parts of 9.

the local industry. San Pedro ports must contend with competitive pressures in international trade as ports on the Pacific Coast and elsewhere compete for discretionary cargo, which can move through any port in the country at the discretion of the shipper. This is a major source of demand for warehouse space. Being near the largest port complex in the western hemisphere confers a considerable advantage (market power) on warehouses and operators in the region. However, the ports face competition to varying degrees from other ports on the West Coast and the Atlantic Coast. With 30% or more of the cargo passing through the San Pedro Bay ports classified as discretionary cargo, a more robust discussion of the dynamics of this situation is warranted than the brief mention in Attachment 4 on page 6. 9.

More immediately, it would describe how an already tight warehouse market became even more taut in the past year as the good movement industry handled record levels of cargo, triggering accelerated interest in real estate development of industrial/warehouse properties in the region. At the same time, it would include a discussion of how the local goods movement sector meets the needs of households and businesses in a vast region that is home to upwards of 23 million residents, depending on how the narrowly or how widely the region is defined. 2.

The report also presents dynamics of warehouse markets neighboring non-South Coast AQMD markets vis a vis the warehouse markets in the South Coast AQMD region, describing how slower net absorption in the South Coast AQMD region "is offset with an increase in non-South Coast AQMD growth, particularly in the Phoenix and Las Vegas markets. This provides suggestive evidence that warehousing activity may shift between the South Coast AQMD jurisdiction and these outlying areas" (Attachment 2, page 17). While this is a *possible* explanation, it is, at best, a partial explanation. More robust analysis would entail looking that the economic growth rates of each region, changes in local demand for industrial space as well as capacity, and discussion of variables that may be affecting all of the regions in question, such as the national economic expansion that only recently ended with the pandemic. 10.

In all, this discussion will paint a more complete picture of the goods movement at the aggregate industry level. The discussion will describe more completely the market conditions within which individual warehouse operators and warehouse owners are making their microeconomic profit maximizing decisions, a topic that is addressed in the following section.

DISCUSSION OF WAREHOUSE RELOCATION DECISION ANALYSIS AND RESULTS

As described in the IEc study, the warehouse operator relocation decision process is a function of several costs, which include real estate costs, other warehouse-related operations costs, transportation costs, labor costs, regulatory costs, and relocation costs. As a part of analyzing transportation costs, IEc provides a profile of the truck fleets that serve the South Coast AQMD region (Attachment 3) and adapts a route- or pathways-based model of goods flows to the analysis of relocation decisions (Attachment 4). The results of

the relocation decision analysis appear in Attachment 5 of the report and are summarized in the Executive Summary.

As pointed out earlier, the report should be more explicit in describing the relocation decisions as being made by warehouse operators. Assuming warehouse operators are tenants and not property owners, they can move their operations more easily than property owners, for whom the relocation decision is different, unless they both own the warehouse and conduct business as an operator. More generally, however, warehouse operators and warehouse owners may respond differently to compliance costs associated with PR 2305. For example, if PR 2305 triggers enough relocation on the part of warehouse operators to cause a sizable decline in demand, then, given the relatively inelastic supply of warehouse space in the South Coast AQMD region, property owners may see a decline in lease rates their properties can fetch, and as a result, may be willing to absorb a share of compliance costs to avoid loss of tenants. 1.

The survey of warehouse operators provided insights into operator behavior and possible responses to PR 2305. It would also have been an opportunity to obtain actual data on transportation routes (pathways). For example, the survey asks the question, "What region does your fleet typically serve?", with *general* follow up questions about the routes used and locations they service. With properly framed questions, it might have been possible to obtain information that reflects ***actual*** behavior. For example, in addition to the general questions in the survey, one might ask for information on specific trips, such as: "For each vehicle in your fleet, please provide the origin, destination and path of the xth trip taken by that vehicle in the past week (or day or month)." As is known in the field of survey design, a self-reported general statement ("my usual commute is 30 minutes") is laden with greater variability than a self-reported specific statement ("my commute today was 37 minutes). 11.

Beyond this point, while the technical approach to the relocation analysis is impressive, its validity can be bolstered by supplying additional background information, drawing comparisons with applicable knowledge and theory of the warehouse market, and using illustrative examples or thought experiments to demonstrate consistency of the relocation analysis with the likely situation for warehouse operators in real world circumstances. 12.

For example, while the report lists the set of costs that are a part of an operator's location decision analysis, knowing the cost structure in the warehouse operator industry across the individual categories would provide valuable context. This would be particularly helpful if the relocation decision comes down to two or three cost categories such as real estate costs, regulatory costs, and transportation costs. Knowing the distribution of costs would make the relocation decision of an operator more transparent. 13.

Other assumptions of the analysis may be oversimplified and may merit more discussion than appears in the study. For example, the pathways analysis only considers transportation costs per mile of distance but does not take into consideration time costs of travel, which begs the question, if Southern California road congestion results in a higher time cost of travel compared to out of area, should differences in the time cost of travel be considered. Admittedly, if drivers are paid on an hourly basis, differences in the time cost of travel 14.

should be reflected in higher wage bills for local operators compared to non-local operators. If these differences are not incorporated into the analysis, at a minimum, IEc may outline a thought experiment that walks though such a comparison using plausible assumptions about wage costs, and per-mile costs, and then use the results of the thought experiment to shed light on the ramifications of omitting the time cost of travel from its analysis. 14.

It also appears that the process of determining which warehouse will relocate (most distant warehouse) is driven by distance and does not consider differentials in real estate costs across regions within the South Coast AQMD. While this may be a simplifying assumption, one might have more confidence in the report findings if a thought experiment or other construct is used to determine whether or not the results would be sensitive to differences in real estate costs. 15.

While the survey of stakeholders is a strength of the analysis, it should be complemented by drawing from the extensive literature on the relocation decisions of firms to describe the most important variables a firm considers when going through the relocation decision process. In particular, this would address the perception that costs of regulation drive firms to leave a given region or a given state. For example, relocation research shows that marginally profitable firms are more likely to relocate to improve profit margins, all else being equal. The literature also sheds light on the extent to which regulations and regulatory costs affect a firm's decision to move and adds context to the findings of the stakeholder survey. 3.

Even with the detailed discussion of the stakeholder survey results, there is room in the report for a more complete profile of the warehouse/fleet operators by individual industry components. This may include the number of operators, payroll employment, and distribution by size, as well as number of self-employed independent operators. These details have implications for the socio-economic characteristics and equity aspects of PR 2305 implementation for the operators, not just the communities and residents. A closer look may show that some individual industries are more sensitive to changes in regulations and compliance costs, hence more susceptible to relocation than others. 4.

IEc

INDUSTRIAL ECONOMICS, INCORPORATED

Reponses to Kleinhenz Economics Review of Industrial Economics Socioeconomic Analysis of Warehouse Relocations

Response to Comment 1:
As the reviewer suggests, "warehouse operators" are the relocation decision makers modeled by IEc. Because warehouse operators can relocate in response to the rule, our focus on operator decisions provides South Coast AQMD with insights into the rule's potential economic and emissions impacts within the AQMD's boundaries. We agree with the reviewer's suggestion that warehouse owners may lower the rents they charge to warehouse operators as an incentive for them to remain within the South Coast AQMD. In not capturing this effect, however, our analysis provides a conservative, high-end estimate of likely relocations.

Response to Comment 2:
We appreciate that additional background on the broader goods movement sector in the region may be useful to provide context for our analysis. Such information is available from several key sources listed below, from which we have summarized high-level findings relevant to this analysis.

The 2018 "Industrial Warehousing Study" from the Southern California Association of Governments (SCAG) catalogues the state of the industrial warehousing sector in Southern California, describes warehouse categories and functions, and interprets evolving trends in warehousing to determine the region's ability to develop future capacity.[51] This report also provides an inventory of warehousing space within the SCAG region, which though it uses different boundaries than the South Coast AQMD region and makes use of slightly older data, may be helpful context in comparison with the findings in Attachment 2 of this analysis.

Robert Leachman's 2017 white paper "Strategic Initiatives for Inland Movement of Containerized Imports at San Pedro Bay" includes the detailed discussion of supply chain strategies IEc relied on for the development of the transport pathways in this analysis.[52] A key trend discussed in Leachman's paper is that fewer imported international shipping containers arriving through the San Pedro Bay are being shipped onward to inland ports via rail without first being sorted and inventoried in the Los Angeles vicinity. This growing trend results in more drayage between the ports and warehousing locations within the South Coast AQMD region to enable the disassembling and repacking of shipping containers prior to rail

[51] Southern California Association of Governments (2018). Industrial Warehousing in the SCAG Region. https://scag.ca.gov/sites/main/files/file-attachments/final_report_03_30_18.pdf?1604268012.
[52] Leachman, R. (2017) Strategic Initiatives for Inland Movement of Containerized Imports at San Pedro Bay. University of California at Berkeley. https://ieor.berkeley.edu/wp-content/uploads/2019/10/RCL-LA-Basin-Initiatives-Jan_13_2017.pdf.

transport. The result is a continued growth in reliance on warehousing in the area for the processing of imports.[53]

SCAG's 2020 Regional Transportation Plan's "Goods Movement" chapter, as well as the corresponding appendix from the 2016 Regional Transportation Plan, include discussions of how national import strategies are evolving and the relevance of these changes to logistics and transportation networks in Southern California.[54,55] A key finding is that strong growth in port traffic in other "corners" of the U.S., in addition to significant market share growth in Canadian and Mexican ports on the Pacific coast, is projected to continue to outpace growth at the Port of Los Angeles and Port of Long Beach.[56] The authors note that while not growing as quickly as other ports, sustained high demand continues at the Port of Los Angeles and the Port of Long Beach. This is driven in large part by continued anticipated growth in trade volumes from Pacific Rim nations, with a significant share of imports passing through the San Pedro Bay.[57]

Response to Comment 3:
As the reviewer suggests, the literature does provide additional context for the location decision-making of firms. Targa et al. (2006) note the importance of transportation network availability and highway access as important components of firm economic success and location decision-making.[58] Similarly, Jaller et al. (2016) note the importance of transportation access and population centers in explaining warehouse and distribution center location decision-making specific to Southern California.[59] Hu et al. (2008) found that internal factors such as firm sales and employment do not play as large of a role as access to transportation options and the general economic environment.[60] Kang (2018) notes that Los Angeles warehouses built more recently (since 2000) have prioritized cheaper land and access to intermodal transport facilities relative to the labor center and port proximity of older warehousing infrastructure, though this may simply reflect the outward expansion of the Los Angeles area goods movement sector.[61] Rivera et al. (2015) note the benefits realized by logistics firms of various sizes co-locating in logistics "parks," specifically increased employee training opportunities and the sharing of transportation capacity.[62]

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[53] Leachman (2017).
[54] Southern California Association of Governments (2020). Regional Transportation Plan Technical Report: Transportation System Goods Movement. https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal_goods-movement.pdf?1606001690.
[55] Southern California Association of Governments (2016). Regional Transportation Plan Appendix: Transportation System Goods Movement. https://scag.ca.gov/sites/main/files/file-attachments/2016rtpscs_goodsmovement_1.pdf.
[56] SCAG (2020).
[57] SCAG (2018, 2020).
[58] Targa, F., Clifton, K. J., & Mahmassani, H. S. (2006). Influence of transportation access on individual firm location decisions. *Transportation research record*, *1977*(1), 179-189.
[59] Jaller, M., Pineda, L., & Phong, D. (2017). Spatial analysis of warehouses and distribution centers in Southern California. *Transportation Research Record*, *2610*(1), 44-53.
[60] Hu, W., Cox, L. J., Wright, J., & Harris, T. R. (2008). Understanding firms' relocation and expansion decisions using self-reported factor importance rating. *Review of Regional Studies*, *38*(1), 67-88.
[61] Kang, S. (2018). Warehouse location choice: A case study in Los Angeles, CA. *Journal of Transport Geography*.
[62] Rivera, L., Sheffi, Y., & Knoppen, D. (2016). Logistics clusters: The impact of further agglomeration, training and firm size on collaboration and value added services. *International Journal of Production Economics*, *179*, 285-294.

With respect to policy changes specifically impacting firm relocation decisions, Pan et al. (2020) note that while traditional factors such as taxation and incentives do have a statistically significant effect on relocation decisions, individual policy changes are unlikely to influence firm relocation decisions without being inordinately large or arriving in combination with other policies or changes.[63] Similarly, Conroy et al. (2016) report small marginal effects of any individual factor on industrial firm relocation, stating the low likelihood of such decision-making being affected by changes to local or state-level taxes or other economic incentives.

As the reviewer mentions, firm profitability may also influence relocation decisions, and less profitable firms are more likely to consider alternatives.[64,65] Given the low numbers of modeled relocations in our analysis, even under higher compliance cost scenarios than proposed in PR 2305, it is more likely that firm relocation decisions will be based off of transportation and goods pathway needs specific to each firm, which we capture by modeling each goods pathway separately. We also note that accounting for the financial health of individual warehouse operators in our modeling would not have been feasible with the available data.

Response to Comment 4:
South Coast AQMD staff have addressed this comment.

Response to Comment 5:
The long-term forecast in our analysis consists of projected developments plus "slack capacity," defined as potential additional developments available on land zoned for industrial development plus projected vacancies. In calculating slack capacity, we subtract the land required for forecasted developments under the 2018 CoStar/Moody's economic case. Projected developments represent roughly six percent of slack capacity in the outlying market areas (approximately 1,400 million square feet of estimated slack capacity versus 80 million square feet of forecasted developments). If a more recent forecast projects more warehouse development in the outlying market areas than the 2018 forecast used in our analysis, this would likely reduce the projected slack capacity available in these areas and, due to capacity constraints, potentially reduce the number of relocations (for those compliance cost scenarios where the estimated number of relocations is greater than zero). Thus, the forecast of outlying market capacity in the analysis supports the development of conservative estimates of relocations.

The reviewer also suggests that a more recent forecast could show an increase in warehouse development activity in the South Coast AQMD's boundaries and that this development may imply more relocations than projected in our analysis. We note, however, that at the maximum average compliance cost of $0.83 per square foot proposed in PR 2305,[66] IEc's

[63] Pan, Y., Conroy, T., Tsvetkova, A., & Kures, M. (2020). Incentives and firm migration: an interstate comparison approach. *Economic Development Quarterly*, *34*(2), 140-153.
[64] Brouwer, A. E., Mariotti, I., & Van Ommeren, J. N. (2004). The firm relocation decision: An empirical investigation. *The Annals of Regional Science*, *38*(2), 335-347.
[65] Pellenbarg, P. H., Van Wissen, L. J., & Van Dijk, J. (2002). *Firm relocation: state of the art and research prospects.* Groningen: University of Groningen.
[66] This value is the average annual compliance cost of the high-cost compliance scenario in which all facilities comply with PR 2305 by paying a mitigation fee every year and receive no funding to purchase equipment to aid with PR 2305 compliance.

analysis found that zero percent of warehouses in the South Coast AQMD are likely to relocate. The economics of the relocation decision would be the same for additional warehouses located in the South Coast AQMD. Thus, even if there are indeed more warehouse developments in the South Coast AQMD than we calculate in our long-term scenario, expected relocations would still likely be zero under the rule as it is proposed.

Response to Comment 6:
IEc's primary use of the 2018 SCAG report "Industrial Warehousing in the SCAG Region" is to inform the warehouse categorization used throughout the analysis.[67] Because this general categorization has not significantly evolved since 2018, the 2018 SCAG report serves as a reasonable basis for the warehouse categorization relevant to PR 2305. Although SCAG's October 2020 "Last Mile Freight Study" notes the increasing prevalence of smaller delivery fulfillment facilities oriented toward package sorting for last-mile delivery,[68,69] most of these smaller facilities are unlikely to exceed the 100,000 square foot threshold for regulation under PR 2305.

With respect to recent trends in the flow of goods through the region's ports, 2019 and the first half of 2020 saw slight declines in imports through the San Pedro Bay ports complex relative to 2018. The second half of 2020 resulted in a strong turnaround for imports, with the Port of Los Angeles finishing with 2020 as its fourth-largest cargo volume year ever and the Port of Long Beach having its single largest cargo volume year in its history.[70] The growth trend has continued in the first part of 2021, with January and February volumes at the Port of Los Angeles tracking 21 percent above the same months in 2020, and five percent above the same months in 2019.[71]

Response to Comment 7:
South Coast AQMD staff have addressed this comment.

Response to Comment 8:
The reviewer suggests that the relocation of warehouse operators outside the South Coast AQMD region would increase the per-facility costs of complying with PR 2305 for those warehouses that remain. However, the costs of compliance with PR 2305 for a given facility are a function of each warehouse's size and operations (truck trips). The number of warehouses in the regulated universe does not affect the costs of compliance for any one warehouse. Therefore, if any warehouse operators leave the South Coast AQMD region in response to the rule, we do not expect compliance costs for other facilities to be affected.

Response to Comment 9:

[67] SCAG (2018).
[68] Southern California Association of Governments (2020) Last Mile Freight Study. https://scag.ca.gov/sites/main/files/file-attachments/2958_lastmilefreightstudy-final.pdf?1604195996.
[69] Southern California Association of Governments (2020). Regional Transportation Plan Technical Report: Transportation System Goods Movement. https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal_goods-movement.pdf?1606001690.
[70] Logistics Management (2021) https://www.logisticsmgmt.com/article/port_of_los_angeles_and_port_of_long_beach_end_2020_with_strong_volume_gain.
[71] Freightwaves (2021) https://www.freightwaves.com/news/san-pedro-bay-congestion-recedes-to-christmas-eve-level.

South Coast AQMD staff have addressed this comment.

Response to Comment 10:
We agree with the reviewer's assertion that slower net absorption in the South Coast AQMD region coupled with growth in net absorption in some outlying markets is likely driven by a variety of factors other than warehouse operators shifting between the South Coast AQMD region and these other areas. Our intention was not to suggest warehouse operator relocation was the main driver of this pattern observed in the net absorption data but merely to highlight this pattern is consistent with relocation. Other possible factors include, as the reviewer mentions, each respective market area's economic growth and local demand for warehousing space. Cities in some areas, such as Western Arizona, actively recruit new warehousing developments. Increases in absorption in these areas cannot be specifically tied to relocations from the Los Angeles area without an understanding at the individual firm level.

Response to Comment 11:
Although it is possible that a survey of warehouse operators on the goods flow movements through their warehouses would have generated useful information, Leachman (2017) includes the most detailed analysis of goods movement in the Los Angeles area that we were able to identify from published or unpublished sources. It reflects input that Leachman obtained through industry interviews, as well as statistics for goods pathway identification from sources such as the Alameda Corridor Transport Authority, Union Pacific, and BNSF. While a few years have passed since this report's writing, we are unaware of any information to suggest that the general goods distribution shares across pathways has changed significantly in that time. Therefore, given the quality of the Leachman (2017) study and the significant resources required to obtain the detailed information necessary to update the study, we focused our efforts on applying Leachman's findings to develop a detailed understanding of the transportation cost implications of warehouse operator relocation.

Response to Comment 12:
In response to the reviewer's suggestion for illustrative examples, consider the example of two warehouse operators weighing relocation to the Phoenix market. The first operator largely supports goods bound for rail transport for national distribution (e.g., Pathway 6 in our analysis), and the second operator is on a goods flow pathway concluding in distribution within the South Coast AQMD region, such as Pathway 3. For the first operator, relocation from the South Coast AQMD region to Phoenix would entail trucking goods to Phoenix for repacking, followed by drayage to the rail terminal in Phoenix. The goods would not have to be transported significant extra distance, but the change in transportation costs would be due to truck transport being more expensive than rail (see Exhibit 1 below). Alternatively, for the second warehouse operator on Pathway 3, goods must be trucked all the way to Phoenix and then back to the South Coast AQMD region. There are also no avoided rail costs associated with the warehouse on Pathway 3, as there are for the warehouse on Pathway 6. As shown in Exhibit 1, the total change in transportation costs is almost three times higher for goods flowing through the warehouse on Pathway 3 ($147,000 per square foot per year) versus the warehouse on Pathway 6 ($63,000 per square foot per year). The other cost impacts associated with relocation to Phoenix are the same for the two warehouses (also shown in Exhibit 1).

As demonstrated in the above example, the end market for distribution of the goods passing through a warehouse has a significant influence on the changes in transportation costs due to potential relocation. In practice, each warehouse operator is likely to serve a unique combination of pathways that evolves over time, as opposed to serving just a single pathway as presented in our illustrative example. It is possible that changes to the goods that individual warehouse operators manage may affect decision-making around relocation. We note, however, that under the expected compliance costs for PR 2305, our analysis shows no relocations under any single pathway. Thus, a combination of pathways is unlikely to result in different decision-making.

EXHIBIT 1: SAMPLE WAREHOUSE CHANGES IN OPERATING COSTS – RELOCATION TO PHOENIX MARKET AREA

Cost Category	Warehouse Serving Pathway 3 – South Coast AQMD Distribution ($/1000 sq. feet per year)	Warehouse Serving Pathway 6 – National Distribution ($/1000 sq. feet per year)
Rent	$ 4,610 - cost savings	$ 4,610 - cost savings
Labor	$ 1,962 – cost savings	$ 1,962 – cost savings
Power	$ 549 – cost savings	$ 549 – cost savings
Transportation (Trucking and Rail)	$ 147,211 – cost increase	$ 62,629 – cost increase

Response to Comment 13

In response to the reviewer's suggestion that we provide data on the cost structure of warehouse operators in the Southwest region, Exhibit 2 below outlines total baseline geographically-variable operating costs for model 500,000 square foot warehouses in different locations, as reported by The Boyd Company.[72] This is the source we primarily relied on for calculating differences in operating costs across market areas, as described in greater detail in Attachment 4. As indicated in Exhibit 2, costs considered in the Boyd report include labor, power, amortization, taxes, and shipping. These categories differ slightly from those considered in our analysis. We assume amortization and tax costs reported by Boyd are captured in rents. The shipping costs as reported by Boyd reflect only outbound shipments, do not account for differences in rail transport costs, and appear to assume a much lower truck trip rate than is expected under PR 2305.

[72] The Boyd Company (2015). "Comparative Distribution Costs in Port and Intermodal-Proximate Cities: Distribution Warehouse Site Selection."

EXHIBIT 2: SAMPLE WAREHOUSE TOTAL OPERATING COSTS – 500,000 SQUARE FOOT GENERAL DISTRIBUTION WAREHOUSE IN SELECT AREAS

Cost Category	*Location:*	Mira Loma, CA	Victorville, CA	Mesquite, NV	Kingman, AZ
	Market Area:	South Coast AQMD	Bakersfield	Las Vegas	Western AZ
Labor		$ 6,448,562	$ 5,759,695	$ 5,132,061	$ 4,802,935
Power		$ 837,888	$ 837,888	$ 769,080	$ 655,200
Amortization		$ 4,072,557	$ 3,922,992	$ 3,679,813	$ 3,121,886
Property and Sales Tax		$ 1,260,146	$ 1,292,371	$ 1,105,588	$ 1,596,576
Shipping Costs		$ 293,772	$ 524,815	$ 1,803,532	$ 1,760,047
Total Annual Geographically-Variable Operating costs		$ 12,912,925	$ 12,913,886	$ 12,490,074	$ 11,936,644

Response to Comment 14:

The available data on fully loaded trucking costs (i.e., with labor, vehicle wear and tear, etc.) are expressed on a per mile basis rather than per hour. Because labor represents a significant portion of these costs, we agree with the reviewer that congestion is likely to affect the trucking cost per mile. However, we do not believe that explicitly incorporating congestion effects into our analysis would change the conclusions of the analysis. Regardless of warehouse location, trucks must still pass through the congested Los Angeles metro area for all of the goods flow pathways included in our analysis in the baseline and under the proposed rule scenario. In addition, if a warehouse operator were considering relocation to an outlying market and serves goods flow pathways involving local distribution to the South Coast AQMD region, accounting for congestion could *increase* the estimated cost of relocation. Under this scenario, goods would flow through the congested L.A. area *en route* to the outlying area warehouse and would travel through the L.A. area again for local distribution. To the extent that this congestion effect is not represented in the unit cost values applied in our analysis, we may underestimate the transportation cost impact of relocation and overestimate the number of relocations.

Response to Comment 15:

The reviewer correctly points out that different areas within the South Coast AQMD have different average rental prices for warehousing space. Using data available at the county level, rents within the South Coast AQMD's boundaries are higher in Los Angeles county, where rental prices are $11.19 per square foot per year, which is $0.58 higher than the South Coast AQMD average value of $10.61 used in the modeling. Thus, warehouse operators located in Los Angeles County could expect to see an additional $0.58 per square foot in cost savings following relocation. Combining this with the $0.83 per square foot maximum average compliance cost of PR 2305, this difference in rents effectively corresponds to warehouse operators saving $1.45 per square foot due to relocation. Within the context of our analysis, this is similar to avoiding $1.45 per square foot in compliance costs by relocating. However, because our analysis of the $1.50-per-square-foot compliance cost scenario shows

no incremental relocations, we would not expect warehouse operators paying rent in the more expensive areas of the South Coast AQMD to relocate under the proposal.

South Coast AQMD Responses to Kleinhenz Economics Review of Industrial Economics Socioeconomic Analysis of Warehouse Relocations

Response to Comment #1

Industrial Economics, Inc. (IEc) staff have addressed this comment.

Response to Comment #2

IEc staff have addressed this comment.

Response to Comment #3

IEc staff have addressed this comment.

Response to Comment #4

South Coast AQMD staff has produced a draft socioeconomic impact assessment for PR 2305 which addresses several of the reviewer's concerns. The draft socioeconomic impact assessment for PR 2305 addresses information about the number of warehouse operators, small-business considerations, and other socioeconomic characteristics of facilities with warehousing operations.

Response to Comment #5

IEc staff have addressed this comment.

Response to Comment #6

IEc staff have addressed this comment.

Response to Comment #7

The commenter is correct to note the importance of truck trip rates for PR 2305. For this reason, warehouse operators will be required to report actual truck trip data for their operations. This source of information is currently unavailable from any other data source. The 2014 SCAQMD High Cube Warehouse Truck Trip Study was a multi-year effort that concluded with the Institute of Transportation Engineers (ITE) – the preeminent national organization for transportation engineers – completing the analysis and incorporating it into their industry standard Trip Generation Manual. This manual is the basis for the vast majority of transportation engineering studies conducted for development projects in South Coast AQMD and throughout the nation, and continues to be used today. The trip rates are also incorporated into CalEEMod, the primary model used throughout the state to estimate air quality impacts from new development, including for warehousing.

While different types of warehousing will have different trip characteristics, the use of the ITE trip rates provide the most reasonable average to consider a large population of warehouses, such as those covered by PR 2305. Based on the results of that study, the actual trip rates at individual warehouses are expected to vary considerably, but considered

together should approximate the average. Importantly, each warehouse operator's compliance obligation will not be tied to the ITE trip rate. Rather it will be tied to their actual truck trip rate, and the costs they experience due to PR 2305 will be directly tied to their own activity. If PR 2305 is approved by the South Coast AQMD Board, the trip rate data collected may be able to inform future versions of ITE's Trip Generation Manual.

Response to Comment #8

IEc staff have addressed this comment.

Response to Comment #9

The commenter's emphasis on the importance of the region's goods movement industry relative to other ports is acknowledged and has been addressed elsewhere, in particular in Chapter 3 of the draft staff report in the Rule Stringency section, as well as the draft socioeconomic impact assessment for PR 2305. Discussion in Chapter 3 of the draft staff report includes an evaluation of conditions at the ports, including their own economic study of their proposed update to the Clean Truck Rate program.

Response to Comment #10

IEc staff have addressed this comment.

Response to Comment #11

IEc staff have addressed this comment.

Response to Comment #12

IEc staff have addressed this comment.

Response to Comment #13

IEc staff have addressed this comment.

Response to Comment #14

IEc staff have addressed this comment.

Response to Comment #15

IEc staff have addressed this comment.

Appendix III – Industrial Economics, Inc. (IEc) Socioeconomic Analysis of Warehouse Relocations, IEc Response to Comments, and South Coast AQMD Response to Comments

IEc

Assessment of Warehouse Relocations Associated with the South Coast Air Quality Management District Warehouse Indirect Source Rule

23 December 2020

prepared for:

South Coast Air Quality Management District

prepared by:

Industrial Economics, Incorporated

2067 Massachusetts Avenue

Cambridge, MA 02140

and

CALSTART

48 South Chester Avenue

Pasadena, CA 91106

IEc

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EXECUTIVE SUMMARY

ES.1 INTRODUCTION

This report is in support of South Coast AQMD staff's development of a potential indirect source rule (ISR) to reduce mobile source emissions related to the operation of warehouses and distribution centers in the South Coast AQMD's four-county region (Los Angeles, Orange, Riverside, and San Bernardino counties).[1] Diesel truck traffic, largely related to the transport of goods passing through the Ports of Los Angeles and Long Beach and regional warehouses and distribution centers, makes up a large share of local NO_x emissions. A warehouse ISR, if adopted, may help with reducing emissions from trucks servicing warehousing facilities located within its jurisdiction.

Compliance costs to the warehousing sector could vary depending on the design of an eventual rule. If these costs are significant, the implementation of an ISR could potentially precipitate the relocation of warehousing operations outside the region—with the associated truck fleets continuing to travel to and from facilities in the South Coast AQMD jurisdiction. In the worst case scenario, the associated air quality benefits from such a rule might be greatly diminished. Accordingly, South Coast AQMD is interested in identifying and understanding the factors affecting whether warehousing operations are likely to relocate as a result of the potential rule.

Consistent with this objective, Industrial Economics, Inc. (IEc) performed an assessment of the warehousing sector in the South Coast AQMD jurisdiction and outlying markets and, based on this assessment, performed an analysis of potential warehouse relocations under varying levels of potential ISR compliance costs. This document presents the findings of IEc's analysis, as well as the data and methods applied.

ES.2 WAREHOUSE REAL ESTATE MARKET IN THE SOUTH COAST AQMD JURISDICTION AND OUTLYING MARKETS

To inform the analysis of potential warehouse relocations from the South Coast AQMD jurisdiction, IEc assessed the warehouse real estate markets within the South Coast AQMD jurisdiction and in neighboring areas. Through analysis of a range of key market metrics and trends, we assess the capacity of neighboring areas to absorb warehousing operations that might consider relocation following the implementation of an ISR. Across all market areas, our analysis of the warehouse real estate market focuses on warehouses with at least 100,000 square feet of floor area, based on the square footage threshold in the October 6th, 2020, draft ISR text.

Using spatial information available on individual warehouses, we grouped properties into eight distinct real estate markets—the South Coast AQMD jurisdiction (or "District" in the graphics below) and seven

[1] The South Coast AQMD jurisdiction is comprised of all of Orange County and parts of Los Angeles, Riverside and San Bernardino Counties. The region is mapped and described in full in Exhibit 1 and the "Geographic Scope" section below.

neighboring areas in geographic proximity to the South Coast AQMD jurisdiction. In addition, we further sub-divided the South Coast AQMD jurisdiction into three areas, largely defined according to county boundaries. These markets, shown in the maps in Exhibit 1, are as follows:

- **Los Angeles:** The portion of Los Angeles County located within the South Coast AQMD jurisdictional boundaries, including all of the county except for the northeastern corner. This area includes the "megaports" of Los Angeles and Long Beach, the origin point for most goods passing through warehouses in the region and 40 percent of all container cargo traffic in the U.S.[2]
- **Orange County:** All of Orange County, which is completely contained within the South Coast AQMD jurisdictional boundaries.
- **Inland Empire:** The South Coast AQMD portions of Riverside and San Bernardino counties. This includes the most densely populated southwestern corner of San Bernardino County and all of Riverside County except for a small portion near the county's eastern border, near the Arizona state line.
- **North of District, Bakersfield:** All of Kern County and the non-South Coast AQMD portion of Los Angeles County, including Lancaster and Palmdale.
- **North of District, Coastal:** All of Ventura County, Santa Barbara County, and San Luis Obispo County. Contains the Port of Hueneme,[3] located in Ventura County.
- **East of District, Desert Areas:** All of Imperial County and the non-South Coast AQMD portions of San Bernardino County, including Victorville, and Riverside County.
- **South of District, San Diego:** All of San Diego County, which includes the Port of San Diego.[4]
- **Las Vegas:** All of Clark County, Nevada, which includes the city of Las Vegas.
- **Phoenix:** All of Maricopa County and Pinal County, Arizona.
- **Western Arizona:** All of the four Arizona counties to the west of Phoenix: Yuma, La Paz, Mohave, and Yavapai Counties.

Our primary data sources for the assessment of warehouse real estate markets in these areas is the CoStar Suite™ of data products developed and maintained by CoStar, a real estate analytics firm. The CoStar Suite™ includes information on existing properties as well as vacant parcels that may be developed.

The South Coast AQMD jurisdiction is the dominant warehouse market in the broader region. Despite relatively high rents for warehouse space, the South Coast AQMD jurisdiction's square footage of warehouse space is by far the highest in the region and has grown dramatically over the past several years.

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[2] "Industrial Warehousing in the SCAG Region – Final Report." (2018) Prepared for the Southern California Association of Governments by Cambridge Systematics, Inc. with Gill V. Hicks and Associates Inc. April 2018.

[3] The Port of Hueneme is substantially smaller than the Ports of L.A. and Long Beach, with annual container traffic of 84,000 containers in 2018, relative to Long Beach's 8.8 million containers and L.A.'s 8.9 million containers. American Association of Port Authorities. "NAFTA Container Port Ranking 2017." https://www.aapa-ports.org/unifying/content.aspx?ItemNumber=21048

[4] The Port of San Diego's annual container traffic is approximately 143,000 containers. American Association of Port Authorities. *Op cit*.

EXHIBIT ES-1A. REAL ESTATE MARKETS EXAMINED

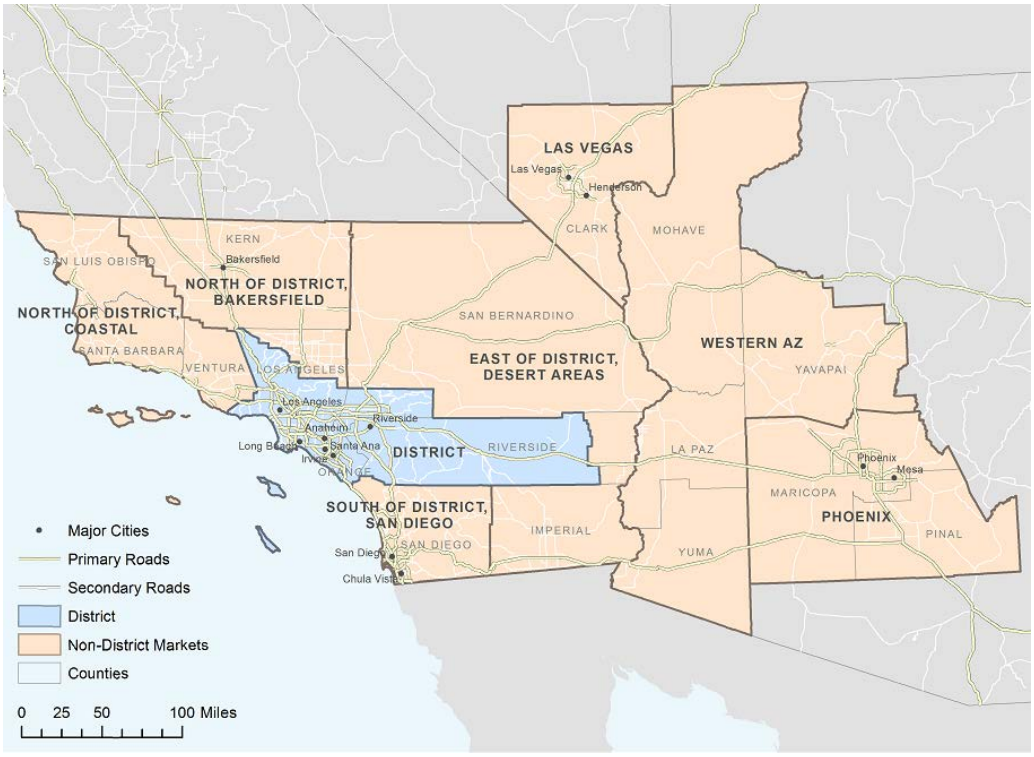


EXHIBIT ES-1B. REAL ESTATE MARKETS EXAMINED – SOUTH COAST AQMD MARKETS FOCUS



CURRENT MARKET SNAPSHOT

Our analysis of current market conditions in the warehouse real estate markets listed above includes assessment of the total warehouse inventory in each area, vacancy rates, pricing, and potential future development. Focusing on buildings used primarily as warehouses, we identified 2,638 warehouses within the South Coast AQMD jurisdiction and 975 in the outlying markets.[5] Similarly, we identified 662 million square feet of rentable building area within the South Coast AQMD jurisdiction and 226 million square feet in the outlying markets. Exhibits ES-2 and ES-3 show the distribution of these warehouses and square footage across market areas.

EXHIBIT ES-2. NUMBER OF WAREHOUSE PROPERTIES BY MARKET & WAREHOUSE TYPE- YEAR 2019

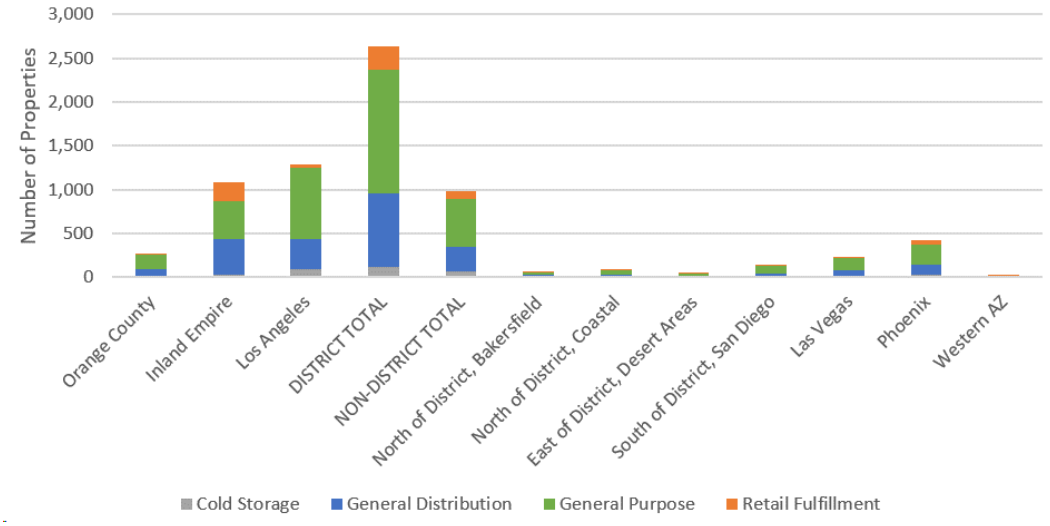
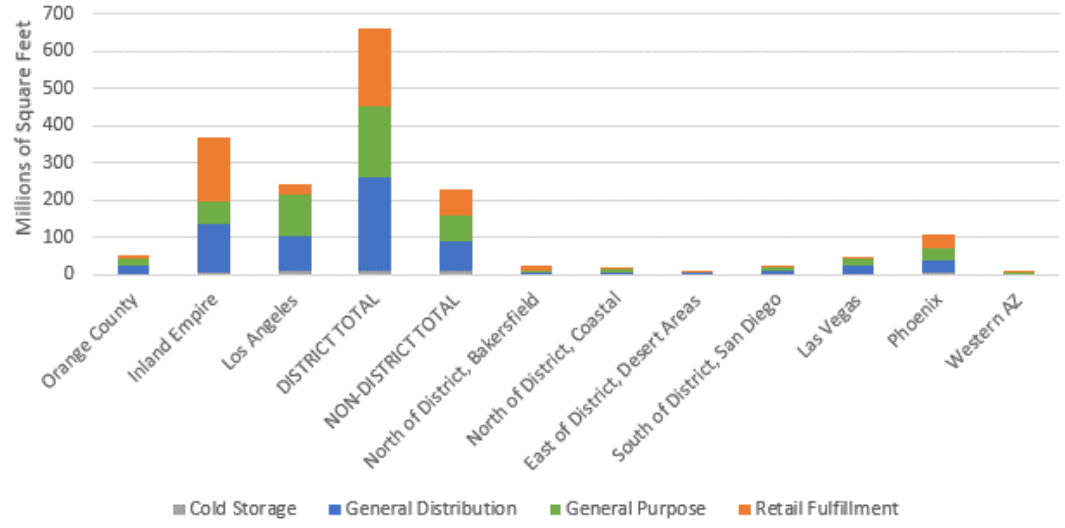


EXHIBIT ES-3. SQUARE FOOTAGE OF PROPERTIES BY MARKET & WAREHOUSE TYPE - YEAR 2019



[5] We also used the CoStar data to identify manufacturing facilities with warehouses. Based on our analysis of the CoStar data, there are 49 such facilities in the South Coast AQMD jurisdiction with an estimated 8.4 million square feet of warehousing space. Because manufacturing facilities require more specialized buildings and equipment, and would likely incur much higher moving costs, we assume manufacturing facilities will not relocate and therefore exclude them from the remainder of this analysis.

For each market area, Exhibit ES-4 presents the vacancy rates for warehouses with at least 100,000 square feet of floor space as of 2019. As shown in the exhibit, the non-South Coast AQMD vacancy rates are generally higher than the South Coast AQMD rates. These values, however, are sensitive to small samples within some of the defined markets, as evidenced by the high vacancy rates in the Western Arizona and San Diego markets. One out of the two retail fulfillment properties in both Western Arizona and San Diego has availability, resulting in the high rates seen in the table.

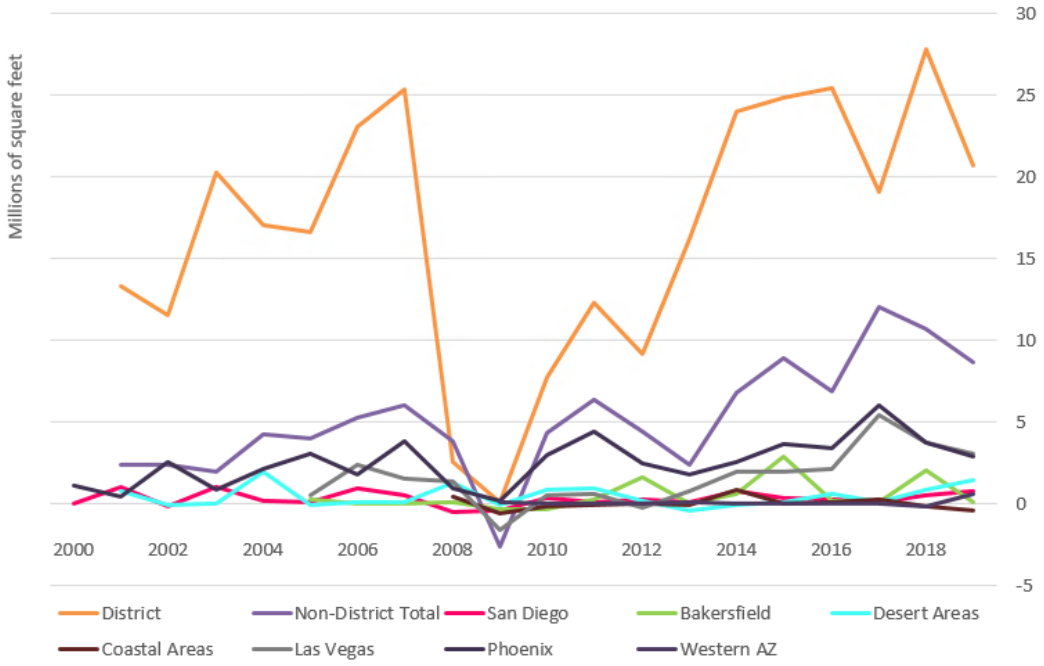
EXHIBIT ES-4. VACANCY RATES ACROSS MARKETS AND WAREHOUSE TYPE - YEAR 2019

GEOGRAPHIC AREA	GENERAL PURPOSE	GENERAL DISTRIBUTION	RETAIL FULFILLMENT	COLD STORAGE	TOTAL
District Total	4%	5%	5%	1%	4%
Orange County	4%	8%	14%	0%	7%
Inland Empire	5%	6%	5%	2%	5%
Los Angeles	3%	2%	4%	1%	2%
Non-District Total	7%	7%	11%	2%	8%
North of District, Bakersfield	6%	5%	4%	0%	4%
North of District, Coastal	3%	14%	0%*	0%	7%
East of District, Desert Areas	16%	8%	0%*	0%*	7%
South of District, San Diego	6%	7%	38%*	7%	7%
Las Vegas	3%	2%	5%	0%*	3%
Phoenix	9%	9%	15%	5%	11%
Western AZ	0%*	0%	39%*	0%	12%
Total	2%	5%	4%	7%	

* Categories with fewer than five properties.

To provide insights on the direction of each market, we also examine net absorption for warehouse space, defined as the total amount of space tenants moved into in a given time period less the amount of space tenants vacated during the same time period. Annual net absorption values in square feet are presented in Exhibit ES-5 for 2000 through 2019 for each market area. The non-District total line represents the sum of all outlying market net absorption, both positive and negative. Based on the data shown in Exhibit ES-5, the South Coast AQMD, Phoenix, and Las Vegas markets have steadily increased total occupied space year over year since 2009. The other outlying markets have less obvious growth patterns, with annual net absorption hovering around zero. At two points, in 2012 and 2017, growth in net absorption in the South Coast AQMD jurisdiction slowed relative to the prior years.

EXHIBIT ES-5. ANNUAL NET ABSORPTION ACROSS MARKETS - 2000-2019



Note: Due to data limitations, not all market areas have net absorption data extending back to 2000.

Exhibit ES-6 summarizes the pricing for warehouse space in the South Coast AQMD jurisdiction and outlying market areas, again focusing on properties with a building area of at least 100,000 square feet. At an average of $0.88 per square foot per month, the South Coast AQMD market overall has a higher rental price per square foot than its neighboring markets, with the exception of San Diego. This is driven by high prices in the Orange County and Los Angeles sub-markets, as rent in the Inland Empire is lower than in the other South Coast AQMD sub-markets. The Desert Areas and Coastal Santa Barbara, Ventura and San Luis Obispo (North of District, Coastal) follow closely behind the District average. Western Arizona, Bakersfield, and Phoenix have the lowest prices of $0.50 and below.[6]

Sale prices follow a similar trend to rental prices, with higher prices in urban areas. The non-District average is much lower than the South Coast AQMD value, which is more than three times higher at $1,087 per square foot.

[6] Small sample size is an issue in calculating average rent and sale price by market area. The average rents for the North of District, Bakersfield, East of District, Desert Areas, and Western AZ markets all rely on five or fewer properties in the calculation of these values. For average sale price, East of District, Desert Areas has fewer than five properties with data, while the Western AZ has no data. Focusing on the Non-District Average values in Exhibit 13 avoids this issue.

EXHIBIT ES-6. MONTHLY RENT AND SALE PRICES ACROSS MARKETS FOR WAREHOUSES WITH BUILDING AREA OF AT LEAST 100,000 SQUARE FEET - YEAR 2019

MARKET	AVERAGE RENTAL PRICE PER SQUARE FOOT	AVERAGE SALE PRICE PER SQUARE FOOT
South Coast AQMD Total	**$0.88**	**$1,087**
Orange County	$0.92	$503
Inland Empire	$0.70	$1,164
Los Angeles	$0.93	$1,173
Non-District Average	**$0.58**	**$344**
North of District, Coastal	$0.78	$100
North of District, Bakersfield^	$0.34	$105
East of District, Desert Areas*^	$0.81	$27
South of District, San Diego	$0.92	$225
Las Vegas	$0.63	$574
Phoenix	$0.50	$307
Western AZ*^	$0.32	No Data
Grand Average	**$0.71**	**$815**

*Denotes fewer than five properties with available sales data.

^Denotes fewer than five properties with available rent data.

MARKET TRENDS

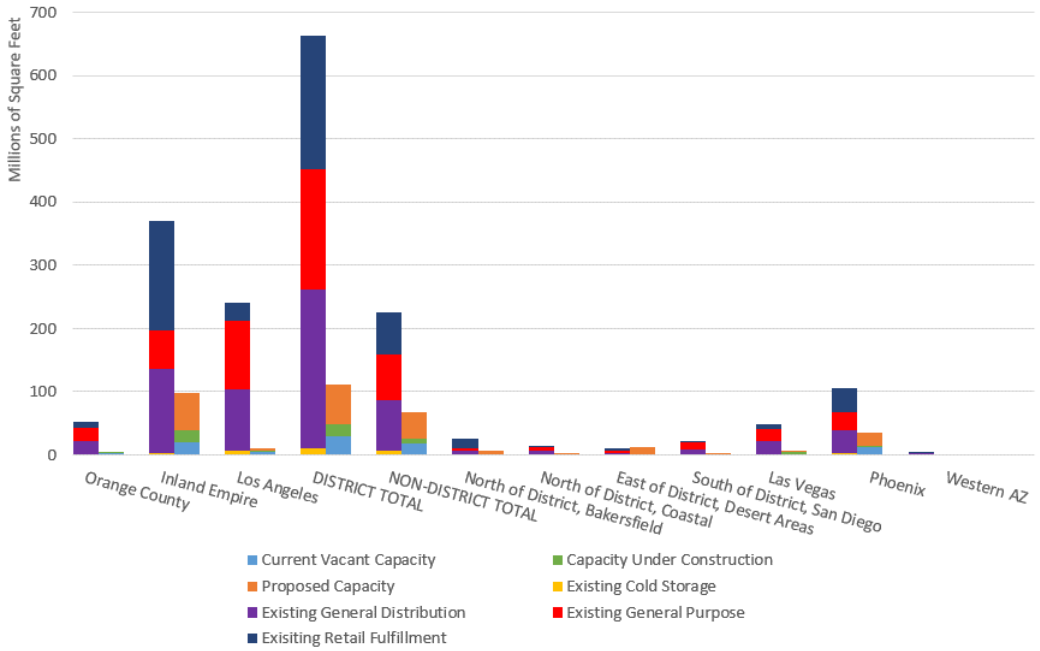
Using current property data as well as forecast data included with CoStar Analytics,™ we developed both medium- and long-term estimates of available capacity for warehousing operations. The long-term forecast estimates capacity additions and additional remaining development potential through 2028. The medium-term forecast considers capacity availability either available now or likely available within the next five years (assuming a five-year window for project approvals and construction). These estimates allow us to compare the projected capacity available in the non-South Coast AQMD areas to existing and projected inventory inside the South Coast AQMD jurisdiction.

To generate a **medium-term** capacity forecast, we examine current vacant capacity and new capacity proposed or currently under construction. Exhibit ES-7, which presents medium term available capacity alongside existing warehouse real estate capacity, shows most of the medium-term capacity available in the South Coast AQMD jurisdiction is in the Inland Empire, while most of the non-South Coast AQMD medium-term capacity is in the Phoenix; East of District, Desert Areas; Las Vegas; and North of District, Bakersfield markets.

Overall, Exhibit ES-7 shows current vacancies, new property under construction, and proposed construction are fairly limited relative to the current warehouse stock. The non-South Coast AQMD total of approximately 67 million square feet is only 10.1 percent of the size of the current capacity in the

SCAQMD jurisdiction: 662 million square feet. This indicates that in the medium term, the outlying real estate markets have the potential to absorb only a small piece of current South Coast AQMD warehousing operations.

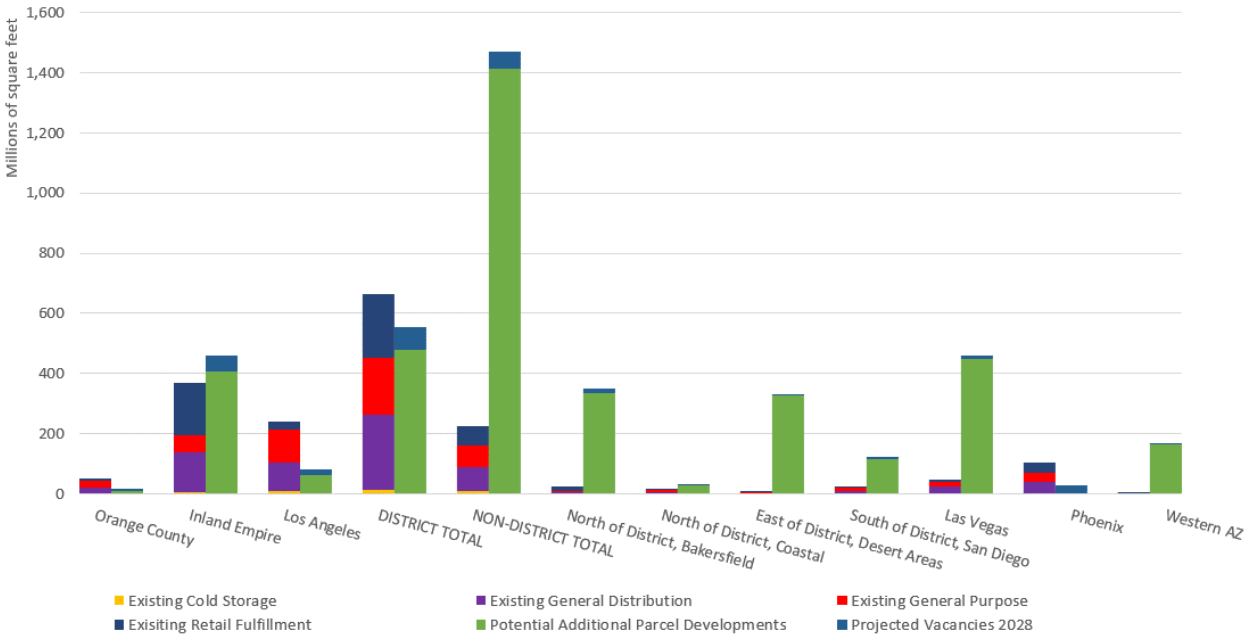
EXHIBIT ES-7. COMPARISON OF MEDIUM-TERM AVAILABILITY FORECAST WITH CURRENT 2019 INVENTORY



To assess capacity in the **long term**, we assess what we characterize as slack capacity. This metric reflects projected vacancies plus the square footage of warehouse space that could be developed on parcels zoned for industrial development and are within two miles of a major road. Exhibit ES-8 shows projected slack capacity and existing warehouse capacity for each market area. As shown in the exhibit, non-South Coast AQMD slack capacity is over twice as large as current South Coast AQMD capacity. The Las Vegas and Western AZ markets combined have enough slack capacity to theoretically absorb approximately all current warehousing operations in the South Coast AQMD jurisdiction, while the much closer East of District, Desert Areas and North of District, Bakersfield markets each have slack capacity larger than one-half of current warehousing capacity in the South Coast AQMD jurisdiction.

Overall, the comparisons in Exhibits ES-7 and ES-8 show projected developments alone would be insufficient to absorb a large portion of the warehouse space in the South Coast AQMD jurisdiction and any mass relocation would require significant warehouse development on currently vacant parcels.

EXHIBIT ES-8. COMPARISON OF ESTIMATED SLACK CAPACITY IN 2028 WITH CURRENT INVENTORY



ES.3 FACTORS AFFECTING WAREHOUSE LOCATION DECISIONS

To inform development of our analysis of potential warehouse relocation decisions, we obtained input from stakeholders on the factors affecting such decisions. We collected this information through a series of interviews with warehouse operators, beneficial cargo owners, manufacturers, and retailers. Key findings from this process were as follows:

- ***Regional Advantages:*** Multiple interviewees pointed to the transportation network within the South Coast AQMD jurisdiction as a major factor influencing their decisions to locate in the region. The many modes of transport within the region make it ideal for warehousing and goods movement. These include two major ports, two major railways, and extremely interconnected highways flowing through and out of California:
    - Ports: Port of Los Angeles, Port of Long Beach
    - Railways: Burlington Northern Santa Fe (BNF) Railway, Union Pacific Railway
    - Interstate Highways: I-5, I-10, I-15, and I-40.

  Interviewees also indicated labor is readily available in the area. Interviewees view this availability of labor as important for ensuring the smoothness of their operations. Finally, the proximity of customers receiving the goods (e.g., BCOs) and proximity of end consumers are clear regional advantages.
- ***Regional Disadvantages***: Despite the advantages above, industry stakeholders also identified several disadvantages associated with locating in the South Coast AQMD jurisdiction. They mentioned the burden state and local regulations put on smaller companies. Because margins in

the logistics sector are relatively small, absorbing additional regulatory costs arising along the supply chain is a challenge. Interviewees also indicated regulatory costs, combined with the costs of real estate and labor, make it difficult for them to remain in the region. One interviewee spoke of a customer moving their warehousing across the country because electricity is 1/6th of the cost as in Southern California.

- ***Locational Choices:*** We specifically asked interviewees about the factors that affect their location decisions. Their responses indicated the decision to move warehousing operations outside of the South Coast AQMD jurisdiction would be determined by the overall cost rather than by one factor alone. The main components affecting cost that interviewees mentioned were:
    - ***Transportation costs:*** If warehousing operations were moved outside the South Coast AQMD jurisdiction (farther from their customers), the transportation costs incurred by the industry would increase. Such costs include the cost of fuel, driver time, and wear and tear on vehicles.
    - ***Labor (cost & availability):*** Labor costs are high in Southern California, but labor is readily available here. Labor is scarcer outside the heavily populated South Coast AQMD jurisdiction, although the degree of scarcity outside the region varies by market. Stakeholders made specific mention of a shortage of truck drivers as baby boomers retire and are not replaced by younger drivers.
    - ***Real estate costs:*** Real estate costs are very high in this region and were a common concern across the stakeholders interviewed. Moving outside the region would reduce real estate costs but would increase transportation costs and finding labor may be more challenging.
    - ***Regulations***: As noted above, many interviewees indicated the regulatory burden associated with locating in the South Coast AQMD jurisdiction is high.

ES.4 OVERVIEW OF APPROACH FOR MODELING RELOCATION DECISIONS

To estimate the number of warehouses likely to relocate outside the South Coast AQMD jurisdiction as a result of the ISR, we compare the costs of relocation for a given warehouse with the costs of complying with the ISR and remaining in the South Coast AQMD jurisdiction. We assume a warehouse will relocate to an outlying market area if two conditions are met:

1. ***Cost condition:*** The annualized costs associated with relocating to at least one outlying market area are less than the annualized costs of ISR compliance, and
2. ***Capacity condition:*** In at least one of the market areas in which a warehouse would realize a cost savings relative to ISR compliance, sufficient capacity exists (measured in square footage of available warehouse space) to absorb the warehouse operation in question.

To determine whether the cost condition is met for a given warehouse, we consider ISR compliance costs for varying levels of stringency (as provided by South Coast AQMD staff) and the full costs associated with relocation to an outlying market area. Relocation costs include the following:

- changes in transportation costs;
- changes in rental costs for warehouse space;
- changes in labor costs;

- changes in electricity costs;
- moving costs; and
- development fees (applicable only for construction of new warehouse space in outlying markets).

We conduct the analysis based on ISR compliance costs and relocation costs annualized over 20 years, using both a four percent discount rate and one percent discount rate. We assume all costs are ultimately borne by warehouse operators.

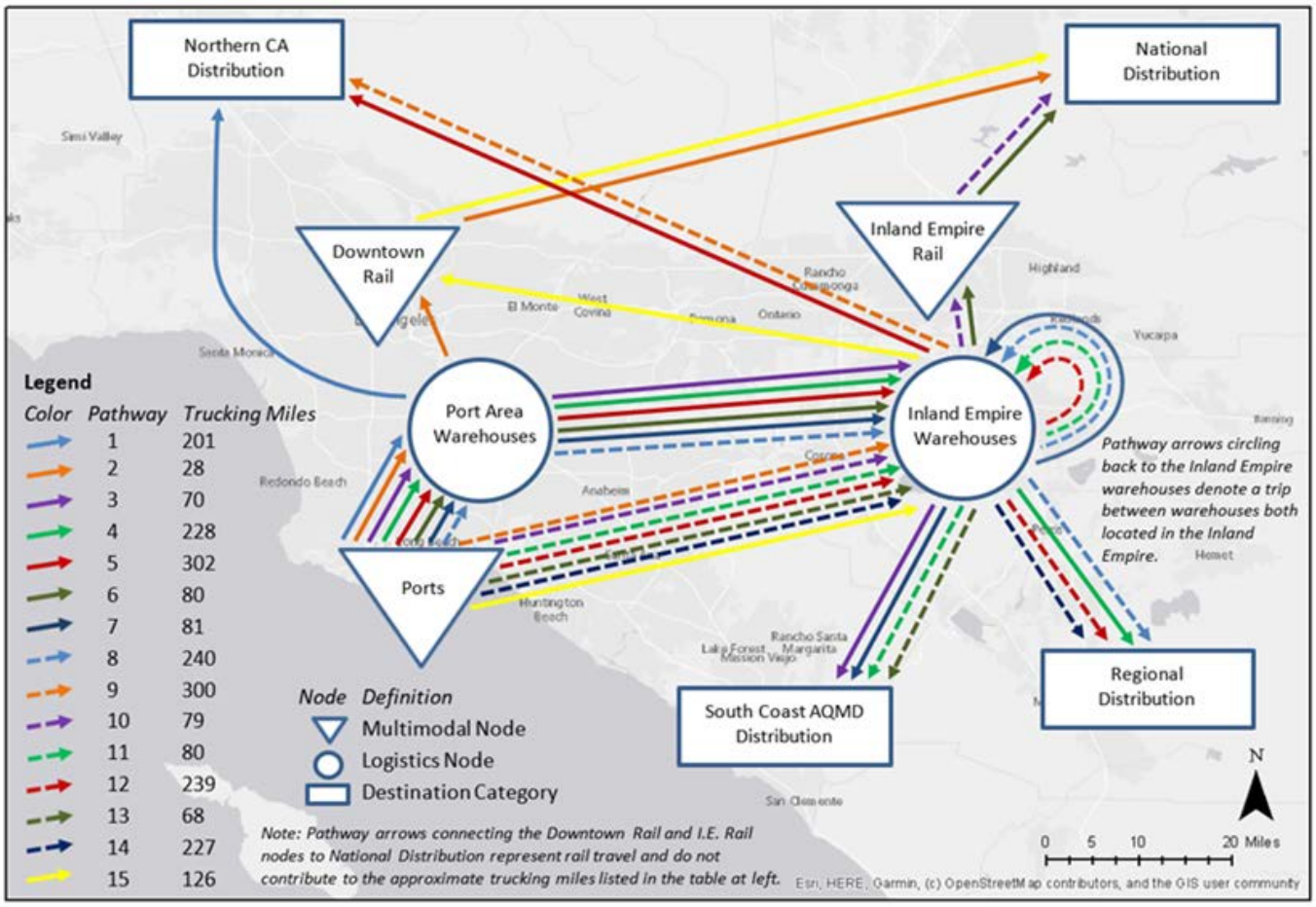
To determine whether the capacity condition described above is met, we rely on capacity data for each outlying market as obtained from CoStar and summarized in Exhibits ES-7 and ES-8 above. To ensure the analysis does not over commit capacity in the outlying markets (i.e., project relocations in an outlying market in excess of the capacity available prior to ISR implementation), our analysis simulates relocation decisions one warehouse at a time and updates the estimated capacity available in each outlying market based on these individual decisions. Thus the capacity available to the 100th warehouse examined reflects the relocation decisions of the first 99 warehouses.

Recognizing the complexity of the logistics industry and the uncertainty inherent in several key aspects of our analysis, we designed the analysis to generate low-end and high-end estimates of warehouse relocations. Specifically, our low-end and high-end estimates capture two sources of uncertainty. The first uncertainty relates to the routing of goods through the South Coast AQMD jurisdiction. Exhibit ES-9 shows the routes, or pathways, for the goods flow through the South Coast AQMD jurisdiction (excluding pathways that do not use warehouses). Although information is available on the aggregate distribution of goods across different routings through the South Coast AQMD jurisdiction, information on which warehouses serve which routes is not available. To account for this uncertainty, we conduct the analysis under two sets of routing assumptions (hereafter referred to as pathway scenarios):

1. ***Composite pathway scenario:*** Under this scenario, each individual warehouse is assumed to be representative of the warehousing sector in the South Coast AQMD jurisdiction as a whole, in terms of the goods routes (pathways) served. For example, if a given pathway accounts for five percent of the goods flow volume passing through the South Coast AQMD jurisdiction, five percent of the truck traffic through each individual warehouse is assumed to be on this pathway. Under this scenario, the change in transport distance associated with relocation to a given outlying market area is the same for all warehouses.
2. ***Specialized pathway sensitivity scenario:*** This scenario allows for the possibility that individual warehouses may specialize in pathways or serve a more limited number of pathways. Because we lack information on the specific pathway(s) a given warehouse is likely to serve, this scenario involves a series of iterative "what if" analyses. For nearly each iteration of the analysis, we assume all warehouses are on the same pathway. After running the analysis for each individual pathway, we calculate the weighted average of the resulting warehouse relocation estimates, using the goods volumes associated with each pathway as weights.[7]

[7] The exception to this approach is the Northern California pathways. For warehouses on these pathways, we assume that 40 percent of their goods are sent to Northern California, 30 percent remain in the South Coast AQMD jurisdiction, and the remaining 30 percent are distributed nationally. For additional detail, see Attachment 4 – Indirect Source Rule Relocation Model—Methodology.

EXHIBIT ES-9. FLOW OF GOODS THROUGH SOUTH COAST AQMD JURISDICTION



PATHWAY	SOUTH COAST AQMD LOGISTICS NODE 1	SOUTH COAST AQMD LOGISTICS NODE 2	SOUTH COAST AQMD LOGISTICS NODE 3	DESTINATION
1	Port Area	-	-	Truck to Northern California Distribution
2	Port Area	-	-	Downtown Rail to National Distribution
3	Port Area	Inland Empire	-	Truck to South Coast AQMD Regional Distribution
4	Port Area	Inland Empire	-	Truck to Non-District Regional Distribution
5	Port Area	Inland Empire	-	Truck to Northern California Distribution
6	Port Area	Inland Empire	-	Inland Empire Rail to National Distribution
7	Port Area	Inland Empire	Inland Empire	Truck to South Coast AQMD Regional Distribution
8	Port Area	Inland Empire	Inland Empire	Truck to Non-District Regional Distribution
9	Inland Empire	-	-	Truck to Northern California Distribution
10	Inland Empire	-	-	Inland Empire Rail to National Distribution
11	Inland Empire	Inland Empire	-	Truck to South Coast AQMD Regional Consumption
12	Inland Empire	Inland Empire	-	Truck to Non-District Regional Consumption
13	Inland Empire	-	-	Truck to South Coast AQMD Regional Consumption
14	Inland Empire	-	-	Truck to Non-District Regional Consumption
15	Inland Empire	-	-	Downtown Rail to National Distribution

Source: Derived from Robert C. Leachman, "Strategic Initiatives for Inland Movement of Containerized Imports at San Pedro Bay, University of California at Berkeley Institute of Transportation Studies, 2017.

The second source of uncertainty reflected in our low-end and high-end estimates is the capacity of outlying market areas to absorb warehouse space from the South Coast AQMD jurisdiction. Although information is available on the vacant capacity in each outlying market and new warehouse developments that have been approved, additional warehouses *could* be developed on undeveloped parcels of land zoned for industrial development. The degree to which such development will occur is uncertain. To account for this uncertainty, we conduct the relocation analysis under two capacity scenarios.

1. ***Medium-term capacity scenario***: Under this scenario, capacity available for relocation is limited to capacity projected to be available in the medium term. This includes current vacant capacity and new capacity proposed or currently under construction in the outlying market areas. This scenario assumes no new construction of warehouse space beyond what is already planned in the outlying market areas. It provides a reasonable representation of capacity until such time that new capacity developments can obtain approval and complete construction. This scenario specifies the lower-bound estimate of warehouse capacity in outlying markets. Exhibit ES-7 above shows the capacity values used under this scenario for each outlying market area.
2. ***Slack capacity scenario:*** This scenario reflects a more expansive view of the capacity that would be available for relocation. Such capacity includes projected warehouse vacancies as well as the warehouse space that could fit on all land that is (1) zoned for industrial development in the outlying market areas and (2) is within 2 miles of a major road. This measure of capacity represents an upper-bound estimate of warehouse capacity in outlying markets. The slack capacity values assumed for each outlying market area are illustrated in Exhibit ES-8 above.

Based on the methods summarized above and for each pathway and capacity scenario, we project the square footage of warehouse space likely to relocate from the South Coast AQMD jurisdiction. We convert this estimate to an estimated number of warehouses based on the average square footage per warehouse.

ES.5 ESTIMATES OF POTENTIAL WAREHOUSE RELOCATIONS

Following the approach outlined above, we estimated the number of warehouse relocations associated with a potential ISR under six compliance cost scenarios specified by South Coast AQMD staff, summarized in Exhibit ES-10.

EXHIBIT ES-10. ISR COMPLIANCE COST SCENARIOS ANALYZED

SCENARIO	COST PER SQUARE FOOT (YEAR 2019$)
Scenario 1	$0
Scenario 2	$0.50
Scenario 3	$1.00
Scenario 4	$1.50
Scenario 5	$1.75
Scenario 6	$2.00

Exhibits ES-11A through ES-11F summarize the estimated number of warehouse relocations for each of the ISR scenarios listed in Exhibit ES-10. For each ISR compliance cost scenario, the exhibits show the estimated number of relocations for each combination of pathway scenario and capacity scenario at a

discount rate of one percent.[8] The exhibits show the total number of relocations to all outlying markets, as well as the distribution of relocations across outlying markets. For example, Exhibit ES-11E shows 16 relocations when the ISR compliance cost is $1.75 per square foot under the specialized-pathway, slack-capacity scenario. Of the 16 relocations, six are to the North of District/Bakersfield market area.

The results in Exhibit 3ES-11 show we project up to 10 warehouse relocations when compliance costs are $0 per square foot, suggesting up to 10 warehouses in the South Coast AQMD jurisdiction may relocate in the absence of the ISR.

This result, in part, reflects the assumptions of the specialized pathway sensitivity scenario. For some iterations of this analysis we assume several warehouses are exclusively on pathways on which relocation is advantageous, even though they may not be on these pathways at all, or may simultaneously be on other pathways on which relocation is less advantageous. For this reason, we consider the specialized pathway sensitivity scenario results to be very conservative estimates of warehouse relocation.

In practice, the warehouses projected to relocate with $0/square foot in ISR compliance costs may be on multiple pathways that, when examined together, would not suggest warehouse relocation. This is borne out under the composite distance pathway scenario (i.e, when warehouses are assumed to serve all pathways in proportion to the goods flow on each pathway), as no warehouses are projected to relocate under this scenario when ISR compliance costs are $0 per square foot.

[8] We also conducted the analysis based on a discount rate of four percent, and the results, which are available upon request, are identical to those presented here.

EXHIBIT ES-11A. ESTIMATED WAREHOUSE RELOCATIONS - $0/SQUARE FOOT ISR COSTS*

PATHWAY SCENARIO	CAPACITY SCENARIO	DISCOUNT RATE	RELOCATIONS (NO. OF WAREHOUSES)							
			TOTAL - ALL MARKETS	BAKERSFIELD	COASTAL AREAS	DESERT AREAS	LAS VEGAS	PHOENIX	SAN DIEGO	WESTERN AZ
Specialized Pathway Sensitivity	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	10	0	0	10	0	0	0	0
Composite Distance	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	0	0	0	0	0	0	0	0

EXHIBIT 3 ES-11B. ESTIMATED WAREHOUSE RELOCATIONS - $0.50/SQUARE FOOT ISR COSTS*

PATHWAY SCENARIO	CAPACITY SCENARIO	DISCOUNT RATE	RELOCATIONS (NO. OF WAREHOUSES)							
			TOTAL - ALL MARKETS	BAKERSFIELD	COASTAL AREAS	DESERT AREAS	LAS VEGAS	PHOENIX	SAN DIEGO	WESTERN AZ
Specialized Pathway Sensitivity	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	10	0	0	10	0	0	0	0
Composite Distance	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	0	0	0	0	0	0	0	0

EXHIBIT ES-11C. ESTIMATED WAREHOUSE RELOCATIONS - $1.00/SQUARE FOOT ISR COSTS*

PATHWAY SCENARIO	CAPACITY SCENARIO	DISCOUNT RATE	RELOCATIONS (NO. OF WAREHOUSES)							
			TOTAL - ALL MARKETS	BAKERSFIELD	COASTAL AREAS	DESERT AREAS	LAS VEGAS	PHOENIX	SAN DIEGO	WESTERN AZ
Specialized Pathway Sensitivity	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	10	0	0	10	0	0	0	0
Composite Distance	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	0	0	0	0	0	0	0	0

**Values for individual market areas may not sum to total due to rounding.*

EXHIBIT ES-11D. ESTIMATED WAREHOUSE RELOCATIONS - $1.50/SQUARE FOOT ISR COSTS*

PATHWAY SCENARIO	CAPACITY SCENARIO	DISCOUNT RATE	RELOCATIONS (NO. OF WAREHOUSES)							
			TOTAL - ALL MARKETS	BAKERSFIELD	COASTAL AREAS	DESERT AREAS	LAS VEGAS	PHOENIX	SAN DIEGO	WESTERN AZ
Specialized Pathway Sensitivity	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	10	0	0	10	0	0	0	0
Composite Distance	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	0	0	0	0	0	0	0	0

EXHIBIT ES-11E. ESTIMATED WAREHOUSE RELOCATIONS - $1.75/SQUARE FOOT ISR COSTS*

PATHWAY SCENARIO	CAPACITY SCENARIO	DISCOUNT RATE	RELOCATIONS (NO. OF WAREHOUSES)							
			TOTAL - ALL MARKETS	BAKERSFIELD	COASTAL AREAS	DESERT AREAS	LAS VEGAS	PHOENIX	SAN DIEGO	WESTERN AZ
Specialized Pathway Sensitivity	Medium Term	1%	1	0	0	0	0	0	0	0
	Slack Capacity	1%	16	6	0	10	0	0	0	0
Composite Distance	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	0	0	0	0	0	0	0	0

EXHIBIT ES-11F. ESTIMATED WAREHOUSE RELOCATIONS - $2.00/SQUARE FOOT ISR COSTS*

PATHWAY SCENARIO	CAPACITY SCENARIO	DISCOUNT RATE	RELOCATIONS (NO. OF WAREHOUSES)							
			TOTAL - ALL MARKETS	BAKERSFIELD	COASTAL AREAS	DESERT AREAS	LAS VEGAS	PHOENIX	SAN DIEGO	WESTERN AZ
Specialized Pathway Sensitivity	Medium Term	1%	1	0	0	0	0	0	0	0
	Slack Capacity	1%	16	6	0	10	0	0	0	0
Composite Distance	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	0	0	0	0	0	0	0	0

**Values for individual market areas may not sum to total due to rounding.*

While the 10 warehouse relocations projected under the $0 ISR compliance cost scenario may suggest several warehouses will find it advantageous to relocate in the absence of the ISR, we do not currently observe such relocations occurring. This reflects the fact that the results in Exhibits ES-11A through ES-11F likely overstate relocations under the $0 per square foot ICR compliance cost scenario as well as scenarios with costs greater than $0. This overestimation of relocations is likely due to several factors we are not able to capture quantitatively in our analysis, including, but are not necessarily limited to, the following:

- ***Labor availability***: In many of the outlying markets, the labor force is significantly smaller than in the South Coast AQMD jurisdiction. With a smaller labor pool to draw from, warehouse operators may be reluctant to commit to relocation. Thus, it might be more costly to find a capable workforce in the outlying markets.
- ***Proximity to customers:*** While our analysis captures the transportation cost impact of relocating, the value of proximity to customers may go beyond the change in transportation costs. For example, proximity is important for meeting customer expectations/demands with respect to delivery time.
- ***Risk of warehouse development in outlying markets:*** Most of the warehouse relocations projected by our analysis are under the slack capacity scenario, under which land zoned for industrial use may be developed into warehouse space. Although land is available in most outlying markets to develop warehouse space, warehouse developers may find such investments too risky to pursue.

  Other than potential demand from warehouse operators relocating from the South Coast AQMD jurisdiction, warehouse owners would have limited clientele to support significant growth in the warehouse sector in these outlying markets. If market conditions were to change in the South Coast AQMD jurisdiction after development of the ISR, warehouse operators may move back after their lease ends, leaving owners of newly constructed warehouses in the outlying markets with no source of revenue. Due to this risk, investors may be reluctant to build new warehouse space in these markets.
- ***Barriers to warehouse development in outlying markets:*** Large-scale warehouse developments in the outlying market areas may encounter resistance in obtaining project approval. Local planning boards and the residents who they represent may seek to limit the number of warehouse developments due to concerns about increased truck traffic, the aesthetic impacts of multiple warehouse developments, or other concerns.

Because relocations are projected under the $0 ISR compliance cost scenario, possibly due to the factors outlined above, we estimate relocations for each ISR compliance cost scenario as the difference between relocations for that scenario and relocations projected when ISR compliance costs are zero. For example, with ISR compliance costs of $1.75 per square foot under the specialized pathway sensitivity scenario and the slack capacity scenario, we estimate six warehouse relocations (16 relocations as presented in Exhibit ES-11E less 10 relocations as presented in Exhibit ES-11A). Applying this approach, Exhibit ES-12 presents the number of relocations incremental to those projected with an ISR compliance cost of $0 per square foot.

EXHIBIT ES-12. WAREHOUSE RELOCATIONS, INCREMENTAL TO RELOCATIONS WITH ISR COSTS OF $0 PER SQUARE FOOT

PATHWAY SCENARIO	CAPACITY SCENARIO	DISCOUNT RATE	RELOCATIONS (NO. OF WAREHOUSES)							
			ALL MARKETS	BAKERSFIELD	COASTAL AREAS	DESERT AREAS	LAS VEGAS	PHOENIX	SAN DIEGO	WESTERN AZ
ISR Compliance Costs of $0.50 per Square Foot										
Specialized Pathway Sensitivity	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	0	0	0	0	0	0	0	0
Composite	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	0	0	0	0	0	0	0	0
ISR Compliance Costs of $1.00 per Square Foot										
Specialized Pathway Sensitivity	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	0	0	0	0	0	0	0	0
Composite	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	0	0	0	0	0	0	0	0
ISR Compliance Costs of $1.50 per Square Foot										
Specialized Pathway Sensitivity	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	0	0	0	0	0	0	0	0
Composite	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	0	0	0	0	0	0	0	0
ISR Compliance Costs of $1.75 per Square Foot										
Specialized Pathway Sensitivity	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	6	6	0	0	0	0	0	0
Composite	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	0	0	0	0	0	0	0	0
ISR Compliance Costs of $2.00 per Square Foot										
Specialized Pathway Sensitivity	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	6	6	0	0	0	0	0	0
Composite	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	0	0	0	0	0	0	0	0

As shown in Exhibit ES-12, the incremental number of warehouse relocations varies from none when ISR costs are $0.50 per square foot to as high as six when ISR costs are $2.00 per square foot. Notably, no relocations are projected under the medium-term capacity scenario (when capacity in outlying markets is limited to current vacant capacity and new capacity proposed or currently under construction), incremental to the $0 per square foot ISR compliance cost scenario. This reflects the more limited capacity available under this scenario.

As context for the results presented in Exhibit ES-12, we estimate that 2,687 warehouses are likely to be affected by the ISR.[9] Thus, the projection of up to six warehouses relocating represents 0.2 percent of the universe of affected warehouses.

Our analysis also projects no warehouse relocations under the composite pathway scenario (i.e., when each warehouse is assumed to serve all 15 goods flow pathways). This finding is true both incremental to the $0 ISR compliance cost scenario (results in Exhibit ES-12) and for each scenario individually, prior to netting out the relocations projected when ISR compliance costs are $0 per square foot (results in Exhibits ES-11A to ES-11F).

The lack of relocations under the composite pathway scenario reflects the significant increase in transport distance for some pathways. Because the composite scenario models relocation based on the weighted average change in distance across all pathways, a significant increase in distance for a small number of pathways that account for a large portion of the goods flow drives up the weighted average change in transport distance such that the increased transportation costs associated with relocation outweigh any cost savings. For example, while relocation to the Bakersfield market area may reduce transport distance slightly for some pathways, transport distance increases by more than 130 miles one-way for pathway 2 and more than 245 miles for pathway 13; together these pathways account for approximately 39 percent of the goods flow volume.

Exhibit ES-12 shows most warehouse relocations, incremental to the $0 per square foot ISR compliance cost scenario, are concentrated in the Bakersfield area under the specialized pathway sensitivity scenario and the slack capacity scenario. This result is driven by the lower rental costs in the Bakersfield area ($4.03 per square foot per year) relative to the South Coast AQMD jurisdiction ($10.61 per square foot per year).[10] While transportation costs will increase if warehouses relocate to the Bakersfield area, the increase is small enough for one pathway that the rental cost savings are sufficient to yield a cost savings for this pathway.

This concentration of relocations in the Bakersfield area differs slightly from the results shown in Exhibits ES-11A through ES-11F, which are *not* incremental to the $0 per square foot ISR compliance cost scenario. Although those results show a significant concentration of relocations in the Bakersfield area, they show a greater number of warehouses relocating to the Desert Areas. Because the relocations to

[9] This figure reflects the sum of non-manufacturing warehouses and warehouses at manufacturing facilities as presented in Attachment 2 of this report.

[10] Rent values obtained from CoStar, as summarized in Attachment 2 of this report. Additional information on the costs considered in the analysis is available in Attachment 4 of this report.

the Desert Areas are projected when ISR compliance costs are $0 per square foot, they are netted out of the relocations reflected in Exhibit ES-12.

ES.6 LIMITATIONS AND UNCERTAINTIES

The results presented above provide a reasonable representation of the warehouse relocations that may occur in response to the ISR and reflect the best information available on the factors that are likely to affect relocation decisions. Nevertheless, we acknowledge the analysis is subject to several uncertainties, the most significant of which we are aware are summarized in Exhibit ES-13.

EXHIBIT ES-13. KEY UNCERTAINTIES AND IMPLICATIONS FOR RESULTS

DESCRIPTION OF UNCERTAINTY	IMPLICATIONS FOR RESULTS
Pathway uncertainty: This analysis relies on the concept of goods flow pathways to estimate the change in transportation distance associated with warehouse relocation. However, we do not know the pathways that individual warehouses serve. Absent such information, the pathway scenarios described above (i.e., composite pathway scenario and specialized pathway sensitivity scenario) provide a means of bounding the estimated number of relocations to account for this uncertainty.	Estimating the number of warehouse relocations under two pathway scenarios leads to a wide range of results. Whether the likely number of relocations is closer to the low end or high end of the range depends on the degree to which warehouse operations are more consistent with the composite scenario (warehouses serve all goods flow pathways) or the specialized pathway sensitivity scenario (warehouses specialize in individual pathways).
Unquantifiable factors: Our assessment of relocation decisions accounts for all factors that we are able to quantify with readily available data, specifically data related to the costs associated with remaining in the South Coast AQMD jurisdiction or relocating to an outlying market area. A number of factors that we are unable to quantify, however, may influence relocation decisions. These include (1) the degree to which labor availability in outlying markets affects the decisions of warehouse operators, (2) advantages of being in close proximity to customers, (3) financial risks associated with developing warehouse space in outlying markets, and (4) barriers to developing warehouse space in outlying market areas.	Many of these unquantifiable factors represent reasons why warehouse operators may want to remain in the South Coast AQMD. This suggests that our analysis may overestimate the number of warehouses that decide to relocate outside the area.
Assumption of no change in goods flow traffic: An implicit assumption of our analysis is that the volume of goods flowing through the South Coast AQMD jurisdiction would remain unchanged as a result of the rule. In practice it is possible the ISR could lead to a reduction in the volume of goods flowing through the region (e.g., through a reduction in import traffic at the Port of Long Beach). This reduction in volume could lead to warehouse relocation (e.g., to the port areas where goods are sent instead of the Port of Long Beach). Our analysis does not capture this effect.	To the degree goods are diverted away from the South Coast AQMD jurisdiction due to the ISR, we may underestimate the number of warehouse relocations.

DESCRIPTION OF UNCERTAINTY	IMPLICATIONS FOR RESULTS
Rents held constant: For the purposes of simulating the relocation decision-making process of warehouse operators, we held warehouse rents in the South Coast AQMD jurisdiction and in outlying markets constant at current levels. To the extent rent differences between the South Coast AQMD jurisdiction and outlying markets change over time, we may not accurately capture the relocation decisions of warehouse operators.	Absent knowledge of the degree to which relative rents are likely to change over time, we find it highly speculative to take a stance on whether the assumption of constant rents leads to underestimation or overestimation of relocations. However, the relocation of warehouses outside the SCAQMD jurisdiction could put upward pressure on rents in outlying markets and downward pressure on rents in the South Coast AQMD jurisdiction. Combined, these effects would narrow the difference between rent in the South Coast AQMD jurisdiction and less costly outlying markets, potentially limiting the number of warehouse relocations.

ATTACHMENT 1

TECHNICAL MEMORANDUM ON WAREHOUSING AND LOGISTICS INDUSTRY IN THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT JURISDICTION

MEMORANDUM | 30 November 2020

TO Ian MacMillan, Paul Stroik, Shah Dabirian, and Victor Juan, South Coast Air Quality Management District (SCAQMD)

CC Jason Price, Industrial Economics (IEc)

FROM Jasna Tomic and Kelly Leathers, CALSTART

SUBJECT Technical Memorandum on Warehousing and Logistics Industry in the South Coast Air Quality Management District Jurisdiction

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INTRODUCTION

This memorandum is in support of the South Coast Air Quality Management District (South Coast AQMD) staff's development of a potential indirect source rule (ISR) to reduce mobile source emissions related to the operation of logistics and warehousing facilities in the South Coast AQMD's four-county region (Los Angeles, Orange, Riverside, and San Bernardino counties, as shown in Exhibit 1).[1]

Diesel truck traffic, largely related to the transport of goods passing through the Ports of Los Angeles and Long Beach and regional warehouses and distribution centers, makes up a large share of local NO_x emissions. A warehouse ISR, if adopted, may help with reducing emissions from trucks servicing warehousing facilities located within its jurisdiction.

Compliance costs to the warehousing sector could vary depending on the design of an eventual rule. If these costs are significant, the implementation of an ISR could potentially precipitate the relocation of warehousing operations outside the region—with the associated truck fleets continuing to travel to and from facilities in the South Coast AQMD jurisdiction. In the worst-case scenario, the associated air quality benefits from such a rule might be greatly diminished. Accordingly, South Coast AQMD is interested in identifying and understanding the factors affecting whether logistics and warehousing operations are likely to relocate as a result of the potential rule.

The purpose of this document is to develop a better understanding of the logistics and warehousing sector in the South Coast AQMD jurisdiction. The first part of this document reviews the categories of warehouse and distribution center facilities found in the logistics industry and provides brief descriptions of the operations characterizing each category. The second part focuses on understanding the factors affecting the location decisions of these facilities and the trends affecting the logistics industry in this region. This information is based on interviews with several industry stakeholders identified by CALSTART and/or South Coast AQMD.

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[1] The South Coast AQMD jurisdiction is comprised of all of Orange County and parts of Los Angeles, Riverside and San Bernardino Counties. The region is mapped and described in full in Exhibit 1 and the "Geographic Scope" section below.

EXHIBIT 1: SOUTH COAST AQMD JURISDICTION



This assessment of the South Coast region's logistics and warehousing industry builds on the 2018 warehousing report released by the Southern California Association of Governments (SCAG). Similar to the SCAG report, the assessment in this document identifies and describes the various segments of the logistics and warehousing industry. This document's additional focus on the location decisions of logistics and warehousing facilities will help South Coast AQMD better understand the likelihood of logistics and warehousing operations relocating to neighboring regions as a result of an ISR.

This assessment builds upon the High-Cube Warehouse Vehicle Trip Generation Analysis prepared for South Coast AQMD and the National Association of Industrial and Office Properties, which describes characteristics of "high-cube warehouses" (HCW) and the trips generated at each facility type. The HCW study provides insights on the traffic associated with each type of HCW.

CATEGORIES OF WAREHOUSE AND LOGISITICS FACILITIES

We define warehouse categories primarily based on the SCAG 2018 report, supplemented with additional references and confirmed by information collected during interviews with industry stakeholders. The following are the main categories of facilities:

1) General Purpose Warehouse
    a. Port-Related
    b. Non-Port-Related
2) Transload Facility
3) Cross-dock Transload Facility
4) Truck Terminal for Less-Than-Truckload Trucks
5) General Purpose Distribution Center
6) Manufacturing & Distribution Facility
7) Retail Fulfillment Center
8) Cold Storage

All of these categories are listed in the SCAG 2018 report. Each warehousing facility is characterized by the operations that occur within that facility and size and layout of the facility, as summarized in Exhibit 2.

General Purpose Warehouse (GPW) is the most common type of facility used to store goods. The majority of general purpose warehouses are operated by logistics service providers or third-party logistics providers (LSP or 3PL), which offer a wide array of services. While the primary function of a GPW is to store goods that usually have not been sold yet, value-added services like barcode application and scanning, ticketing and labeling, and carton packing are also provided at these facilities. Goods can stay at a GPW anywhere from several weeks to several months.

> **Port-related General Purpose Warehouses** are in commercial and industrial clusters. Port-related import products include international manufactured or processed goods, such as textiles and apparel, footwear, electronics, and home and office supplies.
>
> **Non-Port-Related General Purpose Warehouses** tend to be dispersed throughout the region. They store domestic products, which may include domestically manufactured, harvested, or processed goods, such as chemicals, minerals, pharmaceuticals, agricultural products, and other food products.

Transload Facilities are special purpose port-related facilities that mainly deal with imported products. Transloading refers to the transfer of contents from marine containers (40 ft) into domestic rail or truck containers or trailers (53 ft) near a US gateway port for onward movement to an inland destination. Cargo is transferred based on the destination, specified by the beneficial cargo owner (BCO). Transloading reduces the per-unit cost of inland transportation for importers. The turnaround time for these facilities is usually up to one week.

Crossdock Transload Facilities are a special type of transload facility that handles cargo for export, import, or domestic cargo. While structurally similar to transload facilities, they differ from transload facilities in that they are pure distribution facilities, with no storage. In addition, time from receipt to shipment at crossdock facilities is less than 24 hours, and goods generally leave these facilities in full truckloads.

Truck Terminals for Less-Than-Truckload (LTL) Trucks are facilities used to transfer mainly domestic and imported cargo in small order quantities. They are operated by a motor carrier to transfer the less-than-truckload shipments from one truck to another. Sorting and segregation of inbound cargo takes place to make one outbound LTL truck and typically cargo is not stored for long at these facilities (up to 1 week). The outbound LTL trucks contain orders meant for multiple customers within a limited geographical area, while full truckloads are filled with cargo designated for one customer.

General Purpose Distribution Centers (DCs) are warehouses operated by BCOs, or outsourced to LSPs, to manage storage and distribution of inventory for their customers. Distribution centers store product for retailers and wholesalers to be redistributed to another location or directly to the consumer. DCs are positioned strategically to maximize the range of customers they can serve and keep delivery costs low. Turnaround time varies depending on cargo type and demand but is generally shorter than in a GPW, on

the order of weeks. The flow of product is very large, and each order may contain hundreds or thousands of items.

Retail Fulfillment Centers are special-purpose DCs that have become much more common in the supply chains of large retailers. Typically, DCs replenish store stock and ship to retailer stores, while retail fulfillment centers process individual consumer orders placed through catalogs and the internet, replenish store inventory from the stock on hand, and serve local retail customers.

Manufacturing and Distribution Facilities are more complex facilities consisting of onsite manufacturing, warehousing, and distribution. At least 50 percent of the area is dedicated to manufacturing. The smallest part of the facility is dedicated for office space, no more than 10 percent, and the remaining is taken up with warehouses and distribution facilities.[2] Separate warehouses are dedicated for incoming raw materials and for finished goods. The raw materials or products are stored in the warehouses from 2 weeks to 90 days.

Cold Storage Facilities are functionally identical to regular distribution centers, except with two important differences: all products must be either refrigerated or frozen, and the turnaround time is very short to ensure freshness. Refrigerated facilities will produce a substantial amount of emissions compared to other facility types due to the refrigeration units. Truck refrigeration units (TRUs) also produce a substantial amount of emissions. This type of distribution center uses the same strategy as regular distribution centers, and overall reduce the number of LTL trucks driving from a vendor to a retail store.

Several additional subcategories are worth mentioning that are specialized cases of the categories above or a hybrid solution.

Parcel Hubs are a unique hybrid of a transload facility and a distribution center. Starting with either a mail carrier or the company's retail store, small packages are sent to a regional parcel hub and sorted by destination. The parcels are consolidated onto a pallet and shipped to another parcel hub near the package's destination. The pallets may pass through a dedicated transloading facility near an airport or shipped directly via a class 8 truck.

E-commerce Fulfillment Center are specialized DCs that support online orders. The facilities process a large number of individual consumer orders placed through the internet. Orders are generally small (1-3 items) and are filled and shipped within hours. Proximity and easy access to highways is important to accommodate the large number of delivery vehicles accessing the facility. E-commerce fulfillment facilities have different operations inside the facility ("each picking" vs "case picking"). Costco and Sam's Club have extremely efficient operations because they don't have to break down pallets and ship them out, instead they just ship the whole pallet and then break the pallet down in the store. E-commerce fulfillment centers are breaking down cargo into tiny individual pieces of product and shipping them out.

[2] Yap and Circ (2003).

EXHIBIT 2: WAREHOUSING FACILITIES[3, 4, 5]

Warehouse Category	Description of Facility	Building Location
General Purpose Warehouse	The typical area is 25,000 to 50,000 sq. ft., with low-ceiling height, and varying width.	Not Specific
Transloading Facility	The typical area is 25,000 to 50,000 sq. ft., with low-ceilings, and a narrow rectangular shape with multiple doors on the long side. One side is meant for inbound containers and the opposite is meant for outbound containers.	Depends on Proximity to Ports
Crossdock Transload Facility	The typical area is 25,000 to 50,000 sq. ft., with low-ceilings, and a narrow rectangular shape with multiple doors on the long side. One side is meant for inbound containers and the opposite is meant for outbound containers.	Depends on Proximity to Ports
Parcel Hub	The typical area can be up to 500,000 sq. ft.	Depends on Proximity to Market
Truck Terminal for Less-Than-Truckload Trucks	The typical area is anywhere from 25,000 sq. ft. to 150,000 sq. ft., with low-ceilings. It's usually narrow and long with multiple doors to quickly and efficiently process cargo.	Not Specific
General Purpose Distribution Center	The building size can vary greatly depending on the distributer, ranging from 50,000 sq. ft. to 500,000 sq. ft. and are generally very tall.	Depends on Proximity to Market
Manufacturing & Distribution	The size can range from 200,000 sq. ft. to 1,000,000 sq. ft. or more depending if light or heavy manufacturing.	Not Specific
Retail Fulfillment Center	The area ranges from 500,000 sq. ft. to 1,000,000 sq. ft., with very high ceilings to accommodate the automated pick and pack technology.	Depends on Land Availability
E-commerce Fulfillment Center	Square footage varies.	Depends on Proximity to Market
Cold Storage Facility	The building size depend on demand and turn over time.	Depends on Proximity to Market

[3] SCAG Report (2018)

[4] UC Davis Sprawl Report (2017)

[5] High-Cube Warehouse (2016)

PRIORITIES AND TRENDS AFFECTING THE REGIONAL LOGISTICS INDUSTRY

To gather input from stakeholders on the factors affecting the location decisions of facilities as well as general trends affecting the industry, we conducted a series of structured interviews of various industry stakeholders. The following section details the interview process, which included identifying industry stakeholder contacts, preparing questions designed to obtain relevant information, and the input provided by stakeholders.

IDENTIFICATION OF STAKEHOLDERS

South Coast AQMD and CALSTART first developed a list of stakeholder contacts as interview candidates. The warehousing and logistics industry is an extremely complicated and multifaceted industry with diverse stakeholders. To ensure our understanding of stakeholder priorities reflected this diversity, we specified four classifications of stakeholders to interview.

The first category encompassed warehouse operators, third-party logistics companies, and freight forwarders, described as "3PL/Warehouse Operators" in Appendix A. These stakeholders specialize in goods movement and supply chain operations.

The second category are retailers, defined as individuals or organizations that purchase products from a manufacturer or distributor and resell the goods to consumers. Retailers encompass a wide array of businesses from small corner stores to Walmart and door-to-door companies to Amazon.[6]

The third category are beneficial cargo owners (BCO), a term that refers to an importer that takes control of the cargo at the point of entry and does not utilize a third-party source like a freight forwarder or 3PL. However, the term BCO is often used much more broadly to refer to the owner of the cargo in a container or trailer.

The fourth category is manufacturing facilities with warehouse space onsite. As goods come off the production line, most manufacturers temporarily store goods in warehouse space onsite.

Exhibit 3 lists the eleven companies we have interviewed to date. Note some of the contacts fall under multiple classifications. For example, some retailers handle each operation along the supply chain, while some retailers outsource each operation.

[6] Supply Chain and Logistics Terms and Glossary. International Warehouse Logistics Association. (2010)

EXHIBIT 3: INTERVIEWEE CLASSIFICATIONS

COMPANY NAME	3PL/ WAREHOUSE OPERATOR	RETAILER	BENEFICIAL CARGO OWNER	MANUFACTURER
Pacific Mountain Logistics	x			
NFI	x			
Dependable Highway Express (DHE)	x			
California Retailers Association		x		
PepsiCo/FritoLay	x		x	x
Walmart	x	x	x	
Sysco	x			
TForce	x			
UPS	x			
Allen Lund Company	x			
Snak King	x		x	x

DEVELOPMENT OF INTERVIEW QUESTIONS

The interview questions were developed with collaboration between CALSTART, IEc, and South Coast AQMD (see Appendix B). After the questions were completed, we contacted individual stakeholders via e-mail and/or phone to schedule interviews with the willing participants. The interview process consisted of a 30- to 60-minute conversation depending on the engagement of the interviewee.

FINDINGS

Stakeholders expressed concern with the costs associated with the location of their operations but were keenly aware of the advantages and disadvantages of remaining in the South Coast AQMD jurisdiction. They also made clear to us the term “warehouse” is not an all-encompassing term for all the facilities described above. They refer to each facility specifically by the names given. Warehouse operators/3PLs were our most responsive interviewees; only one retailer was able to speak with us; two of the interviewees were manufacturers, and we were unable to interview a stakeholder that acted exclusively as a BCO.

REGIONAL ADVANTAGES

Multiple interviewees pointed to the transportation network within the South Coast region as a major factor influencing their decisions to locate in the region. The many modes of transport within the region make it ideal for warehousing and goods movement. These include two major ports, two major railways, and extremely interconnected highways flowing through and out of California:

- Ports: Port of Los Angeles, Port of Long Beach
- Railways: Burlington Northern Santa Fe (BNF) Railway, Union Pacific Railway
- Interstate Highways: I-5, I-10, I-15, and I-40

Interviewees also indicated that labor is readily available in the area. Interviewees view this availability of labor as important for ensuring the smoothness of their operations. Finally, the proximity of customers receiving the goods (e.g., BCOs) and proximity of end consumers are clear regional advantages.

REGIONAL DISADVANTAGES

Despite the advantages above, industry stakeholders also identified several disadvantages associated with locating in the South Coast region. They mentioned the burden that state and local regulations put on smaller companies. Because margins in the logistics sector are relatively small, absorbing additional regulatory costs arising along the supply chain is a challenge. Interviewees also indicated regulatory costs, combined with the costs of real estate and labor, make it difficult for them to remain in the region. One interviewee spoke of a customer moving their warehousing across the country because electricity is $1/6^{th}$ of the cost as in Southern California.

LOCATIONAL CHOICES

As indicated in the interview questions shown in Appendix B, we specifically asked interviewees about the factors that affect their location decisions. Their responses indicated the decision to move warehousing operations outside of the Southern California region would be determined by the overall cost rather than by one factor alone. The main components affecting cost that interviewees mentioned were:

- ***Transportation costs:*** If warehousing operations were moved outside the South Coast AQMD jurisdiction (farther from their customers), the transportation costs incurred by the industry would increase. Such costs include the cost of fuel, driver time, and wear and tear on vehicles.
- ***Labor (cost & availability):*** Labor costs are high in Southern California, but labor is readily available here. Labor is scarcer outside of the heavily populated South Coast AQMD jurisdiction, though the degree of scarcity outside the region varies by market. Stakeholders made specific mention of a shortage of truck drivers as baby boomers retire and are not replaced by younger drivers.
- ***Real estate costs:*** Real estate costs are very high in this region and were a common concern across the stakeholders interviewed. Moving outside the region would reduce real estate costs but would increase transportation costs and finding labor may be more challenging.

- ***Regulations***: As noted above, many interviewees indicated the regulatory burden associated with locating in the South Coast jurisdiction is high.

The bottom line that determines moving is the total cost of operations ("it's all math", to quote one interviewee) and the costs weighed against the benefits of moving to a new location.

Benefits of staying in the region:

- Close to customers
- Access to highways, railways, and ports
- Readily available labor

Issues with staying in the region:

- Challenging regulatory climate
- Expensive real estate
- High labor costs

Benefits of leaving the region:

- Less regulation
- Lower real estate costs
- Lower labor cost

Issues with leaving the region:

- Higher transportation cost
- Less readily available labor
- Less attractive to customers because of the distance from region

3PL/GENERAL WAREHOUSE OPERATORS

The movement of goods is an extremely complicated process and is executed by many entities working together to move goods. Due to the complexity of modern logistics, some companies outsource goods movement to freight forwarders or third-party logistics firms. The operations of warehousing and logistics facilities vary depending on the:

- characteristics of the goods – number of products, their size, and turnover rates;
- customers' preferences;
- facility throughput and services provided; and
- type and size of facility.

Large 3PL firms offer every service along the supply chain, such as freight forwarding, delivery, storage, etc. Customers rarely choose one company to perform every service and instead look for diversity within their supply chain movement to ensure they receive the best prices.

3PLs/freight forwarders and warehouse facilities operators sometimes manage multiple types of facilities. If they have operations near the ports, they typically operate crossdock facilities. They may also have operations further inland, where they operate larger general-purpose warehouses (GPW). One interviewee described the warehouse sector as a 30 percent/30 percent/30 percent/10 percent mix of dry, refrigerated, frozen, and office space, respectively.

The 3PLs with whom we spoke indicated their decisions regarding location are complex. While location and costs are important factors when considering a warehousing facility, location requirements differ across facility types (i.e. crossdock/transloading facilities are typically near ports and railways). Facilities housing goods with longer turnover times

(*e.g.* goods that don't expire: electronics, toys, household items) can be farther away, but locations close to ports, highways, and railways are usually preferred. For handling imports, 3PLs typically prefer to be in Los Angeles because the goods will travel shorter distances and spend less time sitting in trucks or in warehouses. Consistent with the discussion above, 3PLs consider a variety of costs in addition to the cost of real estate (rent), such as labor costs and the costs of transporting goods.

BENEFICIAL CARGO OWNERS

As noted above, we were unable to interview any BCOs to support the development of this memo. However, because transportation costs are cited as the dominant factor accounting for more than half of total cost of logistics (followed by inventory costs at 20 percent),[7] BCOs may favor location of distribution facilities at a higher cost if they are in close proximity to intermodal facilities and will help decrease the overall transportation costs of goods.

MANUFACTURERS

We spoke to two manufacturers, both in the food and beverage industry. For manufacturing facilities, especially larger ones, the location is determined by the proximity of rail as some raw materials are shipped by rail. The proximity to retail stores and to mega warehouses is also very important. In the past, delivery went to big stores while more recently products are delivered to mega warehouses before reaching retail and end customers. Both manufacturing facilities have been in the same locations for several decades and moving was not under consideration, as relocation would involve moving specialized manufacturing equipment, which would pose many challenges. With respect to the space at manufacturing facilities, one facility indicated that much more than 50 percent of its space is dedicated to manufacturing. Of 220,000 square feet in total, 160,000 square feet is for the manufacturing floor, 30,000 square feet is a warehouse for finished product, 15,000 square feet is for a raw material warehouse, and 15,000 square feet is the corporate office.

RETAILERS

The retailers with whom we spoke emphasized that the retail industry is changing dramatically and that these changes will affect the warehousing landscape in the region. The rise of e-commerce is leading to a boom in online shopping. Online shopping primarily occurs in two ways: the consumer orders the product online, then they either have it shipped to their home or they pick it up in store. With the rise of e-commerce, many retailers are slowly transitioning from store fronts to warehouses. Warehouses allow retailers to hold more product for the consumers at a lower cost than the storefront. This gives the consumers more choice in product than if they were shopping in a store. This is not necessarily changing the amount of product sold but is instead changing the way products are sold and delivered.

Retailers have historically chosen warehouse locations based on proximity to their retail stores, but this is changing now with the rise of e-commerce. Retailers are not only shipping to their storefronts but also to mega warehouses -warehouses larger than 1

[7] The Geography of Transport Systems, Ch 11 – Applications and Case Studies, https://transportgeography.org/?page_id=6517

million square feet. These mega warehouses are operated by companies like Amazon, and retailers ship some of their goods to these warehouses to be sold by Amazon. Thus, retailers are now concerned not only about warehouse proximity to their retail stores, but also proximity to the "mega warehouses." In the context of an ISR affecting the warehousing sector, this suggests retailers' responses regarding warehouse location will depend, in part, on how mega warehouses respond to an ISR.

One stakeholder commented about regulations affecting retailers and the difficulties regulation poses for the siting and construction of warehouses in California. While the need for additional warehouse space exits, the stakeholder suggested the costs and delays associated with regulation are a significant impediment to warehouse development in the region. The stakeholder, however, did not provide details on the specific regulations that cause these costs/delays. Due to the high cost of operating in California, the stakeholder sees this industry growing in Reno.

TRANSFORMING INDUSTRY TRENDS

Multiple interviewees expressed that the industry is in flux and that over the next ten years significant changes to the logistics supply chain will occur. With the rise of e-commerce, automation, and the increased need for final mile delivery, companies are trying to plan for these changes. In addition, some of the bigger companies have sustainability goals in place, including fleet electrification and warehouse facility upgrades.

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APPENDIX A – INTERVIEWEES

Interviewed	Business Type	Company Name	Name
YES	3PL/General Warehousing	Pacific Mountain Logistics	B.J. Patterson
YES	3PL/General Warehousing	NFI	James O'Leary
YES	3PL/General Warehousing	Dependable Highway Express (DHE)	Troy Musgrave
YES	3PL/General Warehousing	Allen Lund Company	Ken Lund
YES	Retail/BCO	California Retailers Association	Rachel Michelin
YES	Retail/BCO/ Manufacturing	PepsiCo	Keshav Sondhi
YES	Retail/BCO	Walmart	Jennifer Wheeler
YES	Retail/BCO/ Manufacturing	Snak King	Jeffrey Forde
YES	3PL/General Warehousing	Sysco	Eddie Tantoco
YES	3PL/General Warehousing	TForce	Richard Boyd
YES	3PL/General Warehousing	UPS	Dale Morin
YES	3PL/ General Warehousing	Dependable Highway Express (DHE)	Tom Lentz
-	3PL/General Warehousing	SC Express	Sherry Hertel
-	3PL/General Warehousing	California Cartage Company	Bob Liveley
-	3PL /General Warehousing	XPO Logistics	Tim Demczyk
-	3PL/ General Warehousing	Lineage Logistics	Dominic Dicalo
-	Consultant	Clean Future	John A. Thorton
-	3PL/ General Warehousing	Dependable Highway Express (DHE)	Tom Lentz
-	3PL/ General Warehousing	Los Angeles Customs Brokers Freight Forwarders Association	Karen Quintana
-	3PL/ General Warehousing	Transportation Intermediaries Association	Chris Burrows
-	3PL/ General Warehousing	Fedex Express	Dustin Rice
-	3PL/ General Warehousing	DHL	Chris Wessel
-	Retail/BCO	IKEA	Adolfo Kurczyn
-	Retail/BCO	Albertson's/Vons	Tim Burke
-	Retail/BCO	Walmart	Randall Sanford
-	Retail/BCO	Retail Industry Leaders Association	Brian Rose
-	Retail/BCO	Aramark	Kevin Fisher
-	Retail/BCO	Tyson	Rob Lyall

APPENDIX B- INTERVIEW QUESTIONS

Questions for Warehouse Industry Stakeholders

Background

Please read the following to every interviewee

We are working with the South Coast Air Quality Management District on a project focused on the warehousing and logistics industry. As part of this effort, we would like to obtain background information on the logistics and distribution industry and particularly the warehousing sector in LA, Orange, San Bernardino, and Riverside Counties.

***If prompted:* South Coast AQMD has asked us to collect this information to inform the creation of a potential Indirect Source Rule. The rule development effort is ongoing, and we do not have information on what the eventual provisions of the rule will be.**

***From here, please read the appropriate set of questions for each type of interviewee. ***

Beneficial Cargo Owners (focused on non-retail activity).

*Is BCO classification correct?

1) **Please tell us about your company's role in goods distribution in Southern California. What is your role in moving goods from port to customer? What types of cargo do you typically deal with?**
   a) What are the other types of organizations that you interact/coordinate with in your goods distribution operations? Please describe your role in logistics/distribution relative to theirs.
   b) Where are your warehouses located?
   c) If warehouses are not operated by the BCOs: What warehouses are you contracted with?
   d) ***If motor carriers or warehouse operators not mentioned, ask about them specifically, including their involvement in motor carrier dispatching decisions. ***
2) **Tell us about how your cargo is moved out of the port. What factors determine your drayage operations?**
   a) What factors are important when selecting a warehouse for transloading operations or cargo storage? Does this vary across different types of cargo?
   b) How important is port proximity in selecting a transloading facility or cargo storage? Do you use transloading facilities/storage near the port, or a warehouse
   c) outside of LA and Orange county? Is there a strategic reason why your company chose this location?
   d) Is your cargo's final destination typically in Southern California or elsewhere? If both, do you select the warehouses differently based on the final destination?
   e) Is there a typical turnaround time for your cargo?
   f) How do you track your cargo? Do you rely on freight forwards and 3PLs, or do you use tools/software? What information do you track?
   g) What sort of truck or freight verification is conducted at the gate for entering/exiting vehicles?
   h) ***If the interviewee has its own fleet*** Use of telematics or geo fencing to track vehicles?

3) **Does your cargo require cold storage? If so:**
   a) How does this affect the process you described earlier, as far as location of transloading facilities?

   Question for BCOs that operate their own warehouse:
   b) What characteristics of a warehouse make it conducive to cold storage?
   c) Is refrigeration infrastructure easily relocated from one warehouse to another?
4) ***If relevant:* Who are your customers: Where are they in the supply chain in relation to you? (Possible answers could be retailers, trucking companies, third party logistics companies, or other?)**
   a) How important is the warehouse location for meeting your customer's needs?
5) **Have you ever considered using warehouses outside the urban LA, OC, Riverside, or San Bernardino Counties?**
   a) If so, what prompted your consideration? (Possible answer could be operational changes, warehousing cost, business expansion, etc.)
   b) *** If mentioning cost as a reason*** Do you have an idea of the cost threshold that would lead you to consider using warehouses outside the urban LA, OC, Riverside, or San Bernardino Counties?
   c) Did you eventually use warehouses outside the urban LA, OC, Riverside, or San Bernardino Counties? If not, what were the principal constraints?
6) **Can you identify any current trends that are affecting your industry?**
   a) ***If relevant:* Are there any trends that may affect your decision to use warehouses within the urban LA, OC, Riverside, or San Bernardino Counties versus outside of these areas?
   b) Are there other aspects or challenges to your industry that you think may be relevant?
7) **How does online shopping impact your business?**
   a) How does this change the process you described earlier?
   b) What characteristics of a warehouse make it conducive to e-commerce?
8) **As we understand it, warehouses may provide a range of services, including transloading, cross dock transloading, terminal services for less-than-truckload trucks, general purpose warehousing/storage, cold storage, distribution center, and retail fulfillment.**
   a) Are there any other categories that you would recommend we add to this list? Also, do you have at least a rough sense of the distribution of warehouses across these services (e.g., approximately A to B percent of warehouses in the region have cold storage)? We're not expecting that you would have precise estimates but any input you can offer based on your experience would be helpful.

Retailers (Focus on distribution to individual stores)

*Is Retailer classification correct?

1) **Please tell us about your company and how products end up in your retail store(s). (Question for retailers who do not import the cargo/ take control of cargo at the port)**
   a) Roughly what share of your store products are shipped directly through the San Pedro ports vs. land transported from warehouses not related to port operations?

b) How do those products get transported from the vendor to your stores? Does this vary between different types of goods?
c) What's a typical delivery timeline from the regional distribution center to the store?

2) **Do you directly lease and operate warehouses, or do you hire third party logistics providers to manage aspects of your distribution? What about trucking operations?**
   a) What are the advantages and disadvantages of handling these operations within your company versus contracting for these services?
   b) Do you have an involvement in truck dispatching decisions? What are the advantages and disadvantages of handling these operations vs. contracting for these services?
   c) What sort of truck or freight verification is conducted at the gate for entering/exiting vehicles?
   d) ***If the interviewee has its own fleet*** Use of telematics or geo fencing to track vehicles?
3) **What kinds of warehouses do you use in Southern California?**
   a) Does this include distribution centers, long term storage centers, and import-related warehouses?
   b) In general, where are these warehouses located? Does the location vary between different types of cargo?
   c) What qualities make certain warehouses more desirable? Does this vary for different types of cargo?
4) **Does your cargo require cold storage? If so:**
   a) How does this change the process you described earlier?
   b) *If the respondent indicates that their company operates warehouses:*
      i) What characteristics of a warehouse make it conducive to cold storage?
      ii) Is refrigeration infrastructure easily relocated from one warehouse to another?
5) **How does online shopping impact your business?**
   a) How does this change the process you described earlier?
   b) What characteristics of a warehouse make it conducive to e-commerce?
6) **How important is warehouse proximity to your retail stores? Does this vary across warehouse types and functions, as well as products?**
7) **If your company contracts with others for warehousing, have you ever considered changing service providers based on their proximity to your retail stores?**
   a) How does your company balance transportation costs in cases where the warehouse is not in close proximity to your retail locations? Do those costs fall to you or does the contracted company accrue those costs?
8) **How do you handle freight tracking?**
9) **Can you identify any current trends that are affecting your industry? *If relevant:* Are there any associated effects on your decisions regarding where to warehouse your cargo?**
10) **Are there other aspects or challenges to your industry that you think may be relevant?**

Warehouse Operators (3PL, Freight Forwarders, general warehousing)

*Is warehouse operator classification correct?

1) **Please tell us about your company.**
    a) How many warehouses do you operate in the urban LA, OC, Riverside, or San Bernardino Counties?
    b) Where are they located?
    c) What kinds of warehouses or services do you provide?
    d) What kinds of customers do you serve?
2) **Tell us about how goods move in and out of your warehouse. Where are goods typically coming from and where are they going?**
    a) Are there specific warehouse characteristics that are important to this process?
    b) Does the process vary across different types of cargo? If so, how?
    c) What's a typical delivery timeline? Do you avoid times of high traffic?
    d) What are the other types of organizations that you interact/coordinate with in your goods distribution operations? Please describe your role in logistics/distribution relative to theirs.
    e) What sort of truck or freight verification is conducted at the gate for entering/exiting vehicles?
    f) ***If the interviewee has its own fleet*** Use of telematics or geo fencing to track vehicles?
3) **When selecting a warehouse, what qualities make certain warehouses more desirable? For example, available space, cost per square foot, or location?**
    a) Are there other facility amenities that are also important?
4) **Do you use cold storage? If so:**
    a) How does this change the process you described earlier?
    b) What characteristics of a warehouse make it conducive to cold storage?
    c) Is refrigeration infrastructure easily relocated from one warehouse to another?
5) **What services do you outsource to other companies? For example, trucking?**
    a) What are the advantages and disadvantages of handling these operations within your company versus contracting for these services?
6) **How important is the warehouse location for meeting your customer's needs?**
    a) How does the LA/OC area compare to further away in San Bernardino County?
    b) How do locations within in the urban LA, OC, Riverside, or San Bernardino Counties areas compare to cities outside the region, i.e. Barstow, Phoenix, and Las Vegas?
7) **Have you ever considered relocating outside the urban LA, OC, Riverside, or San Bernardino Counties?**
    a) If so, what prompted your consideration? (Possible answer could be operational changes, warehousing cost, business expansion, etc.)
    b) *** If mentioning cost as a reason*** Do you have an idea of the cost threshold that would lead you to consider moving to warehouses outside the urban LA, OC, Riverside, or San Bernardino Counties?
    c) What are the principle constraints on relocation?
8) **Can you identify any current trends that are affecting your industry? *If relevant:* Are there any associated effects on your decisions regarding the location of your operations?**

a) Are there other aspects or challenges to your industry that you think may be relevant?

9) **As we understand it, warehouses may provide a range of services, including transloading, crossdock transloading, terminal services for less-than-truckload trucks, general purpose warehousing/storage, cold storage, distribution center, and retail fulfillment**.
   a) Are there any other categories that you would recommend we add to this list? Also, do you have at least a rough sense of the distribution of warehouses across these services (e.g., approximately A to B percent of warehouses in the region have cold storage)? We're not expecting that you would have precise estimates but any input you can offer based on your experience would be helpful.

Manufacturing and Distribution Facility

1) **Tell us a bit about your company**
   a. What do you manufacture?
   b. Who are your customers?
2) **Tell us about your facility**
   a. How many square feet total?
   b. What percentage is dedicated to warehousing, manufacturing, and office space?
   c. What qualities make a space more desirable? (available space, cost per sq ft, location) Are there facility amenities that are important?
   d. Do you use cold storage? If so:
   e. What characteristics of a warehouse make it conducive to cold storage?
   f. Is refrigeration infrastructure easily relocated from one warehouse to another?
3) **Tell us about your operations**
   a. Where are goods typically coming from and where are they going?
   b. What percentage of goods that move through your facility are imports vs. exports?
   c. What's a typical delivery timeline?
   d. Do you try to avoid times of high traffic?
4) **We want to understand your place in the supply chain and how you interact with your customers and other contractors**
   a. What are the other types of organizations do you interact/coordinate within your goods distribution operations?
   b. What services do you outsource to other companies? For example, trucking?
   c. What are the advantages and disadvantages of handling these operations within your company versus contracting for these services?
5) **Please tell us about you fleet**
   a. Do you lease or own your vehicles? What percentage is leased vs. owned? And what are the benefits of leasing vs. owning?
   b. How many vehicles are in your fleet? And what classes are they?
   c. What is the average age of the vehicles in your fleet?
   d. What fuel technology do you use?
   e. If you operator forklifts or yard hostlers, what percentage are fossil fuel vs. electric? Are any of these fossil fuel vehicles operating indoors?

f. Is your fleet equipped with telematics? If so, do you rely on this to track fuel usage and mileage? Do you use geofencing?
g. What is a typical day operation for you fleet?
    i. Average number of miles
    ii. Average number of stops
h. Which of the following would best describe your fleet's operations?
    i. Regional Delivery
    ii. Drayage
    iii. Less than Truckload
    iv. Over the Road
    v. Other (please explain)
i. Which of the following warehousing facilities does your fleet typically service? And, what characteristics of your fleet makes it suitable to serve this specific type of facility?
    i. Distributions center
    ii. Cross-dock facility
    iii. Transload facility
    iv. General Purpose Warehouse
    v. Truck Terminal for Less than Truckload Trucks
    vi. Retail Fulfillment Center
    vii. Storage or Cold Storage

6) Please tell us about how vehicles interact with your facility

a. What is the typical process for vehicles entering and exiting the facility?
b. What information do you collect about vehicles entering and exiting the facility (i.e. vehicle type, fuel technology, model, US DOT, CA, MC #s, VIN, truck model, truck year)
c. What method do you use to track the number of vehicles visiting your facility (inbound and outbound)? What is the typical daily number of vehicles?
d. Do trucks need to be part of a truck registry to enter the facility? (i.e. Drayage Truck Registry OR TRUCRS)

7) We are also trying to understand how location plays a role in your business operations.

a. How important is the warehouse location for meeting your customer's needs?
b. How does the LA/OC area compare to further away in San Bernardino County?
c. How do locations within in the urban LA, OC, Riverside, or San Bernardino Counties areas compare to cities outside the region, i.e. Barstow, Phoenix, and Las Vegas?
d. Have you ever considered relocating outside the urban LA, OC, Riverside, or San Bernardino Counties?
e. If so, what prompted your consideration? (Possible answer could be operational changes, warehousing cost, business expansion, etc.)
f. *** If mentioning cost as a reason*** Do you have an idea of the cost threshold that would lead you to consider moving to warehouses outside the urban LA, OC, Riverside, or San Bernardino Counties?
g. What are the principle constraints on relocation?

8) We want to understand any trends you are seeing in the industry

a. Are there any aspects or challenges to your industry that you think may be relevant?

9) Plans for future sustainability

a. Do you have sustainability goals/plans? Please explain.
b. Have you thought about putting community benefit measures in place, in terms of air pollution?
c. Have you researched into the possibility of electric fleets and/or charging and refueling stations?

ATTACHMENT 2

TECHNICAL MEMORANDUM ON REAL ESTATE MARKETS NEIGHBORING THE SOUTH COAST AQMD JURISDICTION

IEc

MEMORANDUM | 12 DECEMBER 2020

TO Victor Juan, Ian MacMillan, Paul Stroik, and Shah Dabirian, South Coast Air Quality Management District (South Coast AQMD)

FROM Derek Ehrnschwender and Jason Price, IEc

SUBJECT Technical Memorandum on Real Estate Markets Neighboring the South Coast AQMD Jurisdiction

INTRODUCTION

This memorandum is in support of South Coast Air Quality Management District (South Coast AQMD) staff's development of a potential indirect source rule (ISR) to reduce mobile source emissions related to the operation of warehouses and distribution centers in the South Coast AQMD's four-county region (Los Angeles, Orange, Riverside, and San Bernardino counties).[1]

Diesel truck traffic, largely related to the transport of goods passing through the Ports of Los Angeles and Long Beach and regional warehouses and distribution centers, makes up a large share of local NO_x emissions. A warehouse ISR, if adopted, may help with reducing emissions from trucks servicing warehousing facilities located within its jurisdiction.

Compliance costs to the warehousing sector could vary depending on the design of an eventual rule. If these costs are significant, the implementation of an ISR could potentially precipitate the relocation of warehousing operations outside the region—with the associated truck fleets continuing to travel to and from facilities in the South Coast AQMD jurisdiction. In the worst-case scenario, the associated air quality benefits from such a rule might be greatly diminished. Accordingly, South Coast AQMD is interested in identifying and understanding the factors affecting whether warehousing operations are likely to relocate as a result of the potential rule.

Consistent with this objective, this memo analyzes the warehouse real estate markets within the South Coast AQMD jurisdiction and in neighboring areas. Through analysis of a range of key market metrics and trends, we assess the capacity of neighboring areas to absorb warehousing operations that might consider relocation following the implementation of an ISR. To inform assessment of relocation potential over time, we also assess how these neighboring markets may change over the next ten years. The specific market statistics examined in this memo include the following:

- ***Total warehouse inventory:*** To help South Coast AQMD better understand the size of the local warehousing sector, we compile information on the inventory of warehouses within the region. Similarly, to gauge the potential capacity of neighboring areas to absorb warehouse operations from the South Coast AQMD jurisdiction, we also present the inventory of warehouses in these areas.

[1] The South Coast AQMD jurisdiction is comprised of all of Orange County and parts of Los Angeles, Riverside and San Bernardino Counties. The region is mapped and described in full in Exhibit 1 and the "Geographic Scope" section below.

- ***Vacancy rates:*** Complementing the inventory data, we examine vacancy rates in the South Coast AQMD jurisdiction and in neighboring areas. This information provides insight into the *current* capacity of neighboring markets to absorb warehousing operations located in the South Coast AQMD jurisdiction.
- ***Net absorption:*** We examine net absorption of warehouse space in each area, defined as the amount of space tenants moved into in a geographic area and time period minus the amount of space tenants vacated during that same time period. Because this metric reflects changes in inventory levels for a given period, it may provide insights into the direction of the market (e.g., the capacity or lack of capacity of neighboring areas to absorb warehousing operations from the South Coast AQMD jurisdiction).
- ***Pricing:*** Because decisions regarding the relocation of warehouse operations to neighboring areas will depend on the associated cost impacts, we compile data on warehouse pricing in each market—rent per square foot for properties for lease, and sale price per square foot for properties that were bought and sold.
- ***Parcels available for warehouse development:*** To gauge the potential for expansion of the warehouse market in each area to accommodate operations currently located in the South Coast AQMD jurisdiction, we present data on vacant land in each market area with the appropriate zoning for warehouse space.

We begin the real estate market analysis by describing the data sources relied upon and outlining the structure of the analysis. Building on this information, we then present our analysis of the key market metrics identified above. Finally, we conclude with a synthesis of our key findings.

DATA SOURCES AND ANALYTIC STRUCTURE

The primary data sources for this document are contained in the CoStar Suite™ of data products developed and maintained by CoStar, a real estate analytics firm. As described in further detail below, the CoStar Suite™ includes information on existing properties as well as vacant parcels that may be developed. These data are flexible in terms of how they may be spatially aggregated, and include information on the attributes of individual properties allowing for identification of different types of warehouse space.

COSTAR DATA

The CoStar Suite™ contains a variety of databases, of which we use CoStar Property® and CoStar Market Analytics™. CoStar Property® contains a regularly maintained comprehensive list of commercial real estate properties and vacant lands, with an extensive list of descriptive fields. CoStar Market Analytics™ contains a range of historical data, metrics, and forecasts relevant to identifying trends.

For the purposes of this analysis, we limit our scope to properties meeting the following criteria:

- Properties with status labeled as existing or undergoing renovations.
- Properties within CoStar's Industrial and Flex (Industrial with some office space) categorizations.

- For buildings within the CoStar Industrial and Flex categorization, properties with secondary categorizations of Distribution, Light Distribution, Refrigeration/Cold Storage, Truck Terminal, or Warehouse.[2]
- Properties with a minimum 100,000 square foot rentable building area.[3]
- Properties with a minimum ceiling height of 15 feet.[4]

Based on these criteria, we identify 2,638 properties in South Coast AQMD's jurisdiction and 975 properties in the neighboring areas examined in this analysis (further details below).[5]

This analysis also incorporates CoStar's information on vacant land parcels for the purposes of assessing potential new additions to the supply of warehouses in outlying markets. We limit our scope to parcels classified for industrial use and with a minimum footprint of 200,000 square feet. We use a 200,000 square foot minimum based on our 100,000 square foot minimum building area and an assumption (based on the CoStar property data) that an acceptable lower-bound for the ratio of property area to building area is two-to-one.

GEOGRAPHIC SCOPE

For each property, the CoStar database includes detailed spatial information. Specifically, the database includes (1) latitude and longitude coordinates, (2) mailing address, and (3) size of the building footprint. Using the spatial information in the database, we grouped properties into eight distinct real estate markets—the South Coast AQMD jurisdiction (or "District" in many of the graphics below) and seven neighboring areas in geographic proximity to the South Coast AQMD jurisdiction. In addition, we further sub-divided the South Coast AQMD jurisdiction into three areas, largely defined according to county boundaries. These markets, shown in the maps in Exhibit 1, are as follows:

- **Los Angeles:** The portion of Los Angeles County located within the South Coast AQMD jurisdictional boundaries, including all of the county except for the northeastern corner. This area includes the "megaports" of L.A. and Long Beach, the origin point for most goods passing through warehouses in the region and 40 percent of all container cargo traffic in the U.S.[6]

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[2] Facilities with the secondary type Manufacturing are also discussed in this document. Because manufacturing facilities' decision-making processes regarding relocation are likely to differ from the decision-making process for facilities whose primary function is warehousing, these facilities are captured in a stand-alone section below rather than in the primary analysis presented in this document.

[3] An earlier version of this document limited the scope of this analysis to properties greater than 25,000 square feet. Due to revisions to the proposed ISR limiting its applicability to properties 100,000 square feet and greater, this draft amends its scope and warehouse classification to focus on this group.

[4] An exception to this is that we include properties for which building area was available but ceiling height was not in order to capture the most complete picture of the real estate landscape in each area.

[5] Consistent with the note above, these figures do not include manufacturing facilities.

[6] "Industrial Warehousing in the SCAG Region – Final Report." (2018) Prepared for the Southern California Association of Governments by Cambridge Systematics, Inc. with Gill V. Hicks and Associates Inc. April 2018.

- **Orange County:** All of Orange County, which is completely contained within the South Coast AQMD jurisdictional boundaries.
- **Inland Empire:** The South Coast AQMD portions of Riverside and San Bernardino counties. This includes the most densely populated southwestern corner of San Bernardino County and all of Riverside County except for a small portion near the county's eastern border, near the Arizona state line. Driving times from both ports to destinations within the South Coast AQMD jurisdiction vary depending on traffic, but an hour and a half is expected for crossing Los Angeles and accessing the centrally located cities of Riverside and San Bernardino.[7]
- **North of District, Bakersfield:** All of Kern County and the non-South Coast AQMD portion of Los Angeles County, including Lancaster and Palmdale. Bakersfield, the largest population center in Kern County, is roughly two hours and 45 minutes from the Port of L.A.
- **North of District, Coastal:** All of Ventura County, Santa Barbara County, and San Luis Obispo County. Contains the Port of Hueneme,[8] located in Ventura County. Driving times from the Port of L.A. to the cities of Santa Barbara and San Luis Obispo are approximately two hours and 30 minutes and four hours and 15 minutes, respectively.
- **East of District, Desert Areas:** All of Imperial County and the non-South Coast AQMD portions of San Bernardino County, including Victorville, and Riverside County. Driving times from the Port of L.A. vary from one to four hours.
- **South of District, San Diego:** All of San Diego County, which includes the Port of San Diego.[9] The drive time to San Diego from the Port of L.A. is roughly two hours and 30 minutes.
- **Las Vegas:** All of Clark County, Nevada, which includes the city of Las Vegas. It takes roughly five hours to drive from the Port of L.A. to Las Vegas.
- **Phoenix:** All of Maricopa County and Pinal County, Arizona. The drivetime from the Port of L.A. to Phoenix is approximately six hours.
- **Western Arizona:** All of the four Arizona counties to the west of Phoenix: Yuma, La Paz, Mohave, and Yavapai Counties. Driving times from the Port of L.A. vary from four to six hours.

[7] We calculate driving times based on expected departures from the Port of L.A. at 6:00 AM on a weekday, a time with relatively low traffic.

[8] The Port of Hueneme is substantially smaller than the Ports of L.A. and Long Beach, with annual container traffic of 84,000 containers in 2018, relative to Long Beach's 8.8 million containers and L.A.'s 8.9 million containers. American Association of Port Authorities. "NAFTA Container Port Ranking 2017." https://www.aapa-ports.org/unifying/content.aspx?ItemNumber=21048

[9] The Port of San Diego's annual container traffic is approximately 143,000 containers. American Association of Port Authorities. *Op cit.*

EXHIBIT 1-A. REAL ESTATE MARKETS EXAMINED

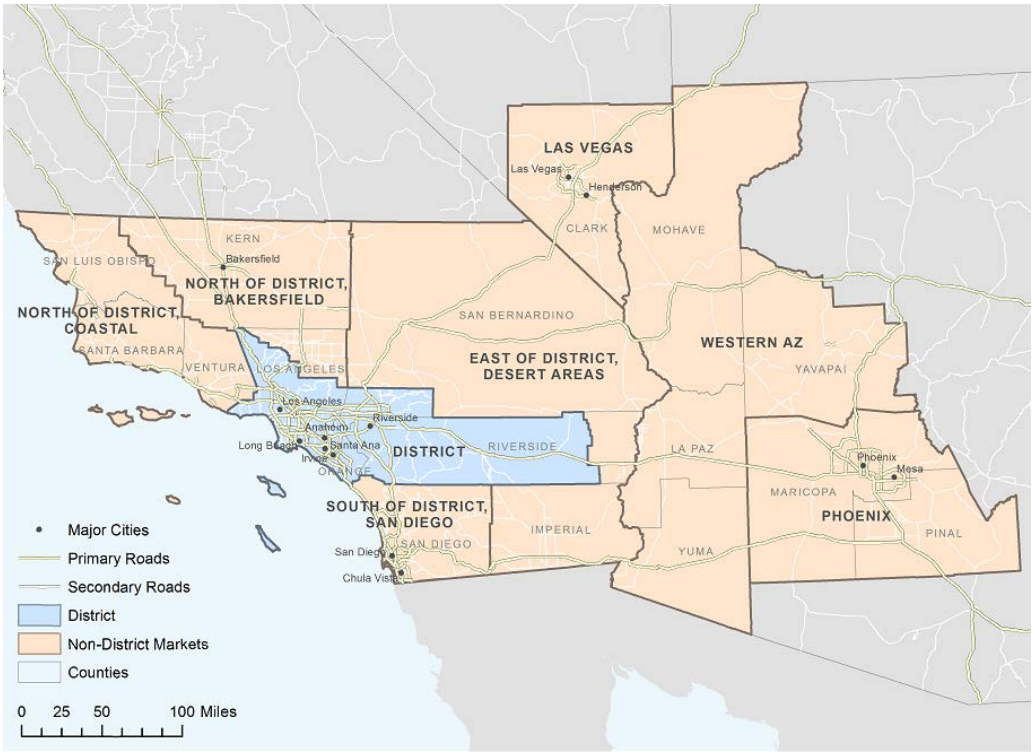


EXHIBIT 1-B. REAL ESTATE MARKETS EXAMINED – DISTRICT MARKETS FOCUS



WAREHOUSE CLASSIFICATION

Our analysis of warehouse real estate markets in the areas identified above distinguishes between different types of warehouses. We make this distinction because different types of warehouses (or warehousing operations) may respond differently to an ISR. As a starting point for defining warehouse categories, we examined the Southern California Association of Governments' (SCAG's) 2018 report on warehousing activity in Southern California.[10] As summarized in Exhibit 2, the SCAG report identifies eight categories of warehouses, the definitions for which include building area and ceiling height.[11]

While useful, the SCAG classification system in many cases describes warehousing *services* rather than physical warehouse *structures*. Because a given warehouse may be suitable for more than one type of warehousing service, the full SCAG classification system may not be appropriate for this analysis. For instance, there is no structural difference between warehouses that provide port-related general purpose warehousing services and those that provide non-port-related general purpose warehousing services. Similarly, warehouses that perform transload services are physically similar to warehouses that perform crossdock services.

Thus, for the purposes of segmenting the warehousing real estate market in this analysis, we specify warehouse categories based on the suite of warehousing services that a warehouse may provide or on its capacity to accommodate a warehousing service with specific needs (e.g., refrigeration). We also define the classification scheme so that it fully captures and categorizes the property data from CoStar. Additional considerations in our classification of warehouses include the following:

- We exclude ceiling height as a parameter in our classification scheme. Because ceiling height is missing for many properties in the CoStar data, the exclusion of these properties would provide an incomplete picture of the market.
- Our classification is unable to account for the "long and narrow" building shape unique to transload and crossdock facilities due to data limitations. For this reason, we combine transload and crossdock warehouses with the general purpose category, due to similarities in building size.
- We find properties with the CoStar secondary classifications of Refrigeration/Cold Storage and Truck Terminal have a wide variety of building areas and do not fit neatly into one building category. We therefore identify cold storage facilities as a separate category due to their unique facility characteristics. We fit truck terminals into all of the other categories as their building area can range considerably from 25,000 to 330,000 square feet.

Based on the above, Exhibit 3 outlines our classification scheme for the market analysis.

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[10] "Industrial Warehousing in the SCAG Region – Task 4: Understanding Facility Operations." (2018) Prepared for the Southern California Association of Governments by Cambridge Systematics, Inc. with Gill V. Hicks and Associates Inc. April 2018.

[11] Two additional categories of warehouses—parcel hubs and e-commerce facilities—are included in the warehousing and logistics technical memorandum prepared in support of this analysis. Due to limitations in the specificity of the CoStar secondary classification field, we do not identify these categories in this analysis. These facilities, depending on their respective size, are captured within the categorization we outline in Exhibit 3. For the characterization of parcel hubs and e-commerce facilities, see Jasna Tomic and Kelly Leathers, "Technical Memorandum on Warehousing and Logistics Industry in the South Coast Air Quality Management District Jurisdiction," prepared for South Coast AQMD, November 30, 2020.

EXHIBIT 2. SCAG WAREHOUSE CLASSIFICATION

WAREHOUSE TYPE	TYPICAL BUILDING AREA	TYPICAL BUILDING WIDTH	TYPICAL CEILING HEIGHT	SITE COVERAGE (BUILDING FOOTPRINT/PROPERTY SIZE)	CARGO TURNAROUND TIME
Port-Related General Purpose Warehouse	25,000-50,000 sq. Ft.	Not specific	>22 ft.	0.5	Varies
Non-Port-Related General Purpose Warehouse	25,000-50,000 sq. Ft.	Not specific	>22 ft.	0.5	Varies
Trans-load Facility	>25,000 sq. Ft	Long and narrow	>22 ft.	0.5	Up to one week
Cross-dock Facility	>25,000 sq. Ft	Long and narrow	>22 ft.	0.5	1-2 days
Truck Terminal for Less-Than-Truckload Trucks	25,000 to 150,000 sq. Ft.	Not specific	<25 ft.	0.3	Up to one week
General Distribution Center	50,000 to 500,000 sq. Ft.	Not specific	<25 ft.	0.4	Varies
Retail Fulfillment Center	500,000 to 1,000,000 sq. Ft.	Not specific	>28 ft.	0.4	Up to one week
Cold Storage	>25,000 sq. Ft.	Not specific	>22 ft.	0.5	Up to one week

EXHIBIT 3. WAREHOUSING REAL ESTATE CLASSIFICATION SCHEME

PROPERTY CLASSIFICATION	APPLICABLE SCAG WAREHOUSE CATEGORIES	BUILDING AREA	COSTAR PRIMARY CATEGORIZATION	COSTAR SECONDARY CATEGORIZATION
General Purpose	General Purpose, Transload, Crossdock	100,000-200,000 sqft	Industrial or Flex	Distribution, Light Distribution, Truck Terminal, Warehouse
General Distribution	General Distribution Centers	200,000-500,000 sqft	Industrial or Flex	Distribution, Light Distribution, Truck Terminal, Warehouse
Retail Fulfillment	Retail Fulfillment Centers	500,000+ sqft	Industrial or Flex	Distribution, Light Distribution, Truck Terminal, Warehouse
Cold Storage[1]	Refrigeration/Cold Storage Facility	25,000+ sqft	Industrial or Flex	Refrigeration/ Cold Storage

Notes:
1. In addition to cold storage warehouses greater than 100,000 square feet, we include cold storage warehouses between 25,000 and 100,000 square feet for additional insights on these facilities.

In addition to the warehouse types shown in Exhibit 3, which apply to buildings whose main function is warehousing, we also examine warehousing space at manufacturing facilities in the South Coast AQMD jurisdiction. For these facilities, however, decisions regarding relocation are likely to differ from the decision-making process for warehouse facilities. As supported by conversations with manufacturing warehouse operators for the technical memo on the warehousing and logistics industry, manufacturing facilities often have specialized equipment that would be more costly to move.[12] In addition, the pool of buildings to which manufacturing facilities could relocate may differ from the buildings that warehouses would consider. Due to these differences, our assessment of manufacturing warehouses in the South Coast AQMD jurisdiction is presented separately from our assessment of other warehouses.

ANALYSIS

Our analysis of the real estate markets in the South Coast AQMD jurisdiction and neighboring areas examines the current state of these markets and recent projections extending 10 years into the future. This analysis will help South Coast AQMD better understand the capacity of neighboring markets to absorb warehousing operations from its jurisdiction.

CURRENT MARKET SNAPSHOT

In this section, we compile a set of market metrics from the CoStar property database to compare warehousing real estate in the South Coast AQMD jurisdiction with real estate

[12] Jasna Tomic and Kelly Leathers, "Technical Memorandum on Warehousing and Logistics Industry in the South Coast Air Quality Management District Jurisdiction," prepared for South Coast AQMD, November 30, 2020.

in outlying markets. We compare the markets according to total inventory, vacancy rates, tenancy growth rates, net absorption, pricing, and potential future development.

Total Inventory (Warehousing Facilities)

We assess the total inventory of warehousing properties along two metrics: the number of total properties and the rentable building area of those properties, measured in square feet. Exhibits 4, 5, and 6 present these values by market area and property type. We identify 3,613 properties with the CoStar categorizations of Industrial and Flex (Industrial with some office space), the CoStar secondary categorizations of Distribution, Light Distribution, Refrigeration/Cold Storage, Truck Terminal or Warehouse, and with a minimum rentable building area of 100,000 square feet. Of these properties, 2,638 (73 percent) are located within the South Coast AQMD jurisdiction, while 975 (27 percent) are located in the outlying markets. Similarly, we identify 888 million square feet of rentable building area meeting the same criteria, with 662 million square feet (75 percent) located within the South Coast AQMD jurisdiction, and the remaining 226 million (25 percent) located in the outlying markets. The South Coast AQMD jurisdiction contains more warehousing space across each of the real estate categories, as highlighted in Exhibits 4 and 6. These exhibits also show the distribution of warehousing space across warehouse categories is fairly consistent across the geographic areas examined.

EXHIBIT 4. TOTAL BUILDING AREA – YEAR 2019: DISTRICT AND NON-DISTRICT

PROPERTY CLASSIFICATION	DISTRICT AREA	SHARE OF TOTAL DISTRICT AREA	NON-DISTRICT AREA	SHARE OF TOTAL NON-DISTRICT AREA
General Purpose	191.4 million sq. ft.	28.9%	72.6 million sq. ft.	32.1%
General Distribution	249.7 million sq. ft.	37.7%	79.5 million sq. ft.	35.2%
Retail Fulfillment	209.6 million sq. ft.	31.7%	66.9 million sq. ft.	29.5%
Cold Storage	11.5 million sq. ft.	1.7%	7.3 million sq. ft.	3.2%
Total	662.2 million sq. ft.	100%	226.3 million sq. ft.	100%

EXHIBIT 5. NUMBER OF WAREHOUSE PROPERTIES BY MARKET AND REAL ESTATE CLASSIFICATION - YEAR 2019

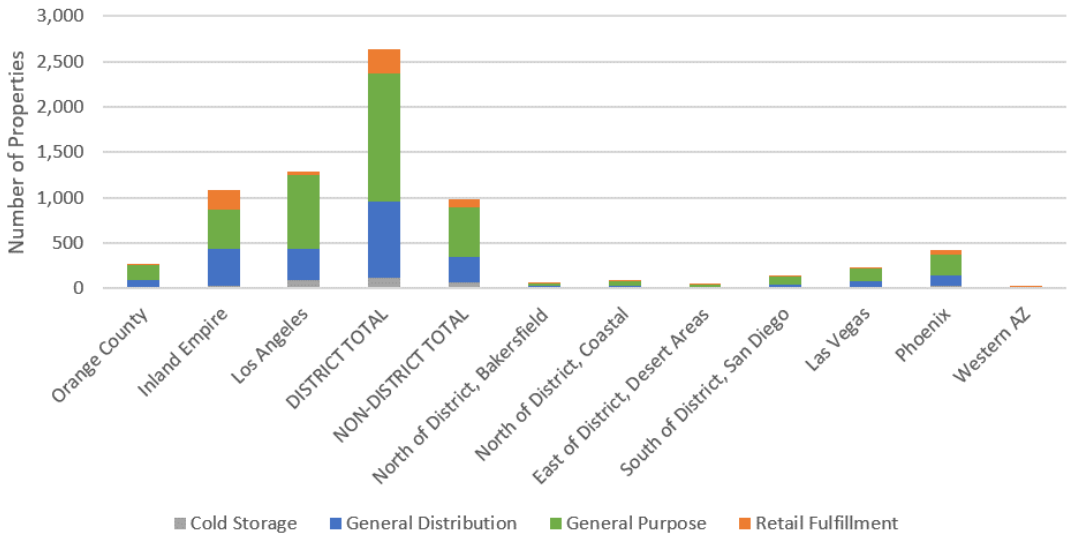


EXHIBIT 6. SQUARE FOOTAGE OF PROPERTIES BY MARKET AND REAL ESTATE CLASSIFICATION - YEAR 2019

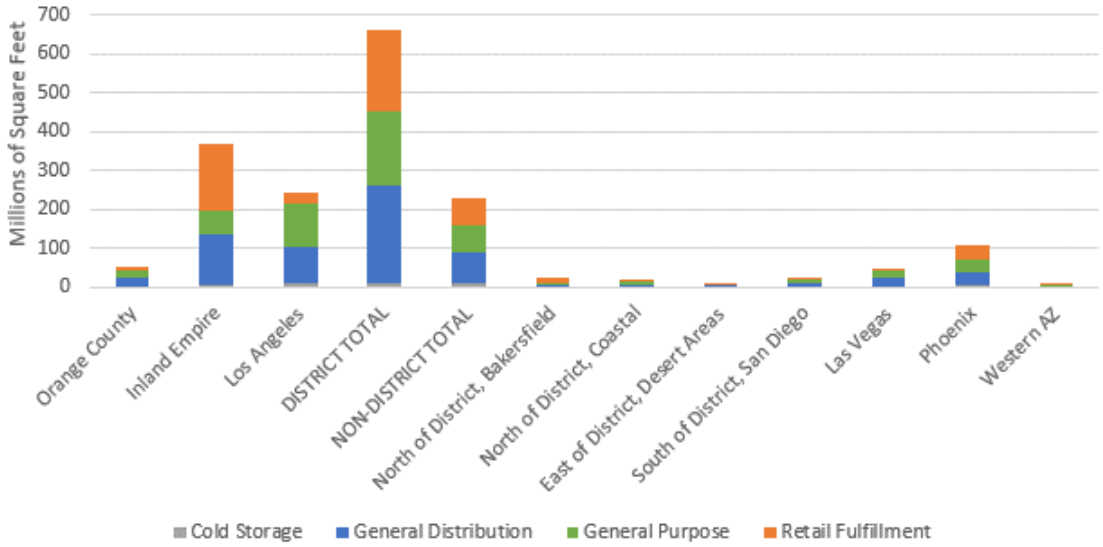


Exhibit 7 compares the growth of warehouse property capacity within the South Coast AQMD jurisdiction and in the surrounding market areas over time. Because these historical data are from the CoStar Market Analytics™ module, they may present slight differences relative to the data in Exhibits 4-6, which are based on data from CoStar Property™.[13] Over the last decade, capacity has increased by approximately 170 million

[13] The historical data from the CoStar Market Analytics™ module are filtered using the same four industrial secondary classifications used to identify warehouses from the CoStar Property™ data: Warehouse, Distribution, Light Distribution, and Truck Terminal. Cold Storage facilities are not included in the historical data. Additionally, the filter for ceiling height was not possible to apply in the historical data. For these reasons, as well as slight differences in the vintage of the respective

square feet in the South Coast AQMD jurisdiction and 70 million square feet in the surrounding market areas. From 2009-2019, average annual capacity additions within the South Coast AQMD jurisdiction were 16.7 million square feet per year, while the average annual additions for all outlying market areas combined was less than half that amount, at 6.9 million square feet per year.

EXHIBIT 7. HISTORICAL SQUARE FOOTAGE OF WAREHOUSE PROPERTIES GREATER THAN 100,000 SQUARE FEET WITHIN THE SOUTH COAST AQMD JURISDICTION AND SURROUNDING MARKET AREAS

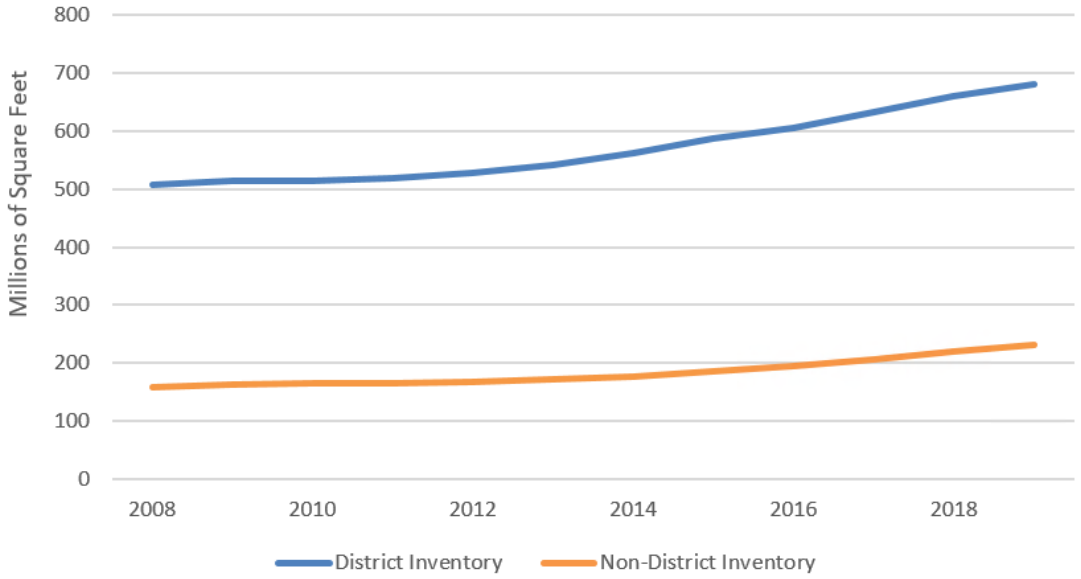


Exhibit 8 compares the growth of warehouse property capacity between the surrounding market areas over time. Similar to the data in Exhibit 7, the historical data in Exhibit 8 are from the CoStar Market Analytics™ module and may differ somewhat from the data reflected in Exhibits 4-6. As shown in Exhibit 8, growth in recent years is most significant in the Las Vegas and Phoenix markets. Of the markets closer to the South Coast AQMD jurisdiction, the Bakersfield market shows the largest increase in capacity. Data are not available for all market areas prior to 2008.

We assess properties based on their distance from major roads, defined as either a primary or secondary road. These roads include interstate highways, U.S. routes, state routes, and major urban streets. Distances were calculated along a straight line from property location to the nearest major road point.

underlying property data, there may be slight differences in the historical data as compared with the values reported from the CoStar Property™ module.

EXHIBIT 8. HISTORICAL SQUARE FOOTAGE OF WAREHOUSE PROPERTIES GREATER THAN 100,000 SQUARE FEET WITHIN THE SOUTH COAST AQMD JURISDICTION AND SURROUNDING MARKET AREAS – ADDITIONAL DETAIL

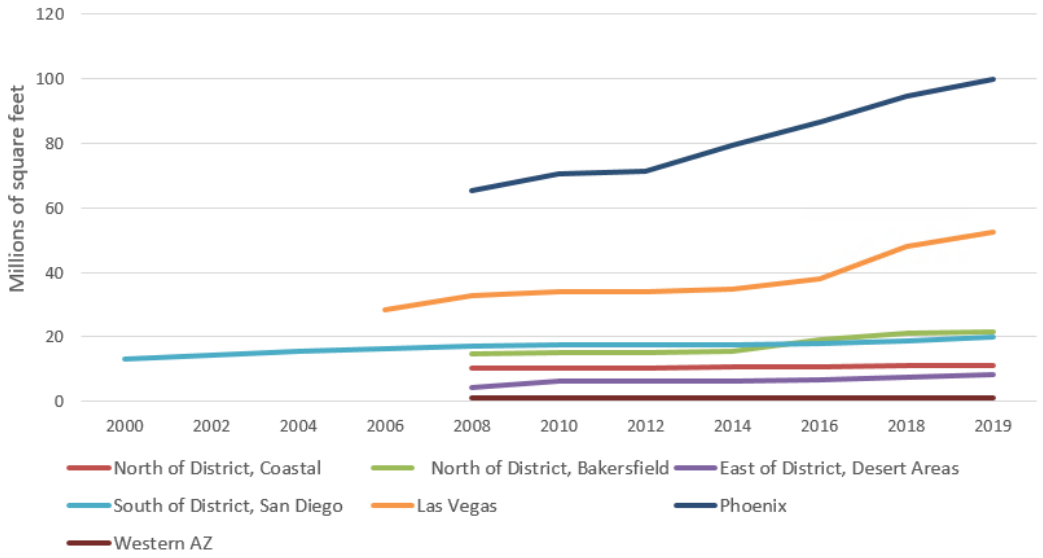
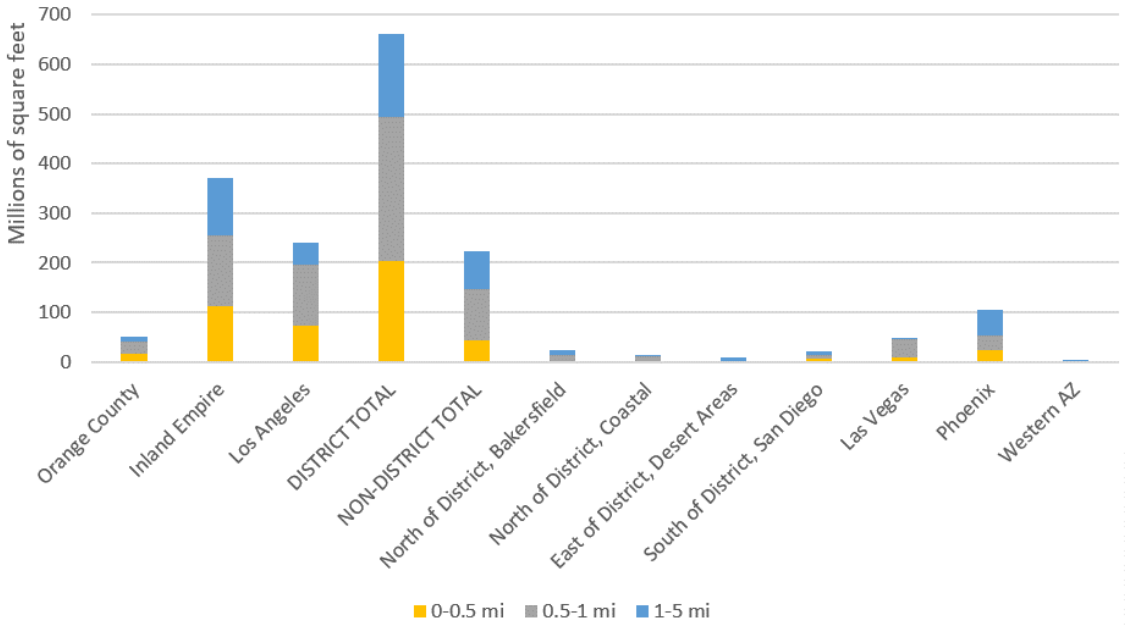


Exhibit 9 shows the square footage of property at different distances from major roads (e.g., 0 to 0.5 miles from a major road). As shown in the exhibit, roughly one-third of warehousing square footage in the South Coast AQMD jurisdiction is located within a half mile of a major road, while the share is closer to one-fifth for the outlying markets. Less than one percent of warehousing real estate is located farther than five miles from a major road.

EXHIBIT 9. SQUARE FOOTAGE OF PROPERTIES BY DISTANCE FROM MAJOR ROAD (MILES) - YEAR 2019



Inventory (Manufacturing Facility Warehouses)

As noted above, manufacturing facilities may include warehousing space in addition to assembly/manufacturing space. To complement the profile of warehousing facilities included in this document, we also examine the scale of relevant manufacturing facilities in the South Coast AQMD jurisdiction using CoStar data.

Assuming an average of 25 percent of a manufacturing facility's floor area is devoted to warehousing, we limit the scope of properties considered to those greater than 400,000 square feet, resulting in 100,000 square feet of warehousing space.[14] Based on the CoStar categorizations of Industrial and Flex (Industrial with some office space) and secondary categorizations of Manufacturing and Light Manufacturing, we identify 49 manufacturing properties in the South Coast AQMD jurisdiction that may have 100,000 square feet or more of warehousing space. The total warehousing space across these facilities is 8.4 million square feet. This represents an additional 1.3 percent increase over the 662 million square feet of warehousing space identified within the South Coast AQMD above.

Because manufacturing facilities require more specialized buildings and equipment, and would likely incur much higher moving costs, we exclude manufacturing facilities from the remainder of this analysis. As we show in our memo estimating potential warehouse relocations due to a possible warehouse ISR for non-manufacturing warehouses,[15] few warehouses are expected to relocate. Thus, we expect manufacturing facilities with warehouses on site to be highly unlikely to relocate due to a possible ISR.

Vacancy Rates (Warehousing Facilities)

We calculate vacancy rates as the percentage of total rentable building area currently vacant and available for lease (Exhibit 10). These rates are sensitive to small samples within some of the defined markets, as evidenced by the high vacancy rates in the Western Arizona and San Diego markets. One out of the two retail fulfillment properties in both Western Arizona and San Diego has availability, resulting in the high rates seen in the table. The non-South Coast AQMD totals for vacancy rates are generally higher than the South Coast AQMD rates.

[14] Manufacturing space takes up an average of 70 percent of floor space in properties classified as manufacturing. The remaining space is taken up by warehousing space and office space (though office space is rarely larger than 10 percent of the total, and often less in larger facilities). For this reason, we select 25 percent as a simplified estimate of total warehousing space within manufacturing facilities. Figures from: Yap, Johannson L., and Rene M. Circ. *Guide to classifying industrial property*. Urban Land Institute, 2003.

[15] Jason Price, Derek Ehrnschwender, and Nick Manderlink, "Results of ISR Warehouse Relocation Analysis", prepared for South Coast AQMD, December 12, 2020.

EXHIBIT 10. VACANCY RATES ACROSS MARKETS AND REAL ESTATE CLASSIFICATION - YEAR 2019

GEOGRAPHIC AREA	GENERAL PURPOSE	GENERAL DISTRIBUTION	RETAIL FULFILLMENT	COLD STORAGE	TOTAL
District Total	4%	5%	5%	1%	4%
Orange County	4%	8%	14%	0%	7%
Inland Empire	5%	6%	5%	2%	5%
Los Angeles	3%	2%	4%	1%	2%
Non-District Total	7%	7%	11%	2%	8%
North of District, Bakersfield	6%	5%	4%	0%	4%
North of District, Coastal	3%	14%	0%*	0%	7%
East of District, Desert Areas	16%	8%	0%*	0%*	7%
South of District, San Diego	6%	7%	38%*	7%	7%
Las Vegas	3%	2%	5%	0%*	3%
Phoenix	9%	9%	15%	5%	11%
Western AZ	0%*	0%	39%*	0%	12%
Total	2%	5%	4%	7%	

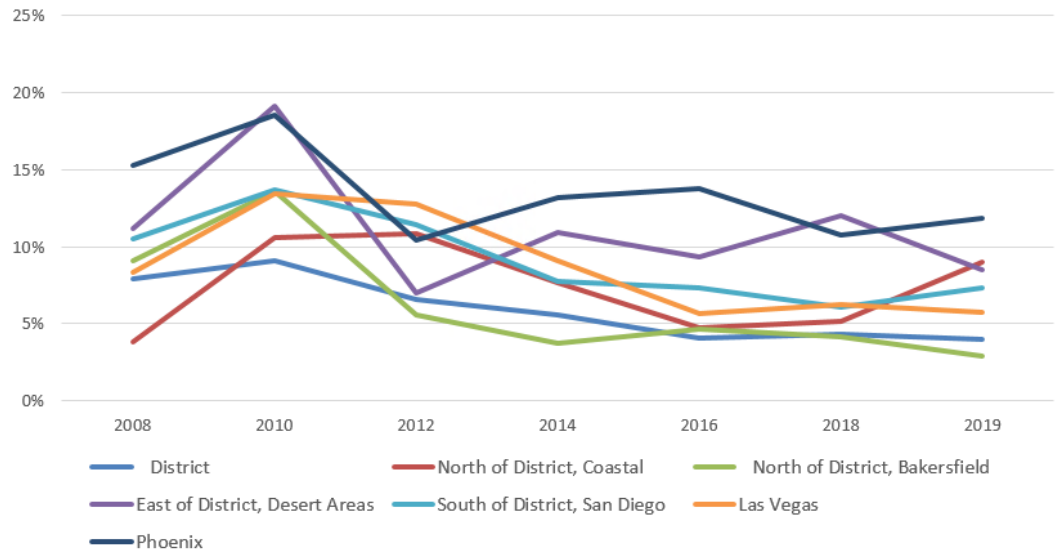
* Categories with fewer than five properties.

In addition to the data presented in Exhibit 10, we examined the difference in vacancy rates for properties closer and farther from major roads, as grouped into three bins: properties within a half mile, a half mile to one mile, and greater than one mile from a major road. Based on this analysis, we did not identify a systematic relationship between vacancy rates and property distance from a major road.[16]

Exhibit 11 shows historical vacancy rates across market areas from 2008 to 2019. Because these historical data are from the CoStar Market Analytics™ module, they differ somewhat from the data snapshot in Exhibit 10, which is based on the CoStar Property™ data. Western AZ is excluded from Exhibit 11 due to a small sample of properties. The vacancy rate in the South Coast AQMD jurisdiction is consistently among the lowest throughout the timeframe, while the Phoenix market tends to have the highest vacancy rate.

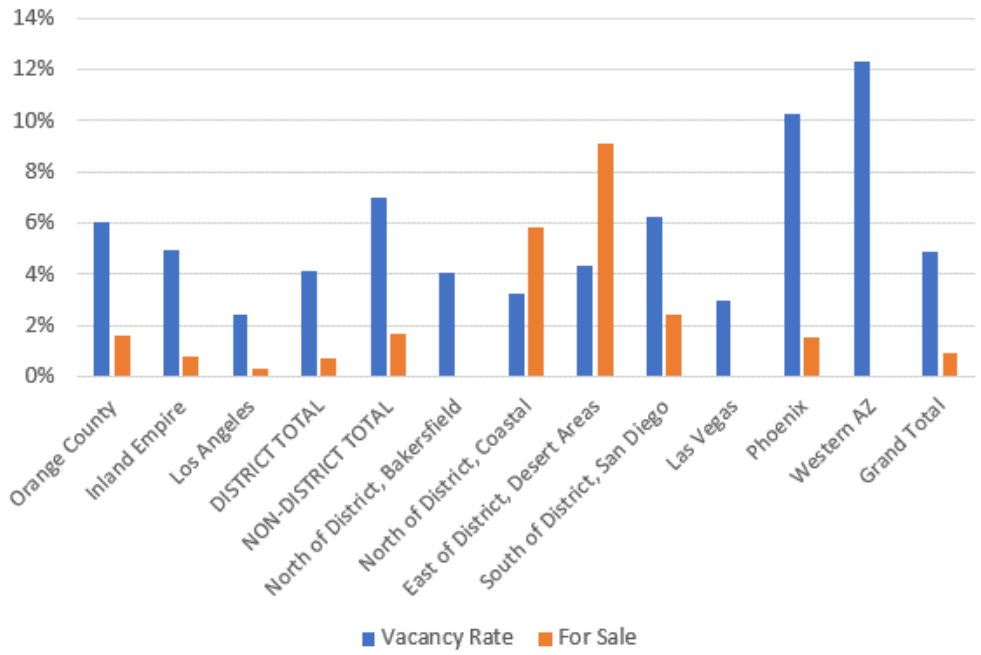
[16] We do note the average vacancy rate for retail fulfillment properties located between one and five miles from a major road is much higher outside the District (25 percent) than in the District (five percent). This difference is driven entirely by properties within the Phoenix market.

EXHIBIT 11. HISTORICAL VACANCY RATES ACROSS MARKETS - 2008-2019.



We also compare vacancy rates with the percentage of property for sale across the markets. To avoid double counting, when a property is both vacant and for sale, we include it only in the for-sale category. Due to this, the vacancy rates shown in Exhibit 12 are slightly lower than those listed in Exhibit 10. For the most part, the share of property area listed for rent exceeds the percentage for sale, with the exception of the East of District, Desert Areas and North of District, Coastal markets.

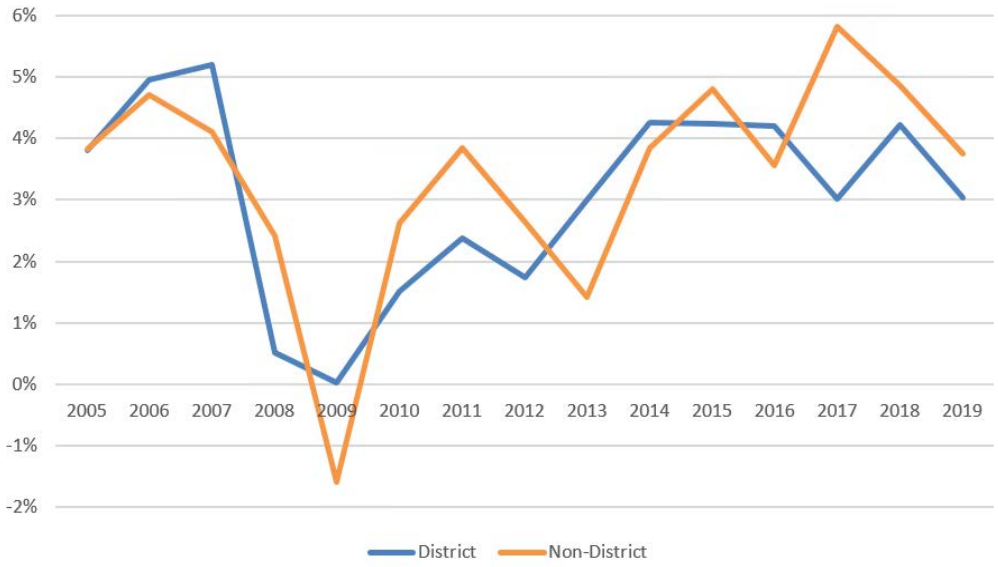
EXHIBIT 12. VACANCY AND FOR SALE RATES ACROSS MARKETS - YEAR 2019



Net Absorption

To provide insights on the direction of each market, we also examine net absorption for warehouse space, defined as the total amount of space tenants moved into in a given time period less the amount of space tenants vacated during the same time period. Exhibit 13 shows annual net absorption as a share of total capacity has been positive and, for the most part, growing in both the South Coast AQMD jurisdiction and outlying markets since 2010.[17] Annual net absorption values in square feet are presented in Exhibit 14 for 2000 through 2019 for each market area. The non-District total line represents the sum of all outlying market net absorption, both positive and negative.

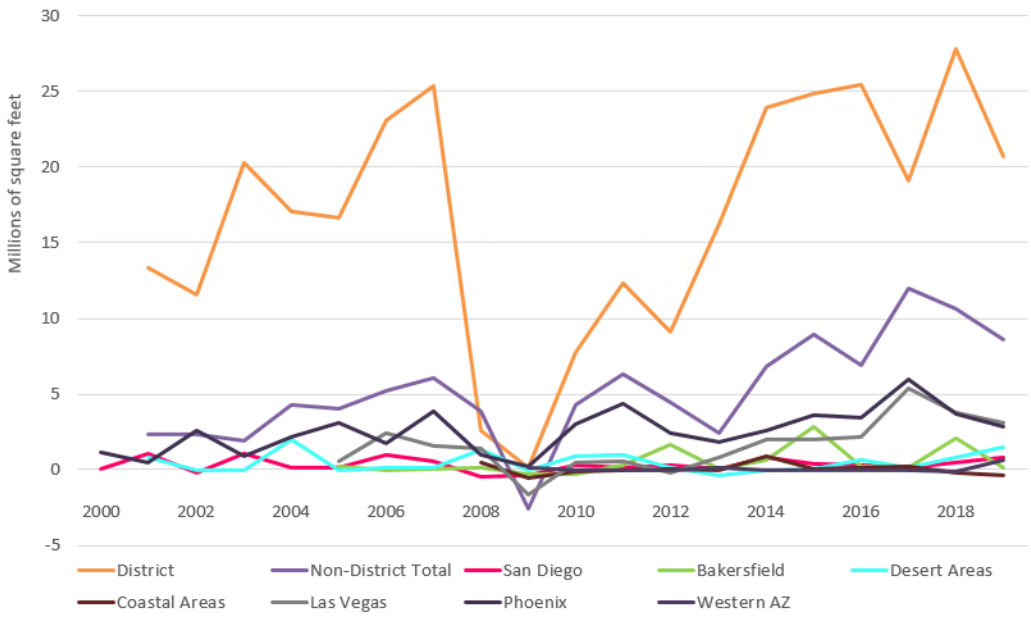
EXHIBIT 13. NET ABSORPTION AS A PERCENT OF OVERALL CAPACITY - 2010-PRESENT



Note: Due to data limitations, the Non-District total does not include net absorption totals for the Coastal Areas and Western AZ markets prior to 2007 and 2008, respectively.

[17] The net absorption and historical rents (Exhibit 17) analyses rely on the same outputs from the CoStar Market Analytics™ module. While the historical rents analysis relies on slightly revised market areas (defined in that section) due to incomplete data, the net absorption analysis uses the same market area geographies as defined in Exhibit 1-A and used elsewhere in this memo.

EXHIBIT 14. ANNUAL NET ABSORPTION ACROSS MARKETS - 2000-2019



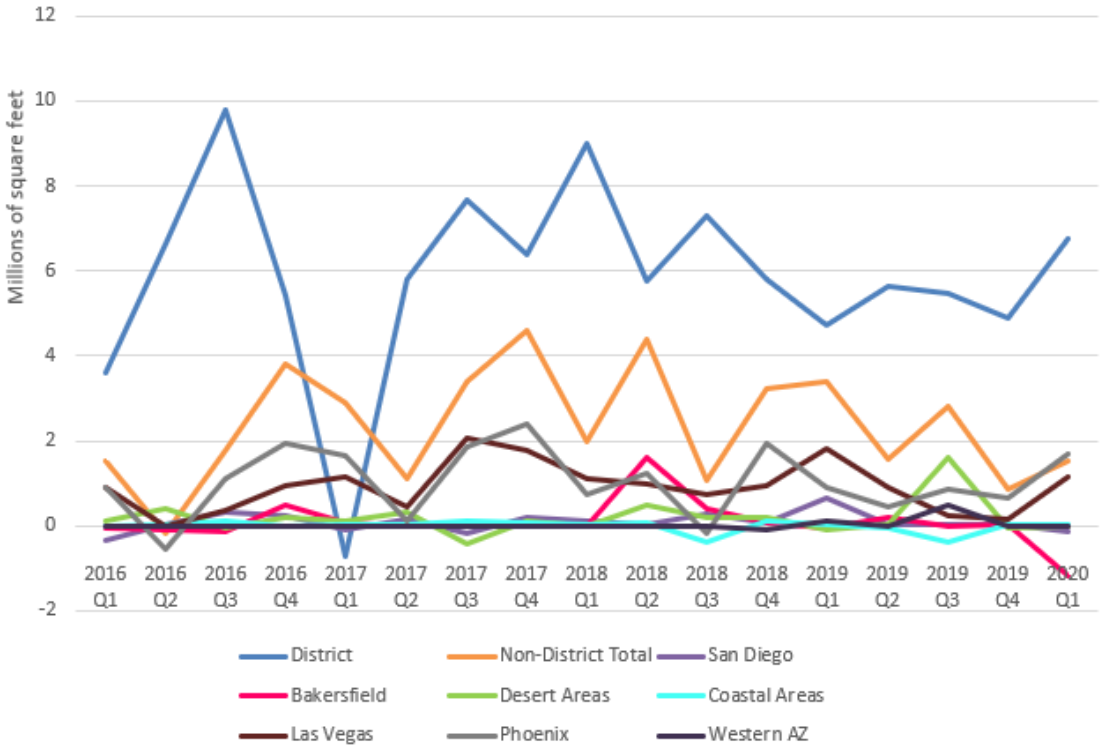
Note: Due to data limitations, not all market areas have net absorption data extending back to 2000.

Based on the data shown in Exhibit 14, the South Coast AQMD, Phoenix and Las Vegas markets have steadily increased total occupied space year over year since 2009. The other outlying markets have less obvious growth patterns, with annual net absorption hovering around zero. At two points, in 2012 and 2017, growth in net absorption in the South Coast AQMD jurisdiction slowed relative to the prior years. Reduced net absorption growth in 2017 in the South Coast AQMD jurisdiction, however, is offset with an increase in non-District growth, particularly in the Phoenix and Las Vegas markets. This provides suggestive evidence that warehousing activity may shift between the South Coast AQMD jurisdiction and these outlying areas.

Exhibit 15 examines this activity from 2016 to the present in quarterly timesteps. Time periods such as Q4 2016, Q1 2017, Q4 2017, Q2 2018, and Q1 2019 indicate dips in the growth of South Coast AQMD tenant occupancy directly coincide with increases in the Phoenix and Las Vegas markets' net absorption. Conversely, growth in net absorption in the South Coast AQMD jurisdiction in Q2 2016, Q2 2017, Q1 2018, Q3 2018, and Q2 2019 align with reduced growth in the non-District markets.

For the most part, non-District growth appears to be focused in the Phoenix and Las Vegas markets, though in some instances Bakersfield (Q2 2018) and Desert Areas (Q3 2019) see spikes in net absorption coinciding with declines in net absorption the South Coast AQMD jurisdiction. In recent years, the quarterly data indicate all markets do not see simultaneous increases or decreases in growth of tenant absorption. Tenant absorption instead appears to shift, a finding not captured as clearly in the annual data in Exhibit 14. Whether this reflects actual competition between markets or other factors, such as differences in the typical leasing calendar across geographies, is unclear.

EXHIBIT 15. RECENT QUARTERLY NET ABSORPTION ACROSS MARKETS, 2016-PRESENT



Pricing

Our assessment of the pricing for warehousing space in the South Coast AQMD jurisdiction and outlying areas considered both monthly rental prices and sale prices, focusing on properties with a building area of at least 100,000 square feet. For rental prices in each area, we calculated the average monthly triple net rent values for the advertised rent per square foot as reported in the CoStar data.[18] The data has available rents for 212 properties, or six percent of the total 3,613 warehousing properties greater than 100,000 square feet and fitting the other criteria for the sample of properties.

We used values reported in the CoStar data to calculate the average sale price per square foot. We limited our scope to sales that occurred from 2017 to the present to avoid underestimating this value due to appreciation in property values over time. We dropped the lowest and highest five percent of sales prices that occurred within this timeframe to avoid outliers due to coding errors or sales intentionally below market value (e.g., transfers of property between members of the same family). This resulted in a sales data sample of 338 properties, or nine percent of the total 3,613 warehousing properties greater than 100,000 square feet and fitting the other criteria for the sample of properties. Exhibit 16-A tabulates the rental and sale price per square foot across markets. Exhibit 16-B illustrates the differences in monthly rent across market area.

At an average of $0.88 per square foot per month, the South Coast AQMD market overall has a higher rental price per square foot than its neighboring markets, with the exception

[18] CoStar reports triple net rent values, which exclude property taxes, building maintenance, and insurance premiums. On a triple net lease, these expenses are typically paid by the tenant in addition to rent.

of San Diego. This is driven by high prices in the Orange County and Los Angeles sub-markets, as rent in the Inland Empire is lower than in the other South Coast AQMD sub-markets. The Desert Areas and Coastal Santa Barbara, Ventura and San Luis Obispo (North of District, Coastal) follow closely behind the District average. Western Arizona, Bakersfield, and Phoenix have the lowest prices of $0.44 and below.[19]

Sale prices follow a similar trend to rental prices, with higher prices in urban areas. The non-District average is much lower than the South Coast AQMD value, which is more than three times higher at $1,087 per square foot.

EXHIBIT 16-A. MONTHLY RENT AND SALE PRICES ACROSS MARKETS FOR WAREHOUSES WITH BUILDING AREA OF AT LEAST 100,000 SQUARE FEET - YEAR 2019

MARKET	AVERAGE RENTAL PRICE PER SQUARE FOOT	AVERAGE SALE PRICE PER SQUARE FOOT
South Coast AQMD Average	**$0.88**	**$1,087**
Orange County	$0.92	$503
Inland Empire	$0.70	$1,164
Los Angeles	$0.93	$1,173
Non-District Average	**$0.58**	**$344**
North of District, Coastal	$0.78	$100
North of District, Bakersfield^	$0.34	$105
East of District, Desert Areas*^	$0.81	$27
South of District, San Diego	$0.92	$225
Las Vegas	$0.63	$574
Phoenix	$0.44	$307
Western AZ*^	$0.32	No Data
Grand Average	**$0.71**	**$815**

*Denotes fewer than five properties with available sales data.

^Denotes fewer than five properties with available rent data.

[19] Small sample size is an issue in calculating average rent and sale price by market area. The average rents for the North of District, Bakersfield, East of District, Desert Areas, and Western AZ markets all rely on five or fewer properties in the calculation of these values. For average sale price, East of District, Desert Areas has fewer than five properties with data, while the Western AZ has no data. Focusing on the Non-District Average values in Exhibit 16 avoids this issue.

EXHIBIT 16-B. MONTHLY RENT AND SALE PRICES ACROSS MARKETS FOR WAREHOUSES WITH BUILDING AREA OF AT LEAST 100,000 SQUARE FEET - YEAR 2019



We also examined recent historical rents across the geographic markets. In order to examine these prices, we relied on data from the CoStar Analytics™ module's quarterly reporting filtered for Industrial properties greater than 100,000 square feet. The markets defined in this tool differ slightly from those we define for the purposes of this analysis, in that they at times follow county lines while ours account for South Coast AQMD's more idiosyncratic jurisdictional boundaries. Additionally, for some areas data are not available in this module. We describe below the resulting altered markets and any methods we used to reconcile the differences with the markets used in Exhibit 16 and elsewhere in this memo.

- ***North of District, Bakersfield:*** Data is not available for the portion of Los Angeles County located outside of the District. We use historical rent data for Kern County, which accounts for 84.0 percent of the current existing square footage considered in this analysis.
- ***East of District, Desert Areas:*** Data is available at the county level for both Imperial County and the non-District portions of Riverside and San Bernardino Counties. We calculate weighted average historical rents by applying the current share of property square footage for Imperial County (19.3 percent) and the non-District portions of Riverside and San Bernardino counties (80.7 percent).
- ***North of District, Coastal:*** The historical rent we estimate for this area is the weighted average of rents for San Luis Obispo and Santa Barbara counties. CoStar Analytics™ data are not available for Ventura County. Taken together, San Luis Obispo and Santa Barbara counties account for just 20.5 percent of the total relevant square footage in the North of District, Coastal market considered elsewhere in this document.
- ***South of District, San Diego; Las Vegas; and Phoenix:*** These markets, following county lines and with available data, are unchanged from those considered elsewhere in this document.

- ***Western AZ:*** Of the four counties included in the Western Arizona area examined elsewhere in this document, Yuma County, which contains 52.9 percent of the relevant properties considered in this market, is the only county for which historical rent data are available.

The pricing information in Exhibit 16 above reflects the 2019 snapshot of CoStar's property-level data filtered according to the criteria described earlier in this document.

Because CoStar's historical data does not allow for filtering by secondary type, the historical rent data for all properties are classified as Industrial (i.e., not only those with secondary categorizations of Distribution, Light Distribution, Refrigeration/Cold Storage, Truck Terminal, or Warehouse). Additionally, historical rent data is restricted to properties greater than 100,00 square feet. This difference results in discrepancies relative to the 2019 pricing information gathered from the property data.

Exhibit 17 shows the average monthly triple net rent price for each of the adapted markets described above at the end of the stated year. Following a dip in rents related to the 2008 financial crisis, we see prices steadily rise across markets, in most cases beginning in 2012. Similar to what we see above in the property data snapshot, prices are highest in California's coastal markets. Inland urban and rural markets form a second pricing tier significantly lower than the coastal markets.

EXHIBIT 17. RECENT HISTORICAL MONTHLY RENT PRICES ACROSS MARKETS – 2000-2019 (RENTAL PRICE PER SQUARE FOOT, 2019$[20])

MARKET	2000	2002	2004	2006	2008	2010	2012	2014	2016	2018	2019
South Coast AQMD Jurisdiction	$0.55	$0.55	$0.55	$0.56	$0.57	$0.45	$0.49	$0.56	$0.59	$0.68	$0.80
North of District, Coastal Areas					$0.71	$0.60	$0.55	$0.52	$0.46	$0.63	$0.63
North of District, Bakersfield					$0.38	$0.28	$0.28	$0.33	$0.35	$0.43	$0.45
East of District, Desert Areas						$0.51	$0.30	$0.31	$0.35	$0.39	$0.36
South of District, San Diego	$0.79	$0.74	$0.81	$0.84	$0.84	$0.68	$0.70	$0.67	$0.76	$0.87	$0.92
Las Vegas				$0.57	$0.73	$0.51	$0.47	$0.48	$0.54	$0.50	$0.57
Phoenix					$0.51	$0.41	$0.39	$0.40	$0.44	$0.45	
Western AZ					$0.55	$0.43	$0.25	$0.34	$0.39	$0.37	$0.35

Note:
- Due to data limitations, historical rents are not reported for some market areas.
- Historical values are adjusted to 2019 dollars. See footnote 14 for indexing information.

Parcels

In order to capture the potential for future warehouse development, we assessed land parcels in the CoStar data tagged with CoStar's Industrial categorization. We limited our search to parcels located less than two miles from a major road and organized the parcels according to the classes in Exhibit 4 based on area, assuming a land parcel will be at a minimum twice as large in area as the building's square footage.[21] The resulting parcel size categories are 200,000 to 400,000 square feet, 400,000 to one million square feet, and parcels greater than one million square feet. We also examined the feasibility of grouping parcels according to their access or proximity to electric and water infrastructure, but such information was not available from CoStar or other data sources we consulted.

[20] We use annual gross domestic product implicit price deflators to inflate prices to the current dollar year (2019). These values were obtained from the Federal Reserve Bank of St. Louis Economic Research Division (FRED) and are indexed to 2012 (2012 = 100.00). The values are as follow: 2000=78.08, 2002=81.05, 2004=84.78, 2006=90.07, 2008=94.29, 2010=96.11, 2012=100.00, 2014=103.64, 2016=105.80, 2018=110.42, 2019=112.35.

[21] We arrive at this assumption from calculating the average ratio of rentable building area to land area for both District and non-District markets. For District properties this ratio was much higher, at 0.54, relative to 0.42 for non-District properties. We use a broader population of buildings to calculate this ratio than those included in this analysis.

Exhibits 18 and 19 show the number of properties and estimated building square footage that could be constructed for each of the parcel categories specified in the previous paragraph across the various markets. To estimate building square footage, we applied the average ratios of building area to land area in the South Coast AQMD and non-District markets, 0.54 and 0.42 respectively. Multiplying these values by parcel land area gave an estimate of potential building area. Exhibit 18 shows the number of parcels available while Exhibit 19 shows the square footage of parcels available.

EXHIBIT 18. NUMBER OF PROPERTIES ZONED FOR INDUSTRIAL DEVELOPMENT - YEAR 2019

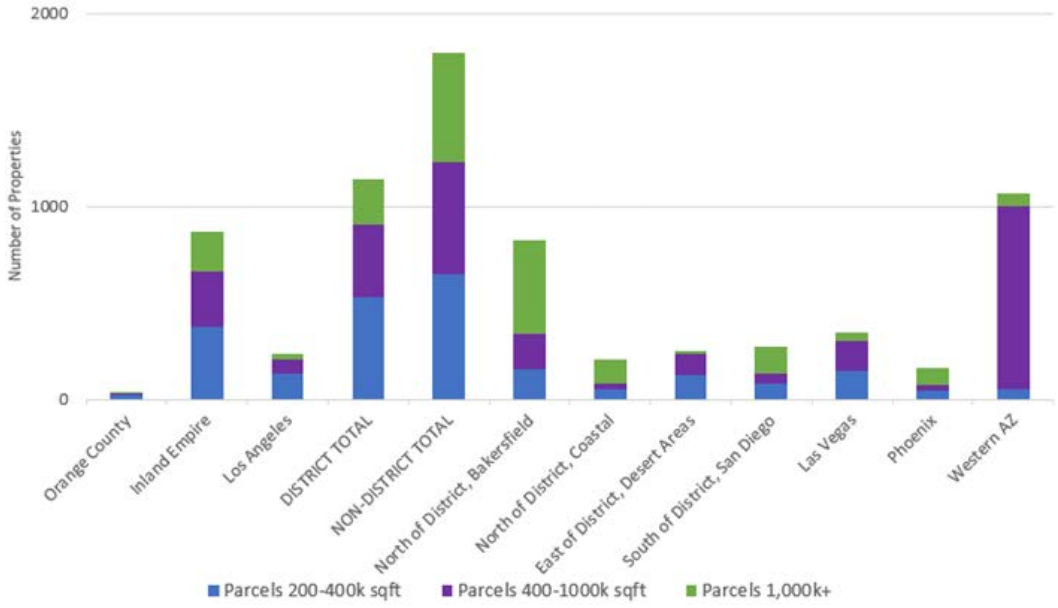


EXHIBIT 19. SQUARE FOOTAGE OF PROPERTIES PROPOSED, UNDER CONSTRUCTION, AND POTENTIAL BUILDING AREA OF PROPERTIES ZONED FOR INDUSTRIAL DEVELOPMENT - YEAR 2019

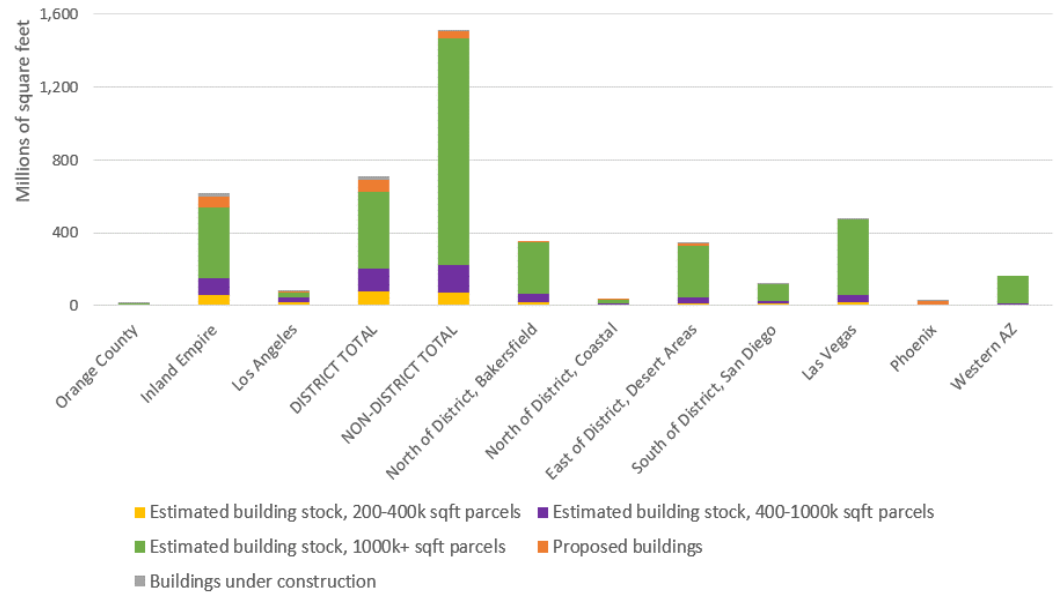


Exhibit 18 reveals a variety of property sizes spread across the various markets, while Exhibit 19 shows most of the total land area located in properties over one million square feet. Eventual parcel development could involve subdividing parcels or developing multiple smaller warehouse facilities on one larger parcel.

MARKET TRENDS

In this section we use current property data as well as the forecast data included with CoStar Analytics™ to identify both medium- and long-term estimates of available capacity for warehousing operations. The long-term forecast estimates capacity additions and additional remaining development potential through 2028. The medium-term forecast considers capacity availability either available now or likely available within the next five years (assuming a five-year window for project approvals and construction). These estimates allow us to compare the projected capacity available in the non-South Coast AQMD areas to existing and projected inventory inside the South Coast AQMD jurisdiction. These forecasts are not available by individual warehouse type, as CoStar's forecast data do not differentiate between differently sized properties.

Medium-term capacity forecast

To generate a medium-term capacity forecast, we examine current vacant capacity and new capacity proposed or currently under construction. Exhibit 20 shows that most of the medium-term capacity available in the South Coast AQMD is in the Inland Empire, while most of the non-South Coast AQMD medium-term capacity is in the Phoenix; East of District, Desert Areas; Las Vegas; and North of District, Bakersfield markets.

EXHIBIT 20. CURRENT VACANCIES, CAPACITY UNDER CONSTRUCTION AND PROPOSED CAPACITY – YEAR 2019

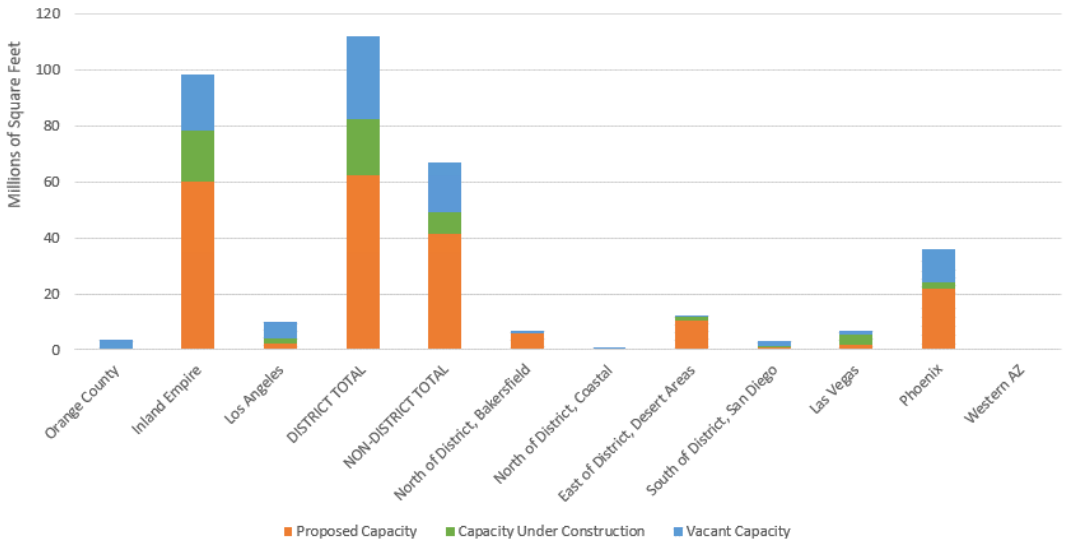
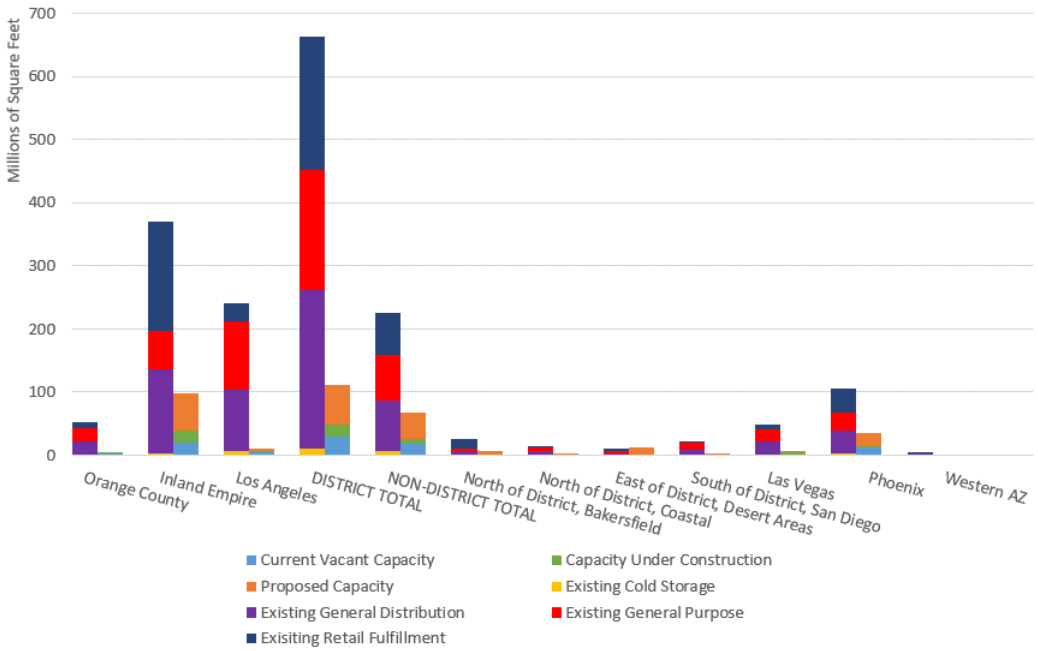


Exhibit 21 compares the medium-term forecast introduced in Exhibit 20 to existing warehousing real estate capacity. As shown in the exhibit, current vacancies, new property under construction, and proposed construction are fairly limited relative to the current warehouse stock. The non-South Coast AQMD total of approximately 67 million square feet is only 10.1 percent of the size of the current District capacity: 662 million

square feet. This indicates that in the medium term, the outlying real estate markets have the potential to absorb only a small piece of current South Coast AQMD warehousing operations.

EXHIBIT 21. COMPARISON OF MEDIUM-TERM AVAILABILITY FORECAST WITH CURRENT 2019 INVENTORY



Long-term capacity forecast

For a long-term forecast of available warehousing space, we identify two key metrics: expected developments and projected "slack" capacity. Expected developments are those projected under the CoStar real estate forecast associated with CoStar's Base Case economic scenario. The base case forecast reflects Moody's Analytics "Baseline" Scenario from July 2018, which assumes a conservative average 1.2 million job additions per year. The forecast applies the future economic estimates to the real estate market, which we limit to properties classified by CoStar as Industrial and falling under the Logistics secondary category.[22]

As with the information on historical rents, the CoStar forecasts of expected developments are, in many cases, based on different geographic markets than those we define above. Though CoStar's forecast areas are based on county boundaries, they do not always align with our market areas. This is largely due to the irregular boundary of the South Coast AQMD region. We reconcile these differences through the following methods,[23] which differ across our markets:

[22] CoStar's secondary classifications in their forecast tools are different than those used in the normal property data. It is not possible to narrow down to Warehouse, Refrigeration/Cold Storage, etc.

[23] Note that these methods are similar to those described for Exhibit 17 and the associated discussion on historical rents.

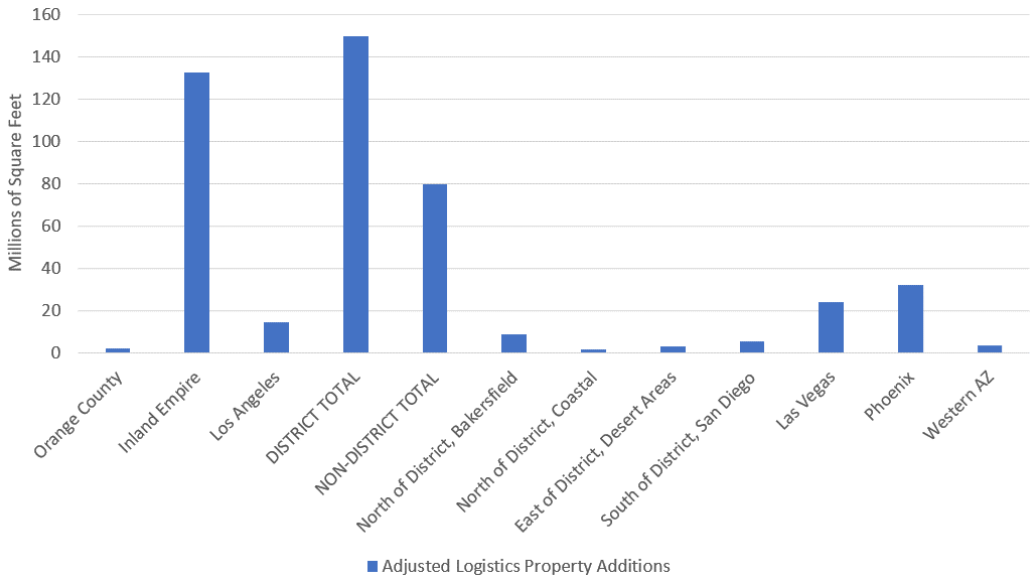
- ***District Markets:*** The CoStar forecast includes projections for all of Los Angeles County and the Inland Empire (i.e., all of Riverside and San Bernardino counties). We use the current snapshot of the relevant property data to determine the share of projected developments in Los Angeles, Riverside and San Bernardino counties located within and outside of the South Coast AQMD jurisdiction. We multiply those percentages by CoStar's estimated growth in properties for each of those counties, then sum the relevant portions within the South Coast AQMD jurisdiction to obtain the total for each of the Los Angeles and Inland Empire markets' projected developments. As mentioned below, Orange County's projections did not need any additional modifications.
- ***North of District, Bakersfield:*** This area includes the non-District portion of Los Angeles County as well as all of Kern County. Building on the approach described above for the South Coast AQMD markets, we use the remaining share of projected capacity growth in the Los Angeles County market added to the projection for Kern County.
- ***East of District, Desert Areas:*** This area includes the non-South Coast AQMD portions of Riverside and San Bernardino counties as well as Imperial County. Building on the approach described above, we use the remaining share of projected capacity growth in Riverside and San Bernardino counties not included in the South Coast AQMD jurisdiction. The CoStar projections, however, do not include data for Imperial County. In the absence of such data, we apply the forecasted ten-year growth rate for Riverside and San Bernardino counties to the existing stock in Imperial County, then sum the properties in the three counties to obtain an estimate for the whole East of District, Desert Areas market.
- ***North of District, Coastal:*** CoStar's forecast includes data for San Luis Obispo and Santa Barbara counties, but not Ventura County. We apply the average growth rate across the included two counties to Ventura County's current capacity, then sum across all three counties to obtain an estimate for the whole Coastal market.
- ***Western Arizona:*** Data are available only for Yuma County, but CoStar forecasts zero developments over the 2018-2028 time period in the base case scenario. We apply this growth rate of zero percent to Yavapai, La Paz, and Mohave counties, expecting no growth in capacity in the next ten years.
- The remaining markets (Orange County, San Diego, Las Vegas, Phoenix) all use the same forecast markets as our analysis, so no reconciliation is necessary.

Based on this spatial reconciliation between the CoStar forecasts and the market areas we defined for this analysis, Exhibit 22 shows expected warehousing real estate capacity developments. Because these forecasts do not distinguish between properties of different sizes, we multiply the values by the proportion of property stock greater than 100,000 square feet to estimate the share of developments relevant to warehouses considered in this analysis.[24] Developments in the South Coast AQMD market exceed those elsewhere,

[24] This ratio is 0.67 for the South Coast AWMD and 0.58 for the non-South Coast AQMD market areas, calculated as the share of warehousing square footage associated with properties greater than 100,000 square feet. This ratio is based on the scope

while the vast majority of non-South Coast AQMD developments are expected in the Phoenix and Las Vegas markets.

EXHIBIT 22. EXPECTED INDUSTRIAL-LOGISTICS DEVELOPMENTS, 2019-2028



Projected slack capacity reflects parcels available for development (as measured at present) as well as projected vacancies. However, because at least a portion of projected vacancies may be on parcels developed in the next several years, summing parcels available with vacancies would lead to overestimation of the total capacity available. To account for this we net out expected developments from the estimated parcels available. Based on this adjustment, we specify projected slack capacity as follows:[25]

$$S = [(P_i - F) * C_{iw}] + V$$

Where S is slack capacity (square feet);

P_i is the total area of land parcels currently available for industrial development (square feet);

F is the land area required to meet forecasted development of industrial land parcels (square feet);

of all properties we have access to via the CoStar database, which is limited to properties greater than 25,000 square feet. The forecasted property additions are with respect to all property sizes, but we expect the share attributable to properties smaller than 25,000 square feet to be small.

[25] This specification of slack capacity is similar but not identical to the long-term measure in the statement of work (SOW), which defines capacity as projected vacancies plus land available for the construction of warehousing facilities. For the reasons described here, the measure in the SOW likely overstates capacity because it does not account for the fact that some projected vacancies may be new construction on parcels now available for construction.

C_{iw} is the building area to land area ratio, as specified above (0.54 for properties in the South Coast AQMD jurisdiction, and 0.42 for non-District properties); and

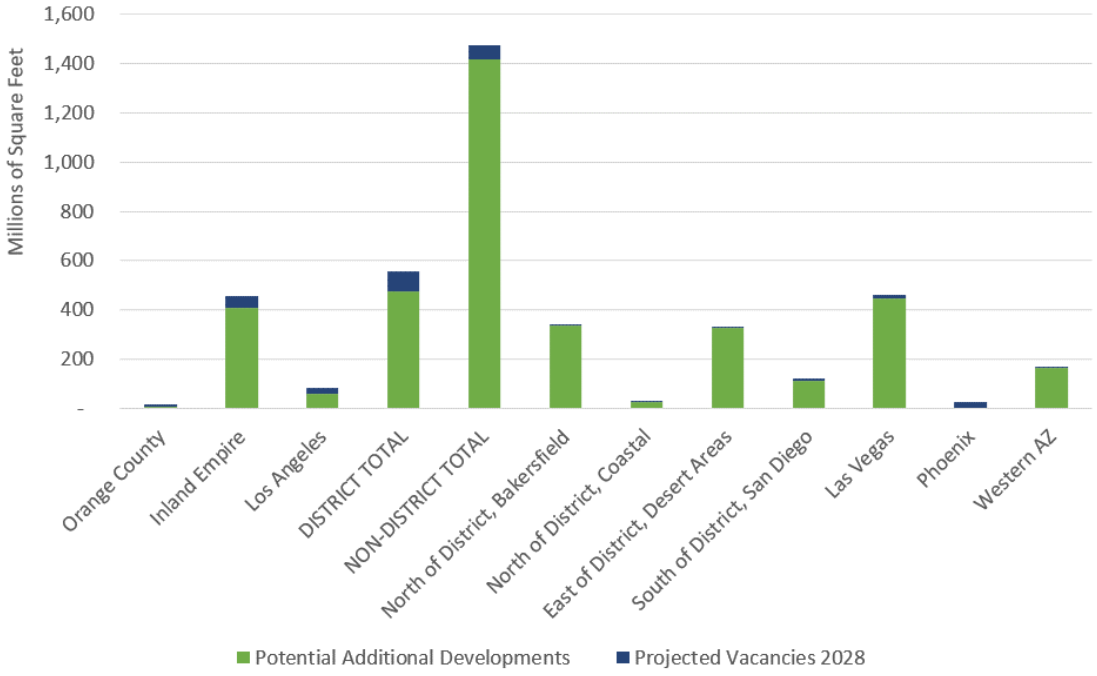
V is projected vacancies (square feet).

This equation, in effect, specifies slack capacity as the parcels expected to be undeveloped without an ISR plus projected vacancies. In applying this equation, we restrict again our search of available vacant land parcels to those larger than 200,000 square feet and those located less than two miles from a major road.

Exhibit 23 shows projected slack capacity, which we calculate following the same reconciliation of the markets' differing geography as above. Projected slack capacity, which may be interpreted as projected vacancies plus potential additional developments not currently forecasted, is approximately three times larger in the non-South Coast AQMD markets than in the South Coast AQMD market. Slack capacity in the South Coast AQMD market, however, is higher than in any single non-District market.

While the projected developments shown in Exhibit 22 reflect additions to total capacity, we expect most of this capacity to be filled in accordance with the base case economic scenario. For this reason, the estimates of slack capacity shown in Exhibit 23 are a more appropriate measure of the capacity available or developable over the next ten years than the projected developments shown in Exhibit 22.

EXHIBIT 23. ESTIMATED SQUARE FOOTAGE OF PROJECTED SLACK CAPACITY, 2028



Similar to Exhibit 21's comparison of the medium-term forecast of capacity additions with existing capacity, Exhibits 24 and 25 compare the long-term forecast's metrics with current capacity.

Forecasted developments in the non-South Coast AQMD markets represent approximately one-eight of current South Coast AQMD capacity, while forecasted developments within the South Coast AQMD jurisdiction are expected to be almost twice as large over the same ten-year time period. Non-South Coast AQMD slack capacity, on the other hand, is over twice as large than current South Coast AQMD capacity. The Las Vegas and Western AZ markets combined have enough slack capacity to theoretically absorb approximately all current warehousing operations in the South Coast AQMD jurisdiction, while the much closer East of District, Desert Areas and North of District, Bakersfield markets each have slack capacity larger than one-half of current warehousing capacity in the South Coast AQMD jurisdiction.

Because mass departures from the South Coast AQMD jurisdiction's warehousing capacity would inevitably drive down prices, we do not expect a largescale development of slack capacity to absorb all warehousing operations in the South Coast AQMD market. It is also unrealistic that all slack capacity would be developed specifically for warehousing capacity, as the Industrial property classification also includes other types of potential developments.

Overall, the comparisons in Exhibits 24 and 25 show projected developments alone would be insufficient to absorb a large portion of the warehouse space in the South Coast AQMD jurisdiction and any mass relocation would require significant warehouse development on currently vacant parcels. In addition, many vacant land parcels available for development may also need utility infrastructure improvements.

EXHIBIT 24. COMPARISON OF EXPECTED DEVELOPMENTS THROUGH 2028 WITH CURRENT INVENTORY

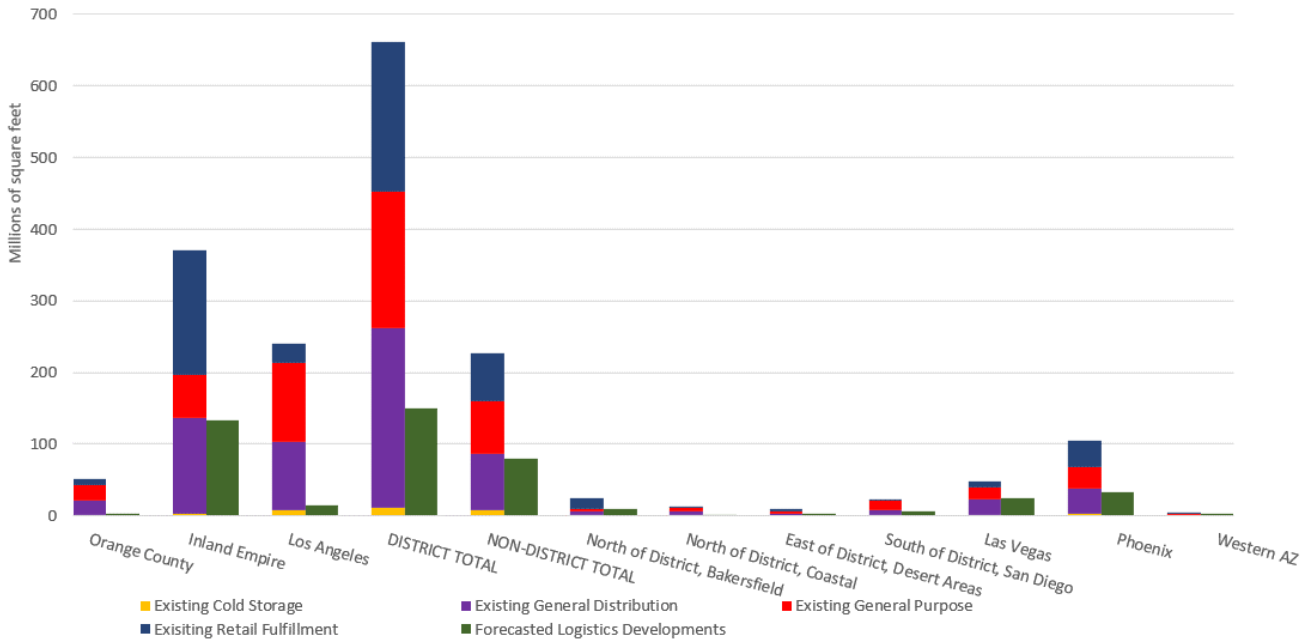
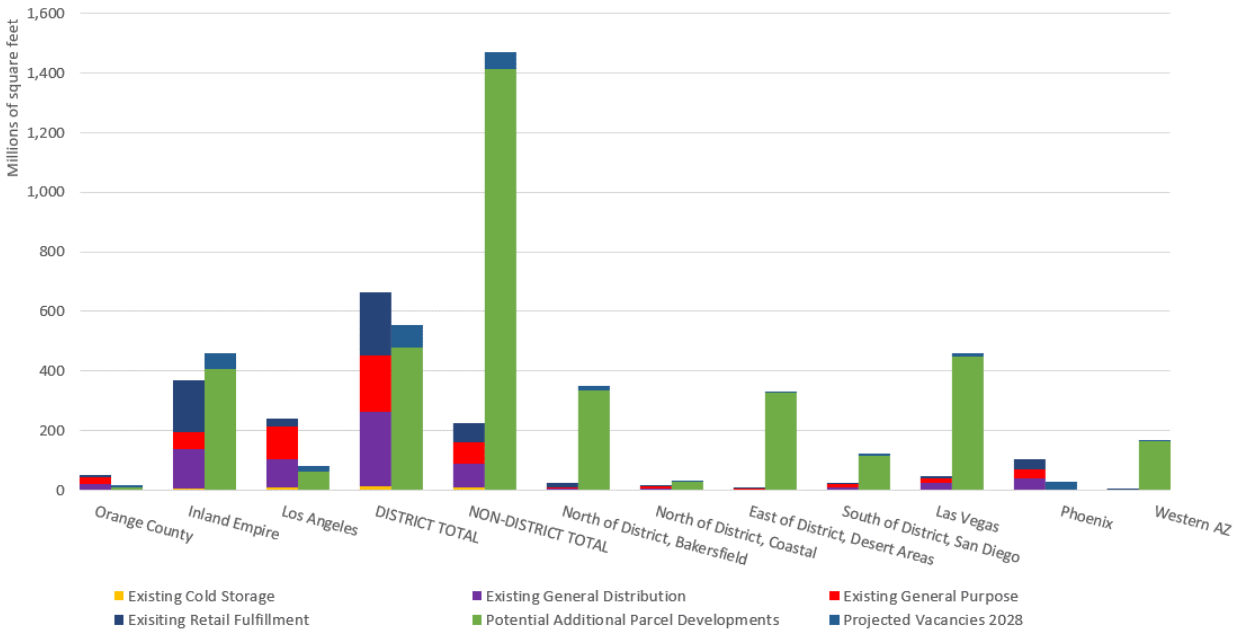


EXHIBIT 25. COMPARISON OF ESTIMATED SLACK CAPACITY IN 2028 WITH CURRENT INVENTORY



CONCLUSIONS

The analysis presented above provides several important insights related to the warehousing real estate markets in the South Coast AQMD jurisdiction and neighboring areas. Focusing on the potential for warehousing operations in the South Coast AQMD jurisdiction to relocate to neighboring areas, the main conclusions we draw from this analysis include the following:

- The market for warehousing within the South Coast AQMD jurisdiction is significantly larger than any of the surrounding market areas considered in this analysis. The South Coast AQMD jurisdiction currently has nearly three times as much warehousing capacity as the outlying markets, with 662 million square feet in the South Coast AQMD jurisdiction versus 226 million square feet across all outlying markets combined. In the last ten years, warehousing capacity additions within the South Coast AQMD jurisdiction are over two times the size of additions in all surrounding market areas combined.
- The outsized demand for warehousing capacity within the South Coast AQMD jurisdiction is despite significantly higher property prices. Rental prices per square foot are on average 34 percent lower in the non-South Coast AQMD markets than within the South Coast AQMD jurisdiction. Of the outlying markets, prices are highest in urban areas and lower outside of California.
- Annual net absorption tends to be much larger within the South Coast AQMD jurisdiction than the surrounding market areas, though the rates are similar when adjusted based on the share of total warehousing capacity. Based on the comparison of net absorption across markets, it appears changes in the growth in warehousing in the South Coast AQMD jurisdiction coincides with changes to growth in the opposite direction in the outlying markets. On at least one occasion,

the Phoenix and Las Vegas markets appear to have absorbed more warehousing growth when growth in the sector declined in the South Coast AQMD jurisdiction. This could suggest a willingness on the part of new or relocating warehouse operators to choose outlying areas over the South Coast AQMD jurisdiction, despite the locational advantages of the latter. We note, however, that the decline in net absorption in the South Coast AQMD jurisdiction (in 2017) may coincide with the increase in the Phoenix and Las Vegas markets due to several factors that we were unable to account for in this analysis (e.g., differential growth rates in state or city economies).

- Because the total warehousing capacity in the South Coast AQMD jurisdiction so exceeds available capacity in the surrounding market areas, additional developments would be necessary to absorb a significant amount of potential warehouse relocations from the South Coast AQMD. With the exception of the North of District, Coastal and Phoenix markets, the potential for significant warehousing capacity developments from vacant land parcels exists in the South Coast AQMD jurisdiction and outlying markets. The non-South Coast AQMD total for estimated potential capacity on undeveloped parcels is more than two times the amount in the South Coast AQMD jurisdiction, at over 1,500 million square feet.
- Focusing on our metric of medium-term capacity, current vacancies and near-term capacity additions are more than 25 percent larger in the South Coast AQMD jurisdiction than in outlying markets. The vast majority of non-South Coast AQMD near-term capacity is located in the Phoenix and Desert Areas markets. Total non-South Coast AQMD medium-term capacity developments represent less than 15 percent of current capacity in the South Coast AQMD jurisdiction.
- With respect to long-term capacity, forecasted capacity additions in the next ten years are around 150 million square feet in the South Coast AQMD jurisdiction and 80 million square feet across outlying markets. While total forecasted capacity additions are highest in the South Coast AQMD jurisdiction, the ten-year forecasted growth rate is higher outside of the South Coast AQMD jurisdiction. The potential for additional development and absorption, or "slack capacity," is over twice as large in the non-District markets as current capacity in the South Coast AQMD jurisdiction. Thus, in the long term, any significant shifts in warehousing operations from the South Coast AQMD jurisdiction to outlying areas will require much greater warehouse development than is currently expected.

ATTACHMENT 3

TECHNICAL MEMORANDUM ON TRUCK FLEETS THAT SERVE WAREHOUSES IN SCAQMD JURISDICTION

MEMORANDUM | 12 DECEMBER 2020

TO Ian MacMillan, Paul Stroik, Shah Dabirian, and Victor Juan, South Coast Air Quality Management District (SCAQMD)

CC Jason Price, Industrial Economics (IEc)

FROM Jasna Tomic and Kelly Leathers, CALSTART

SUBJECT Technical Memorandum on Truck Fleets that Serve Warehouses in South Coast AQMD Jurisdiction

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INTRODUCTION

This memorandum is in support of the South Coast Air Quality Management District (South Coast AQMD) staff's development of a potential indirect source rule (ISR) to reduce mobile source emissions related to the operation of logistics and warehousing facilities in the South Coast AQMD's four-county jurisdiction (Los Angeles, Orange, Riverside, and San Bernardino counties, as shown in Exhibit 1).[1] The purpose of this document is to develop a better understanding of the fleets that serve the logistics and warehousing sector in the South Coast AQMD jurisdiction.

In the first part of this document we review the characteristics of fleets serving the Ports of Los Angeles and Long Beach, the four counties that make up the South Coast AQMD jurisdiction, and the broader ten-county Southern California region. The second portion of this document provides insights on fleet characteristics and operations, as obtained from CALSTART interviews with industry stakeholders.

EXHIBIT 1: SOUTH COAST AQMD JURISDICTION



[1] The South Coast AQMD jurisdiction is comprised of all of Orange County and parts of Los Angeles, Riverside, and San Bernardino Counties. The area is presented in Figure 1.

TRUCK FLEET CHARACTERISTICS

In this section, we present summary data on the characteristics of fleets potentially affected by the ISR. We conduct this analysis for three categories of fleets at different spatial levels. We first examine fleets with access to the Ports of Los Angeles and Long Beach. We then expand the coverage of our assessment to include fleets in the four counties that make up the South Coast AQMD jurisdiction.[2] Finally, we assess the characteristics of fleets in California more broadly.

DATA SOURCES

In order to describe truck fleets and identify the number of trucks that operate in the region, we principally relied on IHS Automotive data from 2018 as well as data from the San Pedro Bay Ports (Port Drayage Truck Registry). The IHS database includes a record of trucks registered with the California Department of Motor Vehicles (DMV). Trucks that operate in California, however, can be registered in other states and operate under the International Registration Plan (IRP), which allows for interstate operation. These trucks are not included in the IHS database but may be important for understanding fleets operating in California, especially for larger companies that have a national presence. At the state level, we therefore examine both DMV registration data and IRP data, as reported in the California Vehicle Inventory and Use Survey (CA VIUS).

POPULATION OF TRUCKS SERVING THE SAN PEDRO BAY PORTS

SAN PEDRO BAY PORTS

We start with analysis of the Port Drayage Truck Registry, which includes the trucks registered to have access to the Ports of Los Angeles and Long Beach, collectively known as the San Pedro Bay Ports. These are generally Class 7 and 8 trucks. Exhibit 2 below presents the total number of trucks in the Port Drayage Truck Registry and the average number of active trucks per month at the San Pedro Bay Ports over the last three years. Exhibit 3 contains the total number of fleets as well as the number of small (less than 6 trucks), medium (6-10 trucks), and large fleets (more than 10 trucks).

EXHIBIT 2: NUMBER OF TRUCKS THAT ACCESS THE SAN PEDRO BAY PORTS

	2020	2019	2018
No. Trucks	18,556	18,280	18,188
Average Active Trucks Per Month	13,080	13,139	12,737

Source: Port Drayage Truck Registry, 2020.

EXHIBIT 3: NUMBER AND SIZE OF FLEETS ACCESSING SAN PEDRO BAY PORTS

	2020	2019	2018
Fleets	2,348	2,162	1,985
Small Fleets (<6 trucks)	1,006	949	854
Medium Fleets (6-10 trucks)	408	363	348
Large Fleets (>10 trucks)	943	850	783

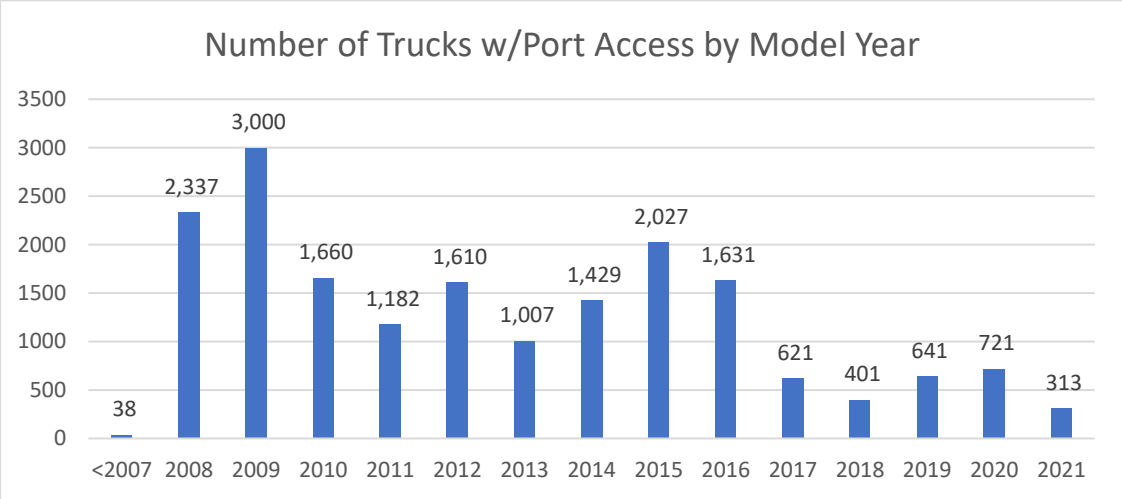
Source: Port Drayage Truck Registry, 2020.

[2] This includes fleets in all of Los Angeles, Riverside, and San Bernardino Counties, including portions of these counties not located in the South Coast AQMD jurisdiction.

The number of trucks in the Port Truck Registry has been steadily increasing over the last three years from 18,188 in 2018 to 18,556 in 2020. The number of average active trucks per month has increased as well. The small drop in 2020 (which included data through September 2020) may have been caused by the drop in goods movement from the ports during the COVID-19 pandemic. The second observation with respect to the size of the fleets is that, as of 2020, the largest proportion, or 43 percent, are small fleets, followed by 40 percent large fleets, and only 17 percent of medium-size fleets.

We analyzed the age of the trucks currently accessing the ports. Exhibit 4 shows the distribution of trucks by model year. Overall, 38 percent of trucks are MY 2010 or older, another 39 percent are MY 2011-2015, and 23 percent are MY 2016-2021.

EXHIBIT 4: AGE DISTRIBUTION OF TRUCKS ACCESSING THE SAN PEDRO BAY PORTS



Source: Port Drayage Truck Registry, 2020

POPULATION OF TRUCKS IN THE SOUTH COAST AQMD COUNTIES

TRUCK POPULATION IN LOS ANGELES, ORANGE, RIVERSIDE, AND SAN BERNARDINO COUNTIES

In this section we analyze the number of trucks in the four counties that make up the South Coast AQMD jurisdiction – Los Angeles (LA), Orange (OR), Riverside (RV), and San Bernardino (SB) Counties[3]. We relied on IHS Markit data which include registrations from the California Department of Motor Vehicles (DMV). Exhibit 5 summarizes these data by vehicle class (Class 3 – Class 8) and by vocation.

[3] These data include the full area of these four counties.

EXHIBIT 5: POPULATION OF TRUCKS BY CLASS IN LA, OR, RV, AND SB COUNTIES

TRUCK VOCATION	CLASS 8	CLASS 7	CLASS 6	CLASS 5	CLASS 4	CLASS 3	TOTAL
Long Haul Truck	63,299	1,550	0	0	0	0	64,849
Regional Truck	44,598	12,901	33,598	10,541	17,238	29,631	148,507
Drayage Truck	27,527	702	206	14	8	13	28,470
Terminal Tractor	794	86	0	0	0	0	880
Step Van	0	32	8,677	3,254	4,668	706	17,337
Cargo Van	0	0	0	0	0	5,439	5,439
Total	136,218	15,271	42,481	13,809	21,914	35,789	265,482

Source: IHS Automotive MD and HD Vehicle Data, 2018.

It should be noted that the vocation assignments in Exhibit 5 were made using codes available in the IHS Markit database and additional descriptions of the truck models. This approach introduces some uncertainty into the characterization of the truck population due to overlapping codes. One example is the relatively small number of drayage trucks observed as Class 3 trucks. Normally drayage trucks are only Class 7 and 8 trucks.

Drawing on the IHS data, Exhibits 6 and 7 include the distribution of the trucks by type and class owned by individuals and larger fleets respectively. In 2018 there were more than 265,000 trucks registered in LA, OR, RV, and SB counties, with 36 percent of those belonging to individuals and the remainder to larger fleets. The largest proportion of trucks (more than 50 percent) is Class 8 for both individual owners and for larger fleets.

EXHIBIT 6: NUMBER OF TRUCKS IN LA, OR, RV, AND SB COUNTIES ONWED BY INDIVIDUALS (OWNER-OPERATORS)

Truck Vocation	Class 8	Class 7	Class 6	Class 5	Class 4	Class 3	Total
Long Haul Truck	18,990	564	0	0	0	0	19,554
Regional Truck	21,492	3,635	9,271	2,976	5,780	15,491	58,645
Drayage Truck	11,839	184	115	0	1	11	12,150
Terminal Tractor	50	7	0	0	0	0	57
Step Van	0	14	327	306	1,630	55	2,332
Cargo Van	0	0	0	0	0	3,259	3,259
Total	52,371	4,404	9,713	3,282	7,411	18,816	95,997

Source: IHS Automotive MD and HD Vehicle Data, 2018.

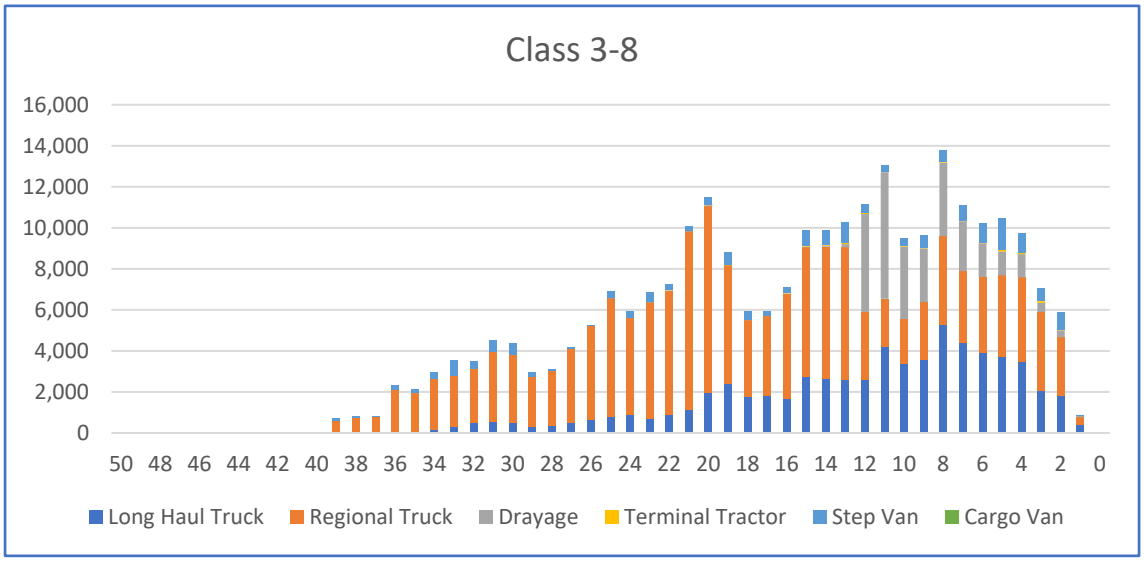
EXHIBIT 7: NUMBER OF TRUCKS IN LA, OR, RV, AND SB COUNTIES OWNED BY LARGER FLEETS

TRUCK VOCATION	CLASS 8	CLASS 7	CLASS 6	CLASS 5	CLASS 4	CLASS 3	TOTAL
Long Haul Truck	44,309	986	0	0	0	0	45,295
Regional Truck	23,106	9,266	24,327	7,565	11,458	14,140	89,862
Drayage Truck	15,688	518	91	14	7	2	16,320
Terminal Tractor	744	79	0	0	0	0	823
Step Van	0	18	8,350	2,948	3,038	651	15,005
Cargo Van	0	0	0	0	0	2,180	2,180
Total	83,847	10,867	32,768	10,527	14,503	16,973	169,485

Source: IHS Automotive MD and HD Vehicle Data, 2018.

We also analyzed truck ages, in years, and fuel types across the four counties that make up the South Coast AQMD jurisdiction. The age distribution of trucks in this area is presented in Exhibit 8 and 9. Exhibit 8 shows these data for Class 3-8 trucks, whereas Exhibit 9 focuses exclusively on Class 8. This age distribution represents a broader universe of trucks than the age distribution shown in Exhibit 4, which focuses only on trucks serving the San Pedro Bay Ports.[4] As shown in Exhibits 8 and 9, long haul and drayage trucks seem relatively younger compared to regional delivery trucks. The exhibits also show that drayage trucks in the area are less than 13 years old. This reflects the prohibition against pre-2007 trucks at the San Pedro Bay Ports.

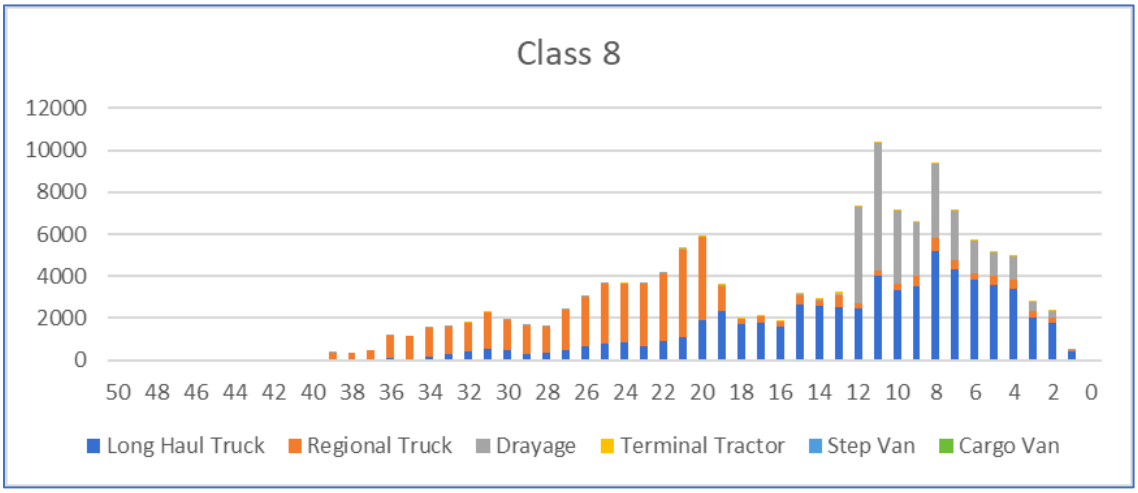
EXHIBIT 8: AGE DISTRIBUTION OF TRUCKS IN LA, OR, RV, AND SB COUNTIES



Source: IHS Automotive MD and HD Vehicle Data, 2018.

[4] This is observable in Exhibit 8 through drayage trucks being at most 12 years old.

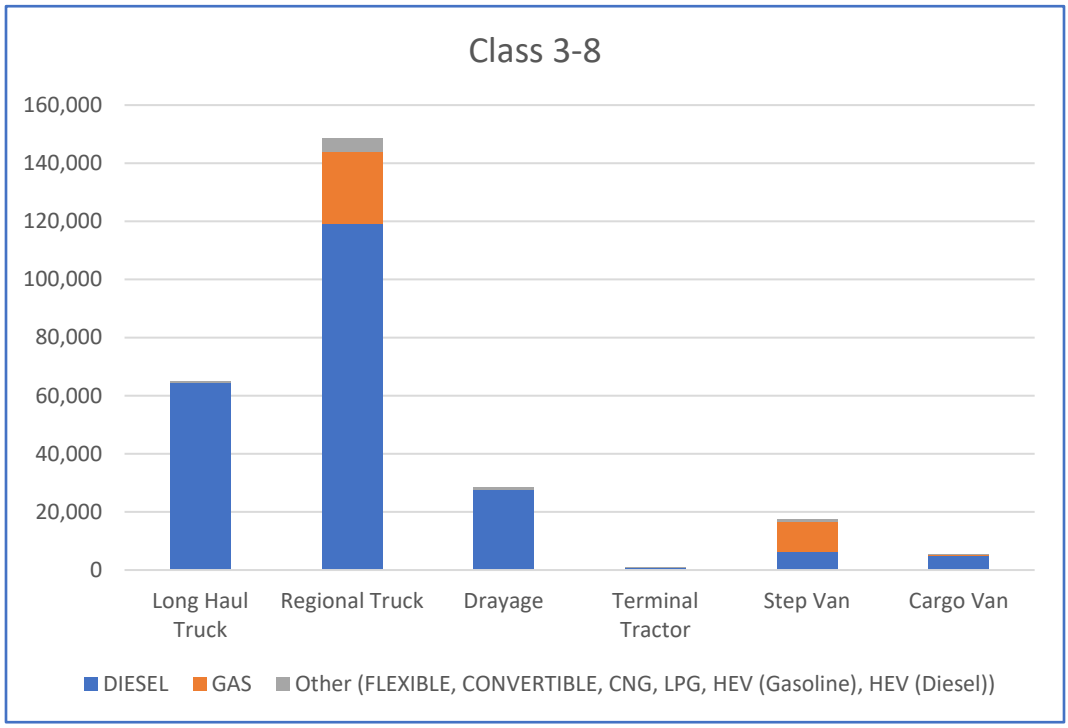
EXHIBIT 9: AGE DISTRIBUTION OF CLASS 8 TRUCKS IN LA, OR, RV, AND SB COUNTIES



Source: IHS Automotive MD and HD Vehicle Data, 2018.

Exhibit 10 shows the distribution of trucks across fuel types for each truck vocation - the data is also available in Appendix C. The dominant fuel type is diesel (84 percent) followed by gasoline (13 percent); all other alternative fuels add up to approximately 3 percent.

EXHIBIT 10: FUEL TYPES IN THE TRUCK POPULATION IN LA, OR, RV, AND SB COUNTIES



POPULATION OF TRUCKS IN GREATER SOUTHERN CALIFORNIA

TRUCK POPULATION IN THE GREATER SOUTHERN CALIFORNIA REGION

In this section we analyze and discuss the population of trucks in the ten counties making up the greater Southern California region. We conducted this analysis to include trucks domiciled and registered in the counties outside the South Coast AQMD jurisdiction but serve warehouse and distribution centers there. The ten counties include:

- Imperial
- Kern
- Los Angeles
- Orange
- Riverside
- San Bernardino
- San Diego
- San Luis Obispo
- Santa Barbara
- Ventura

Exhibit 11 presents the number of trucks by vocation and class size for the greater Southern California region. Overall, the total number of trucks in the region is approximately 31 percent greater than the corresponding population for LA, OR, RV, AND SB counties. The distribution among the different classes and different vocations however is very much the same, with Class 8 as the largest truck class.

EXHIBIT 11: POPULATION OF CALIFORNIA-REGISTERED TRUCKS BY CLASS AND VOCATION IN THE GREATER SOUTHERN CALIFORNIA REGION

TRUCK VOCATION	CLASS 8	CLASS 7	CLASS 6	CLASS 5	CLASS 4	CLASS 3	TOTAL
Long Haul Truck	86,048	2,249	0	0	0	0	88,297
Regional Truck	60,362	18,195	43,429	13,076	21,616	39,972	196,650
Drayage Truck	33,776	836	281	23	14	17	34,947
Terminal Tractor	818	93	0	0	0	0	911
Step Van	0	43	9,031	3,569	5,678	754	19,075
Cargo Van	0	0	0	0	0	8,151	8,151
Total	181,004	21,416	52,741	16,668	27,308	48,894	348,031

Source: IHS Automotive MD and HD Vehicle Data, 2018.

DMV AND IRP DATA

The analysis above relies on IHS Markit data based on California DMV registrations. These data, however, do not include other trucks that operate in the state. To obtain a more comprehensive view of trucks operating in California, we compiled data from the most recent (2018) California Vehicle Inventory and Use Survey (CA VIUS), which includes both DMV data and data from the International Registration Plan (IRP), the latter of which captures trucks registered outside California. Exhibit 12 includes the number of trucks operating in California that are in the DMV or IRP data.

EXHIBIT 12: NUMBER OF TRUCKS BY CLASS IN DMV AND IRP IN CALIFORNIA[5]

Class	DMV	IRP, NON-CALIFORNIA REGISTRATIONS	Total
Class 3	69,723	5,129	74,852
Class 4	47,505	2,167	49,672
Class 5	44,914	6,655	51,569
Class 6	73,170	10,644	83,814
Class 7	44,822	18,707	63,530
Class 8	192,297	243,965	436,261
Total	472,431	287,267	759,698

Source: California Vehicle Inventory and Use Survey, Volume I Truck Survey, 2018.

The total number of trucks reported by the CA VIUS truck survey for 2018 was just below 760,000. The majority of these trucks were identified in the DMV data for all truck classes, with the exception of Class 8. For Class 8 the number of IRP trucks is larger than DMV trucks. This is an important finding, as it indicates the DMV numbers for Class 8 trucks likely undercount the number of active Class 8 trucks operating in the state and potentially the South Coast AQMD jurisdiction.

STAKEHOLDER INTERVIEWS

To gather additional information on the fleets serving warehouses in the South Coast AQMD jurisdiction, we conducted a series of structured interviews of various fleet owners and operators. This section details the process for identifying industry stakeholder contacts, the questions designed to obtain relevant information, and the input provided by stakeholders.

IDENTIFICATION OF FLEET STAKEHOLDERS

South Coast AQMD and CALSTART first developed a list of fleet stakeholder contacts as interview candidates. The warehousing and logistics industry is a complicated and multifaceted industry with diverse stakeholders. To ensure our understanding of fleet stakeholder priorities reflected this diversity, we specified three classifications of stakeholders to interview. These categories included (1) organizations that operate both truck fleets and warehouse facilities, (2) organizations that operate fleets only, (3) and organizations that operate warehouse facilities but not the fleets that serve those facilities. Exhibit 13 includes additional details on the fleets and facilities operated by the stakeholders interviewed.

[5] California Vehicle Inventory and Use Survey, Volume I Truck Survey, Cambridge Systematics (2018).

EXHIBIT 13: INTERVIEWEE CLASSIFICATIONS

STAKEHOLDER INTERVIEWEE NUMBER	CATEGORY	FACILITY TYPE OPERATED	FLEET OPERATIONS
1	Fleet & Facility	General Purpose Warehouse	Drayage
2	Fleet & Facility	General Purpose Distribution Center	Regional Delivery Final Mile
3	Fleet & Facility	Truck Terminal LTL	Drayage, LTL, Over the Road
4	Fleet & Facility	Cold Storage	Regional Delivery Final Mile
5	Fleet & Facility	Cold Storage	Final Mile
6	Fleet & Facility	Transload	Drayage Regional delivery
7	Fleet & Facility	Crossdock Transload	Drayage
8	Fleet & Facility	Retail Fulfillment Center	Final mile logistics provider
9	Fleet	-	Drayage, mail
10	Fleet	-	Regional Delivery
11	Facility only	General Purpose Warehouse	-

DEVELOPMENT OF INTERVIEW QUESTIONS

The interview questions were developed with collaboration between CALSTART, IEc, and South Coast AQMD (see Appendix B). After the questions were completed, we contacted individual stakeholders via e-mail and/or phone to schedule interviews with the willing participants. The interview process consisted of a 30- to 60-minute conversation depending on the engagement of the interviewee.

FINDINGS FROM INTERVIEWS

Based on the interviews conducted, we describe the characteristics and operations of fleets that serve each of the warehouse categories previously described in CALSTART's Technical Memorandum on the Warehousing and Logistics Industry in the South Coast Air Quality Management District jurisdiction.[6] Exhibit 14 summarizes these findings.

[6] "Technical Memorandum on Warehousing and Logistics Industry in the South Coast Air Quality Management District Jurisdiction", prepared by Jasna Tomic and Kelly Leathers, CALSTART, for the South Coast Air Quality Management District, November 30, 2020.

EXHIBIT 14: FLEET CHARACTERISTICS AND OPERATIONS AT DIFFERENT WAREHOUSE FACILITIES

WAREHOUSE CATEGORY	FLEET CHARACTERISTICS AND OPERATIONS
General Purpose Warehouse (GPW)	Mostly Class 7 and 8 trucks that are either drayage or LTL. The drayage trucks operations are 50-100 miles per day with 4 stops. LTL operations make ~10 stops per day and serve warehouse and distribution centers across the region.
Transload Facility	The fleets at a transload facility are involved in drayage and regional delivery operations. Freight is moved into the facility in the morning by rail and the outbound operations start in the afternoon. The facility has about 50-60 Class 8 vehicles entering the facility each day. The fleet serves multiple types of locations throughout the region including, truck/container yards, distribution centers, crossdock transload facilities, and railroads. The vehicles serving the ports only log about 13,000 – 14,000 miles per year due to the proximity to the ports. These trucks make about 8 trips per day.
Crossdock Transload Facility	Exclusively served by Class 8 with 53 ft trailers. Freight leaving the facility goes to distribution centers, other crossdock facilities, and warehouses. Like the transload facility, outbound freight is taken in the morning and bound freight is brought in the evening and sorted. Congestion is a significant issue at these facilities and is addressed by requiring strict appointment times for pick-up and drop-offs. One of the interviewed fleets serving these facilities is involved in regional delivery, specifically final mile logistic operations. This fleet reports approximately 120-180 miles per day with 13-20 pickup locations.
Truck Terminals for Less-Than-Truckload Trucks (LTL)	Primarily a Class 8 LTL fleet which moves goods between drayage and other distribution centers in the region. Outbound freight leaves in the morning, and trucks return in the afternoon with all inbound freight. That freight is then broken down and organized based on the final destination. Daytime truck operations range from 50 to 200 miles. At night the trucks are used for longer haul. These facilities also have yard tractors and forklifts.
General Purpose Distribution Center	It is difficult to generalize the fleet operations at these facilities as they are serviced by many types of fleets. These distribution centers handle many types of products and goods coming from multiple companies. The fleets servicing these facilities are performing regional delivery, drayage, last mile delivery, and over-the-road operations. Trucks move product between the ports, other distribution centers, crossdock transload facilities, and warehouses.
Retail Fulfillment Center	These facilities are serviced by many types of fleets as well. The fleets interviewed move freight from LTL facilities where the product is broken down and then taken to retail fulfillment centers. From the fulfillment center, fleets also conduct last mile delivery using Class 4-6 trucks.
Cold Storage Facilities	Operate Class 5 – 8 trucks all equipped with truck refrigeration units (TRUs). These trucks drive about 150 miles per day making stops between the cold storage facility and final customers such as restaurants and grocery stores. The trucks make 10-15 stops on the route. Some deliveries are made to other cold storage facilities in the region as well. TRUs operate in the yard about 3 hours each day.

WAREHOUSE CATEGORY	FLEET CHARACTERISTICS AND OPERATIONS
Parcel Hubs	Fleet performs regional delivery operations, driving about 300-400 miles per day using Class 8 trucks. Each vehicle makes about 4-6 stops per day between the parcel hub and general-purpose warehouses. One interviewed fleet operator fuels its alternative fuel trucks (CNG) at an offsite fueling station.

In general, goods are delivered to warehouse facilities by Class 8 tractors by different fleets. Some of the vehicles may belong to the facility itself while others belong to fleets that the facility does not directly control. Verification of the vehicle, order, and trailer occurs at the point of entry. The carrier that delivers is sometimes known, but not always. Carriers that pick-up goods are always known in advance. The vehicle make and model are generally not tracked at entry. However, as most scheduling is done through brokerage firms, the brokerage firm does verify the vehicle requirements, for example, that the truck is pre-approved for Smart Way, satisfies emission standards, etc.

The types of trucks that depart from warehouse facilities varies depending on the facility type, and goods may leave on Class 8 or 7 trucks for regional delivery or smaller medium-duty Class 4-6 trucks. Trucks used by the fleet operators interviewed are primarily fueled by diesel and gasoline, with some fleets reporting a small proportion of CNG fueled trucks. In addition to the trucks, yard tractors, forklifts, and pallet jacks operate at warehouse facilities. Forklifts are often fueled by propane and are being replaced by electric units more recently. Similarly, few of the interviewees mentioned that they have or are obtaining electric yard tractors to replace the diesel units. Electric yard tractors have been commercially available since 2013. Information on available models can be found from the Clean Off-road Voucher Incentive Project (CORE).[7]

TRANSFORMING INDUSTRY TRENDS

As part of the interviews, we asked interviewees questions about trends that affect their operations and the industry more broadly, as well as how they might respond to the Indirect Source Rule when it is implemented.

Several interviewees mentioned a trend toward fleets using smaller trucks that will make more frequent deliveries to big box stores. This is a change from tractor trailers making big deliveries to multiple stores per trip. Relying on smaller trucks for more deliveries seems to be a response to customers wanting faster and more frequent deliveries.

The rise of e-commerce has increased both daily shipping requirements and the number of locations to which goods are shipped. Lead time is being changed by the e-commerce business. In the past, products may have stayed on warehouse shelves for a few weeks prior to delivery. Now product is arriving and leaving the facility within a few days. One interviewee described it as the effect of the "Amazon's conveyor system" – product coming in and being loaded on the truck rapidly after arriving. Relatedly, companies are looking for smaller facilities in metropolitan areas because they do not need a significant

[7] Eligible Equipment Catalog, Clean Off-road Voucher Incentive Project, CORE, 2020. https://californiacore.org/resources/#Equipment

amount of space for storage, and they want to be closer to the customers. Most final mile providers are looking for "cross-dock scenarios" where the residence time of the freight at the facility is short.

Interviewees' responses varied when asked about relocating their operations outside of the Southern California region. Some interviewees cited over-regulation and its effect on cost as reasons they might consider relocating, but none have considered it seriously. Interviewees whose customers are located in Southern California have not considered leaving. Drayage fleets are concerned with cargo being rerouted through other ports if the cost of operation at the San Pedro Bay Ports become sufficiently high to motivate companies to ship their goods to different ports.

We asked specifically about ISR and whether they would invest in WAIRE points (Warehouse Actions & Investments to Reduce Emissions) or pay the mitigation fee. [8] In response to this question, fleets indicated that they were concerned with the upfront cost of earning WAIRE points. A few, however, indicated they already have been investing in some of the menu items. Overall, responses on questions regarding the ISR suggest that larger firms are working on sustainability planning across their warehouse and fleet operations, or that firms (or BCOs) are passing on their sustainability goals to the fleets with whom they work and are collaborating to achieve these goals.

[8] WAIRE points are based on the menu-based system and proposed regulatory concept. See the draft ISR rule text dated 6 October 2020.

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(2) High-Cube Warehouse Vehicle Trip Generation Analysis, (2016). Washington, DC: Institute of Transportation Engineers.

(3) Warehousing and Distribution Center Facilities in Southern California: The Use of the Commodity Flow Survey Data to Identify Logistics Sprawl and Freight Generation Patterns, (2017). Jaller, M., and Pineda, L. UC Davis.

(4) Industrial Warehousing in the SCAG Region, Full Report, (2018), Southern California Council of Governments.

(5) California Vehicle Inventory and Use Survey, Volume I Truck Survey, (2018). Cambridge Systematics

APPENDIX A – INTERVIEWEES

Company Name	Name
Pacific Mountain Logistics	B.J. Patterson
DHE	Troy Musgrave
PepsiCo	Keshav Sondhi
Sysco	Eddie Tantoco
TForce	Richard Boyd
Ability Tri-Modal	Mike Kelso
True World Foods	MacKay Holmes
RDS Rally	Greg Stefflre
LA Harbor Grain Terminal	Dwight Robinson
MDB Transportation	Jack Khudikyan
AJR Trucking	Jack Khudikyan

APPENDIX B- INTERVIEW QUESTIONS

Questions for Fleet and Facility Industry Stakeholders

Background

Please read the following to every interviewee

We are working with the South Coast AQMD on a project focused on the warehousing and logistics industry. As part of this effort, we would like to obtain background information on the operations of fleets and how they interact with the warehousing sector in LA, Orange, San Bernardino, and Riverside Counties.

***If prompted:* South Coast AQMD has asked us to collect this information to inform the creation of a potential Indirect Source Rule. The rule development effort is ongoing, and we do not have information on what the eventual provisions of the rule will be. **

***From here, please read the appropriate set of questions for each type of interviewee. ***

Questions for Warehouse Operators that Operate Their Own Fleets

1. **Please describe the general operations at your facility.**
    a. What types of cargo do you typically deal with?
    b. How many off-road vehicles and what type are you operating at the facility?
    c. Can you estimate the number of vehicles entering and exiting the facility each day?
    d. Describe the vehicles entering and exiting by **type** (i.e. tractor trailer/step van)/class (i.e. 4-8)/**size** (GVWR)/**vocation** (i.e. regional delivery/drayage/LTL)
    e. How long do vehicles typically stay at the facility?
2. **What is the typical process for vehicles entering and exiting the facility?**
    a. What information do you collect about vehicles entering and exiting the facility (i.e. vehicle type, fuel technology, model, US DOT, CA, MC #s, VIN, truck model, truck year)
    b. What sort of freight or trailer number verification is conducted at the gate when entering/exiting?
    c. What method do you use to track the number of vehicles visiting your facility (inbound and outbound)? What is the typical daily number of vehicles?
    d. Do you operate multiple facility types? If so, how do the number of vehicles vary based on facility?
        i. Is this process different based on the facility type? If so, please describe some differences.
    e. Do trucks need to be part of a truck registry to enter the facility? (i.e. Drayage Truck Registry OR TRUCRS)
    f. What is the cost for the truck logging/tracking program?
3. **Can you describe your fleet based on the following criteria?**
    a. Total number of vehicles in fleet
    b. Describe your fleet's vehicles by **type** (i.e. tractor trailer/step van)/class (i.e. 4-8)/**size** (GVWR)/**vocation** (i.e. regional delivery/drayage/LTL)
    c. Average age of truck in fleet (and range oldest to newest)?
    d. Vehicle technology (diesel, NG, other fuel or technology and % each). If it's a mix, what is the approximate distribution across technologies?
4. **Information and data**
    a. Is your fleet equipped with telematics? If so, what is the product's name?

b. Do you use geofencing? If so, what is the product's name?
c. How do you track mileage and fuel use?
d. What is the typical lifetime of your vehicles? (i.e. miles and years)
e. What is the cost for this logging/tracking program?

5. **Do you lease or own the vehicles in your fleet?**
    a. What percentage is leased vs. owned? If leasing, how long are the typical leases?
    b. What are the benefits of leasing vs. owning?
    c. Do you have sustainability goals/plans? Please explain.
    d. Have you researched into the possibility of electric fleets and/or charging and refueling stations?
    e. If you operator forklifts or yard hostlers, what percentage are fossil fuel vs. electric? Are any of these fossil fuel vehicles operating indoors?
6. **Which of the following would best describe your fleet's operations?**
    a. Regional Delivery
    b. Drayage
    c. Less than Truckload
    d. Over the Road
    e. Other (please explain)
7. **Are all the vehicles registered in California?**
    a. If not, where are they registered?
8. **Which of the following warehousing facilities does your fleet typically service? And, what characteristics of your fleet makes it suitable to serve this specific type of facility?**
    a. Distributions center
    b. Cross-dock facility
    c. Transload facility
    d. General Purpose Warehouse
    e. Truck Terminal for Less than Truckload Trucks
    f. Retail Fulfillment Center
    g. Storage or Cold Storage
9. **Please describe a vehicle's typical daily operations.**
    a. Vehicle class (i.e. Class 4-8)
    b. Number of miles per day
    c. Number of destinations per day
10. **What region does your fleet typically serve?**
    a. Do the fleets go to multiple locations in a day to deliver goods?
    b. Does the facility provide or recommend any particular route?
11. **What percentage of your fleet is carrying inbound vs. outbound freight from warehousing facilities in the region?**
12. **What are your most common types of customers?**
    a. Please describe your relationship with your customers (i.e. long-term contracts, short term contracts)
13. **Have you ever considered relocating outside the urban LA, OC, Riverside, or San Bernardino Counties?**
    a. If so, what prompted your consideration? (Possible answer could be operational changes, warehousing cost, business expansion, etc.)

b. *** If mentioning cost as a reason*** Do you have an idea of the cost threshold that would lead you to consider moving to warehouses outside the urban LA, OC, Riverside, or San Bernardino Counties?
c. What are the principle constraints on relocation?
d. Have you thought about putting community benefit measures in place, in terms of air pollution?

14. **Can you name some trends affecting the trucking industry?**
    a. What is affecting operations in the region?
    b. In the next 5-10 years, what do you see on the horizon that will affect your operations?
    c. Any obstacles your company is facing?
    d. Any new requirements customers are asking for?
15. **How will you respond to the indirect source rule when it is implemented?**
    a. Invest in menu items to upgrade your facility or pay the mitigation fee?

Exclusively Fleet Operator Questions

1. **Can you describe your fleet based on the following criteria? (all vehicles operating under your interchange)**
    a. Total number of vehicles in fleet
    b. Describe your fleet's vehicles by **type** (i.e. tractor trailer/step van)/class (i.e. 4-8)/**size** (GVWR)/**vocation** (i.e. regional delivery/drayage/LTL)
    c. Average age of truck in fleet (and range oldest to newest)?
    d. Vehicle technology (diesel, NG, other fuel or technology and % each). If it's a mix, what is the approximate distribution across technologies?
    e. If operating alternative fuel vehicles, how are you fueling them?
    f. If you operator forklifts or yard hostlers, what percentage are fossil fuel vs. electric? Are any of these fossil fuel vehicles operating indoors?
2. **Which of the following would best describe your fleet's operations?**
    a. Regional Delivery
    b. Drayage
    c. Less than Truckload
    d. Over the Road
    e. Other (please explain)
3. **Please describe a vehicle's typical daily operations by vehicle class.**
    a. Number of miles per day
    b. Number of stops per day
    c. Number of miles per year?
    d. How does that relate to your type of operations?
    e. Is this fixed?
4. **Which of the following warehousing facilities does your fleet typically service? And, what characteristics of your fleet make it suitable to serve this specific type of facility?**
    a. Truck/container yard
    b. Distribution Center
    c. Cross-dock facility
    d. Transload facility
    e. General Purpose Warehouse
    f. Truck Terminal for Less than Truckload Trucks

g. Retail Fulfillment Center
h. Storage or Cold Storage

5. **What region does your fleet typically serve?**
    a. Do the fleets go to multiple locations in a day to deliver goods?
6. **What types of moves does your fleets do? (Import vs export, % of each)**
7. **What are your most common types of customers?**
    a. Describe the types of customers your fleet serves (i.e. direct customers, freight forwarders, railroad carrier, ocean carrier, long-term contracts, short term contracts)
    b. Describe your fleet's relationship with its customers (term contract or spot rate)
8. **Information and data**
    a. Is your fleet equipped with telematics? If so, what is the product's name?
    b. Do you use geofencing? If so, what is the product's name?
    c. How do you track mileage and fuel use?
    d. If charging /fueling is available at the warehouse, how long do trucks usually stay?
    e. What is the typical lifetime of your vehicles? (i.e. miles and years)
    f. Can you provide the cost for the logging/tracking program?
9. **Do you lease or own the vehicles in your fleet?**
    a. What percentage is leased vs. owned? If leasing, how long are the typical leases?
    b. What are the benefits of leasing vs. owning?
    c. Do you have sustainability goals/plans? Please explain.
    d. Have you researched into the possibility of electrifying your fleet?
10. **Are all the vehicles registered in California?**
    a. If not, where are they registered and why?
11. **Can you name some trends affecting the trucking industry?**
    a. What is affecting operations in the region?
    b. In the next 5-10 years, what do you see on the horizon that will affect your operations?
    c. Do you plan on adopting alternative fuel vehicles? If so, what fuel(s)? Why? How do you plan on fueling them?
    d. Any obstacles your company is facing?
    e. Any new requirements customers are asking for?
12. **How would you respond if warehouses try to get fleets to use clean trucks for at least a portion of their trips to/from warehouses in the District?**

Exclusively Facility Operator Questions

1. **Which category best describes your facility?**
    a. Distributions center
    b. Cross-dock facility
    c. Transload facility
    d. General Purpose Warehouse
    e. Truck Terminal for Less than Truckload Trucks
    f. Retail Fulfillment Center
    g. Storage or Cold Storage
2. **Please describe the general operations at your facility.**
    a. What is the typical process for vehicles entering and exiting the facility? What types of cargo do you typically deal with?

b. Can you estimate the number of vehicles entering and exiting the facility each day? What classifications of trucks?
c. How long do vehicles typically stay at the facility?

3. **What is the number of off-road vehicles at the facility and the type? (i.e. yard tractor, forklift)**
    a. If you operator forklifts or yard hostlers, what percentage are fossil fuel vs. electric? Are any of these fossil fuel vehicles operating indoors?
4. **What is the typical process for vehicles entering and exiting the facility?**
    a. What information do you collect about vehicles entering and exiting the facility (i.e. vehicle type, fuel technology, model)?
    b. What sort of freight verification is conducted at the gate when entering/exiting vehicles?
    c. Is this process different based on the facility type? If so, please describe some differences.
    d. Do trucks need to be part of a truck registry to enter the facility? (i.e. Drayage Truck Registry OR TRUCRS)
5. **Do you have longer-term relationships or contracts with the fleets serving your facility?**
6. **Do you know if all the fleets/vehicles are registered in California?**
    a. If not, where are they registered?
7. **Have you ever considered relocating outside the urban LA, OC, Riverside, or San Bernardino Counties?**
    a. If so, what prompted your consideration? (Possible answer could be operational changes, warehousing cost, business expansion, etc.)
    b. *** If mentioning cost as a reason*** Do you have an idea of the cost threshold that would lead you to consider moving to warehouses outside the urban LA, OC, Riverside, or San Bernardino Counties?
    c. What are the principle constraints on relocation?
    d. Have you thought about putting community benefit measures in place, in terms of air pollution?
8. **Can you name some trends in the trucking industry? What's effecting operations in the region? In the next 5-10 years, what do you see on the horizon that will affect your operations?**
    a. Any obstacles your company is facing?
    b. Any requirements customers are asking for?
9. **How will you respond to the indirect source rule when it is implemented?**
    a. Invest in menu items to upgrade your facility or pay the mitigation fee?

APPENDIX C – DATA

TABLE 1: TRUCK FUEL TYPE IN LOS ANGELES, ORANGE, RIVERSIDE, AND SAN BERNARDINO COUNTIES

	GAS	DIESEL	FLEXIBLE	CONVERTIBLE	COMPRESSED NATURAL GAS	LIQUID NATURAL GAS	PROPANE	ELECTRIC AND GAS HYBRID	ELECTRIC AND DIESEL HYB	ELECTRIC	HYDROGEN FUEL CELL	UNKNOWN
Long Haul Truck	0	64,320	0	0	441	0	0	0	0	0	0	88
Regional Truck	24,702	119,268	2,566	330	688	0	4	0	743	0	0	206
Drayage	2	27,764	0	0	703	0	0	0	0	0	0	1
Terminal Tractor	9	804	0	0	18	0	0	0	0	0	0	49
Step Van	10,259	6,201	0	0	364	0	497	10	0	0	0	6
Cargo Van	333	4,845	248	0	0	0	0	0	0	13	0	0
Total, by fuel type	35,305	223,202	2,814	330	2,214	0	501	10	743	13	0	350
Fuel Type %	13.30%	84.07%	1.06%	0.12%	0.83%	0.00%	0.19%	0.00%	0.28%	0.00%	0.00%	0.13%

ATTACHMENT 4

INDIRECT SOURCE RULE RELOCATION MODEL – METHODOLOGY

IEc

MEMORANDUM | 12 DECEMBER 2020

TO Victor Juan, Shah Dabirian, Paul Stroik, and Ian MacMillan; South Coast Air Quality Management District

FROM Derek Ehrnschwender, Jason Price & Nick Manderlink, IEc

SUBJECT Indirect Source Rule Relocation Model – Methodology

INTRODUCTION

This memorandum is in support of South Coast AQMD staff's development of a potential indirect source rule (ISR) to reduce mobile source emissions related to the operation of warehouses and distribution centers in the South Coast AQMD's four-county region (Los Angeles, Orange, Riverside, and San Bernardino counties).[1] Diesel truck traffic, largely related to the transport of goods passing through the Ports of Los Angeles and Long Beach and regional warehouses and distribution centers, makes up a large share of local NO_x emissions. A warehouse ISR, if adopted, may help with reducing emissions from trucks servicing warehousing facilities located within its jurisdiction.

Compliance costs to the warehousing sector could vary depending on the design of an eventual rule. If these costs are significant, the implementation of an ISR could potentially precipitate the relocation of warehousing operations outside the region—with the associated truck fleets continuing to travel to and from facilities in the South Coast AQMD jurisdiction. In the worst case scenario, the associated air quality benefits from such a rule might be greatly diminished. Accordingly, South Coast AQMD is interested in identifying and understanding the factors affecting whether warehousing operations are likely to relocate as a result of the potential rule.

Consistent with this objective, Industrial Economics, Inc. (IEc) developed a model that estimates the number of warehouse operations likely to relocate outside the South Coast AQMD jurisdiction as a result of the ISR. For a given warehouse, this model weighs the costs of ISR compliance against the costs of relocation. Based on the lesser of these two costs and on the availability of warehouse space in other market areas, the model simulates the decision-making process related to relocation at the warehouse level. The analysis considers potential warehouse relocation to seven alternative market areas outside the South Coast AQMD jurisdiction in California, Nevada, and Arizona.

This memo is organized into three general sections. First we discuss the relocation decision-making process as represented in the model. Second we outline the estimation of costs associated with ISR compliance if warehouse operations choose to remain within the South Coast AQMD jurisdiction. And third we introduce the various costs associated

[1] The South Coast AQMD jurisdiction is comprised of all of Orange County and parts of Los Angeles, Riverside and San Bernardino Counties. The region is mapped and described in full in Exhibit 1 and the "Geographic Scope" section below.

with potential warehouse relocation, including both relocation to existing vacant properties and the development of new warehousing stock. While changes in transportation costs associated with relocation are a key element of these costs, we also account for a variety of other cost changes, including changes in rent, energy costs, labor costs, development fees (for new warehouse developments only), and the cost of moving.

OVERVIEW OF APPROACH FOR MODELING RELOCATION DECISIONS

To estimate the number of warehouses likely to relocate outside the South Coast AQMD jurisdiction as a result of the ISR, we compare the costs of relocation for a given warehouse with the costs of complying with the ISR and remaining in the South Coast AQMD jurisdiction. We assume a warehouse will relocate to an outlying market area if two conditions are met:

1. ***Cost condition:*** The annualized costs associated with relocating to at least one outlying market area are less than the annualized costs of ISR compliance,[2] and
2. ***Capacity condition:*** In at least one of the market areas in which a warehouse would realize a cost savings relative to ISR compliance, sufficient capacity exists (measured in square footage of available warehouse space) to absorb the warehouse operation in question.

We model the relocation decision based on these conditions for all warehouses affected by the rule, with two exceptions: cold storage warehouses and warehouses at manufacturing facilities. For these facilities, decisions regarding relocation are likely to differ from the decision-making process for more conventional warehouse facilities. Both of these facility types have specialized equipment that would be more costly to move. In addition, the pool of buildings to which these facilities could relocate may differ from the buildings that conventional warehouses would consider.

To determine whether the cost condition is met for a given warehouse, we consider ISR compliance costs for varying levels of stringency and the full costs associated with relocation to an outlying market area. Relocation costs include the following:

- changes in transportation costs;
- changes in rental costs for warehouse space;
- changes in labor costs;
- changes in electricity costs;
- moving costs; and
- development fees (applicable only for construction of new warehouse space in outlying markets).

[2] Our approach for assessing potential warehouse relocations considers potential changes in costs but not potential changes in revenues. Warehouse operations that relocate outside the South Coast AQMD jurisdiction might be able to pursue new revenue opportunities, but may also experience revenue losses if cargo owners prefer to work with warehouses in the South Coast AQMD jurisdiction. In addition, any pass through of increased costs associated with relocation would also affect revenues. Given the uncertainty related to all of these factors, our approach does not consider potential changes in revenues.

We conduct the analysis based on ISR compliance costs and relocation costs annualized over 20 years, using four percent and one percent discount rates.[3] We assume all costs are ultimately borne by warehouse operators.

To determine whether the capacity condition described above is met, we rely on capacity data for each outlying market as obtained from CoStar. In addition, to ensure the analysis does not over commit capacity in the outlying markets (i.e., project relocations in an outlying market in excess of the capacity available prior to ISR implementation), our analysis simulates relocation decisions one warehouse at a time and updates the estimated capacity available in each outlying market based on these individual decisions. Thus, the capacity available to the 100th warehouse examined reflects the relocation decisions of the first 99 warehouses.

Recognizing the complexity of the logistics industry and the uncertainty inherent in several key aspects of our analysis, we designed the analysis to generate low-end and high-end estimates of warehouse relocations. Specifically, our low-end and high-end estimates capture two sources of uncertainty.

The first uncertainty relates to the routing of goods through the South Coast AQMD jurisdiction. Although information is available on the aggregate distribution of goods across different routings through the South Coast AQMD jurisdiction, information on which warehouses serve which routes is not available. To account for this uncertainty, we conduct the analysis under two sets of routing assumptions (hereafter referred to as pathway scenarios):

1. ***Composite pathway scenario:*** Under this scenario, each individual warehouse is assumed to be representative of the warehousing sector in the South Coast AQMD jurisdiction as a whole, in terms of the goods routes (pathways) served. For example, if a given pathway accounts for five percent of the goods flow volume passing through the South Coast AQMD jurisdiction, five percent of the truck traffic through each individual warehouse is assumed to be on this pathway. Under this scenario, the change in transport distance associated with relocation to a given outlying market area is the same for all warehouses.
2. ***Specialized pathway sensitivity scenario:*** This scenario allows for the possibility that individual warehouses may specialize in pathways or serve a more limited number of pathways. Because we lack information on the specific pathway(s) a given warehouse is likely to serve, this scenario involves a series of iterative "what if" analyses. For nearly each iteration of the analysis, we assume all warehouses are on the same pathway. After running the analysis for each individual pathway, we calculate the weighted average of the resulting warehouse relocation estimates, using the goods volumes associated with each pathway as weights. Weighting by the goods volumes associated with each pathway ensures that the warehouse space projected to relocate for a given iteration does not

[3] We annualize costs to put them on a consistent temporal basis, given that some costs are annual and other costs are one-time expenditures. We chose a 20-year timeframe to minimize the annualized value of any one-time costs associated with relocation and ensure we do not overestimate relocation costs and underestimate the number of relocations.

exceed the amount of warehouse space that actually serves the pathway in question.[4]

The second source of uncertainty reflected in our low-end and high-end estimates is the capacity of outlying market areas to absorb warehouse space from the South Coast AQMD jurisdiction. Although information is available on the vacant capacity in each outlying market and new warehouse developments that have been approved, additional warehouses *could* be developed on undeveloped parcels of land zoned for industrial development. The degree to which such development will occur is uncertain. To account for this uncertainty, we conduct the relocation analysis under two capacity scenarios:

1. ***Medium-term capacity scenario***: Under this scenario, capacity available for relocation is limited to capacity projected to be available in the medium term. This includes current vacant capacity and new capacity proposed or currently under construction in the outlying market areas. This scenario assumes no new construction of warehouse space beyond what is already planned in the outlying market areas. It provides a reasonable representation of capacity until such time that new capacity developments can obtain approval and complete construction. This scenario specifies the lower-bound estimate of warehouse capacity in outlying markets.
2. ***Slack capacity scenario:*** This scenario reflects a more expansive view of the capacity that would be available for relocation. Such capacity includes projected warehouse vacancies as well as the warehouse space that could fit on all land that is (1) zoned for industrial development in the outlying market areas and (2) is within 2 miles of a major road. This measure of capacity represents an upper-bound estimate of warehouse capacity in outlying markets.

We estimate the square footage of warehouse space likely to relocate from the South Coast AQMD jurisdiction for each pathway and capacity scenario based on the methods summarized above. We convert this estimate to an estimated number of warehouses based on the average square footage per warehouse.

ISR COMPLIANCE COSTS

For the purposes of estimating the number of warehouse relocations, we rely on estimates of ISR compliance costs per square foot as provided by South Coast AQMD staff. As described in the 6 October 2020 draft rule text released to the public, the ISR will give warehouse operators flexibility in how they meet the requirements of the rule. Specifically, warehouse operators may choose from combinations of multiple emission reduction measures identified in the ISR or pay a mitigation fee that will finance efforts within the South Coast AQMD jurisdiction to reducing trucking-related NO_x emissions.

Due to the flexibility afforded by the ISR, the compliance strategy that would be implemented by a given warehouse is highly uncertain and would likely depend on warehouse-specific factors that we are not able to account for in this analysis. Such

[4] For example assume that all 2,518 warehouses modeled in this analysis are projected to relocate when examining a given pathway but that this pathway accounts for 1 percent of the goods flow. Under our approach, this pathway's contribution to the expected number of relocated warehouses is 2,518 × 1 percent, or 25 warehouses.

factors may include the physical configuration of a warehouse, space available for electric vehicle charging infrastructure onsite, or whether the warehouse operator owns its own fleet of trucks.

Due to our inability to account for these and other site-specific factors that may influence compliance decisions, we analyze compliance-cost scenarios specified as an annual cost per square foot of warehouse space. These values, which ranged from $0 per square foot to $2 per square foot, were provided to IEc by South Coast AQMD staff.

RELOCATION COSTS

As described above, the costs associated with relocation include (1) changes in transportation costs, (2) changes in rent, (3) changes in labor costs, (4) changes in electricity costs, (5) moving costs, and (6) development fees (when relocation involves the construction of new warehouse space). We describe our approach to estimating each of these costs in the following sections.

TRANSPORTATION COSTS

This analysis estimates the average increase in transportation costs for a warehouse relocating to each of the seven outlying market areas in Southern California, Southern Nevada, and Western Arizona described in our technical memo on regional warehouse real estate markets.[5]

The first step in this process is to estimate the increased distance per truck trip associated with relocating to each outlying market area. We then translate these increases in distance to increases in costs per truck trip. To obtain a *per-warehouse* expected increase in trucking costs, the increased cost per truck trip is applied to the expected number of truck trips for a warehouse, based on estimates of the number of truck trips per thousand square feet of warehouse area and the square footage of individual warehouses.

Because increased trucking distances may reduce the distance freight is shipped via rail (e.g., if warehouses sorting goods bound for distribution in the Eastern U.S. relocate to Arizona, those goods will be loaded for rail transport closer to their final destination than had they loaded in the L.A. area), our approach accounts for the reduction in rail shipment costs associated with warehouse relocation.

To estimate the change in transport distance, we rely on published data characterizing the flow of goods through the South Coast AQMD jurisdiction based on origin and destination pairs. These data include information on the following:

- The directional flow of goods through the South Coast AQMD jurisdiction (e.g., imports arriving at the San Pedro Bay Ports bound for national distribution versus

[5] Technical Memorandum on Real Estate Markets Neighboring the South Coast AQMD Jurisdiction, prepared by Derek Ehrnschwender and Jason Price, Industrial Economics, for South Coast AQMD. December 12, 2020.

goods shipped into the South Coast AQMD jurisdiction for consumption by local households);[6] and

- Goods flow pathways, or routing, for goods entering the United States through the Port of Los Angeles (POLA) and the Port of Long Beach (POLB). These pathways outline the share of goods visiting different types of warehouses in different locations within the South Coast AQMD jurisdiction before heading to their final destinations.[7]

  For each pathway, we consider an alternate pathway with warehouse relocation from the South Coast AQMD jurisdiction to an outlying market area. While these pathways are specific to imports, we adapt them to characterize the flow of other goods transported through the South Coast AQMD jurisdiction.

We perform the same exercise for each pathway considering warehouse relocation to each of the outlying market areas. The transportation cost impacts associated with relocation depend on the pathway(s) a given warehouse serves. Some warehouses may serve a few pathways, while others serve several. In the absence of information on the pathway(s) associated with a given warehouse, we estimate the transportation cost impacts of warehouse relocation under two pathway scenarios: one in which each warehouse is assumed to serve all pathways and a second in which we examine relocation one pathway at a time and calculate the weighted average of the pathway-specific results.

The methodology presented here is designed to estimate the incremental change in travel costs resulting from the average warehouse's relocation. This estimate reflects the current warehouse environment and does not account for potential future trends in port use for imports or exports or changes in the final destination for goods entering the South Coast AQMD jurisdiction. As pointed out by a recent analysis by the POLA and POLB, more national distributors may begin to favor a "four corners" supply-chain strategy, increasing the share of goods entering the South Coast AQMD jurisdiction that are consumed locally or regionally.[8] This effect could alter the share of goods ascribed to each goods pathway, as discussed later in this memo.

Change in Trucking Distance

The estimated change in trucking distance is central to understanding the transportation cost implications of relocating warehouses from the South Coast AQMD jurisdiction to the outlying market areas. We estimate the change in trucking distance based on two data sources: the U.S. Bureau of Transportation Statistics Commodity Flow Survey and a goods flow pathways analysis published by Robert Leachman at the University of California, Berkeley. We describe our use of these data sources below.

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[6] Together, the Port of Los Angeles and the Port of Long Beach are referred to as the ports of the San Pedro Bay.

[7] These warehouse classifications are based on warehouse size and building categorization, as detailed in Exhibit 3 of: Technical Memorandum on Real Estate Markets Neighboring the South Coast AQMD Jurisdiction, prepared by Derek Ehrnschwender and Jason Price, Industrial Economics, for South Coast AQMD. December 12, 2020.

[8] Port of Long Beach & Port of Los Angeles. 2019. "Economic Study for the Clean Truck Fund Rate."

U.S. Bureau of Transportation Statistics Commodity Flow Survey (CFS): The CFS includes multimodal freight flow data for shipments of goods within the U.S. We use the CFS to characterize (1) goods that originate in the South Coast AQMD jurisdiction and are transported outside the South Coast AQMD jurisdiction or to buyers within the South Coast AQMD jurisdiction and (2) goods that originate elsewhere but also travel through the South Coast AQMD jurisdiction.

Exhibit 1 defines these goods flow categories, according to their origin and destination, and the relative size of each category. To derive the size of each goods flow category shown in Exhibit 1, we relied on CFS data for retail, wholesale, and warehousing industries.[9]

The CFS data does not include a clear identifier for imported goods. Also, based on the CFS documentation, the data does not capture imports until they are shipped onward from the importer's initial domestic location. This suggests any imports reflected in the CFS would show a domestic location as the point of origin. To estimate the import volume separate from goods produced in the South Coast AQMD jurisdiction, we obtained the ratio of imports to exports, 1.97 for 2015, from the Los Angeles Almanac and multiplied it by the export-related tonnage derived from the CFS data.[10]

A key uncertainty with estimating import tonnage in addition to the captured CFS goods flows is whether the resulting import tonnage estimated is already reflected in the CFS (with a LA/Long Beach Metro area origin). While the CFS documentation suggests this is the case, the import estimate we derived would account for 94 percent of the tonnage of goods in the CFS originating from the LA/Long Beach metro area (i.e. that import tonnage would account for 94 percent of all tonnage flowing from the South Coast AQMD jurisdiction).[11] Given the size of the LA metro area economy, this value seems unrealistically high. We suspect some imports may not be captured by the CFS until their arrival in a different location. To address this issue, we have treated the derived import tonnage as additive with the CFS data.[12]

Of the six goods flow categories shown in Exhibit 1, we consider potential changes in distance for three. Specifically, we examine potential changes in transport distance for imports, goods produced in the South Coast AQMD jurisdiction and consumed locally, and goods produced in the South Coast AQMD jurisdiction and bound for national distribution.

We assume goods bound for export, regardless of whether produced inside the South Coast AQMD jurisdiction or at national origin points are shipped directly to transload and cross-dock warehouses located in the port vicinity for packing into marine containers.

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[9] A broader query of the CFS data across more industries would capture many shipments unlikely to rely on warehouses.

[10] "Waterborne Freight Tonnage in California Ports," (2015) The Los Angeles Almanac.

[11] While the South Coast AQMD jurisdiction and the L.A./Long Beach metropolitan area are not perfect matches, limitations in the CFS data require using the metro area as a proxy for the jurisdiction.

[12] We also conducted a sensitivity analysis in which we assumed the imports were fully reflective in the CFS data. Under this assumption the average change in trucking distance associated with warehouse relocation is approximately seven percent higher across the outlying market areas than presented in this document.

These warehouses, due to their location and function, are unlikely to relocate due to a potential ISR.

While it is possible goods bound for export may be sent to other warehouses in the South Coast AQMD jurisdiction prior to transload or cross-dock warehouses, the Southern California Association of Governments (SCAG) warehousing report notes limited warehousing capacity devoted to managing exports relative to imports (approximately one-tenth of total port-related warehousing space, despite the fact that the ratio of import to export tonnage is roughly two-to-one).[13] This suggests less intensive use of warehouse space in the South Coast AQMD jurisdiction for exports than for imports. For this reason, we assume the export-related goods flow relies on limited additional warehousing space beyond transload and cross-dock facilities that directly serve the ports.

EXHIBIT 1. GOODS FLOW CATEGORIES DEFINED BASED ON THE COMMODITY FLOW SURVEY[1]

GOODS FLOW CATEGORY	ORIGIN	DESTINATION	PERCENT OF TOTAL	PERCENT OF GOODS FLOW SUBJECT TO RELOCATION[2]
1	National	South Coast AQMD	5.61%	-
2	National	Export	3.23%	-
3	South Coast AQMD	Export	15.40%	-
4	Imports	All	36.68%	48.42%
5	South Coast AQMD	South Coast AQMD	26.43%	34.89%
6	South Coast AQMD	National	12.65%	16.70%

Notes:
1. The goods flow categories and percentage estimates in this table are derived from the Bureau of Transportation Statistics' Commodity Flow Survey (CFS) which includes freight flow data for retail, wholesale, and warehousing industries. The CFS does not appear to capture imports, so calculation of the relative share of imports relied on CFS export data and the ratio of imports to exports for the San Pedro Bay ports, as obtained from the following report: "Waterborne Freight Tonnage in California Ports," (2015) The Los Angeles Almanac.
2. The percent of affected goods flow was calculated by scaling the "Percent of Total" values for categories 4, 5, and 6 to sum to 100 percent.

We assume goods with national origin points (i.e., produced domestically but outside the South Coast AQMD jurisdiction) with destinations inside the South Coast AQMD jurisdiction (category 1 in Exhibit 1) are distributed directly to their final destination from outside the South Coast AQMD jurisdiction. The transportation costs for these goods would therefore be unaffected by warehouse relocation.

Goods Flow Pathways Study: To assess the change in trucking distance associated with goods flow categories 4 through 6 in Exhibit 1 (the assumed change in distance is zero for categories 1 through 3), we rely on a set of goods pathways derived from a 2017 paper by

[13] "Industrial Warehousing in the SCAG Region – Task 4: Understanding Facility Operations." (2018) Prepared for the Southern California Association of Governments by Cambridge Systematics, Inc. with Gill V. Hicks and Associates Inc. April 2018.

Robert Leachman,[14] which outlines the flow of goods entering the South Coast AQMD jurisdiction through the San Pedro Bay ports. This flow of goods is illustrated in Exhibit 2.

Goods entering the ports of San Pedro Bay are categorized into pathways depending on (1) their final destination (i.e., truck to Northern California, truck to distribution within the South Coast AQMD jurisdiction, truck to areas in the Southwest outside the South Coast AQMD jurisdiction, or rail transport for national distribution) and (2) the warehouses they make use of while traveling along each pathway. We use these pathways to estimate baseline trucking distances for imports (category 4 in Exhibit 1) as well as for goods that originate in the South Coast AQMD jurisdiction and are bound for local consumption or national distribution (Categories 5 and 6 in Exhibit 1).

Of the goods pathways illustrated in Leachman (2017), we derive 18 distinct geographic pathways, 15 of which make use of warehouses within the South Coast AQMD jurisdiction and are relevant to this analysis.[15] These pathways are listed in Exhibit 3. As shown in Exhibit 3, these pathways involve freight passing through one to three warehouses in the South Coast AQMD jurisdiction before shipment outside or distribution within the South Coast AQMD jurisdiction. To estimate the travel distance along each of these pathways, we calculate the driving distance between each pathway "node"—either warehouses, rail terminals, or approximate distribution locations—and sum for a total travel distance for each pathway.[16] The estimated distances, by pathway, are shown in the last column of Exhibit 3.

[14] Leachman, R. 2017. "Strategic Initiatives for Inland Movement of Containerized Imports at San Pedro Bay." Institute for Transport Studies, University of California, Berkeley.

[15] The three pathways that do not make use of warehouses in the South Coast AQMD jurisdiction are those that use direct inland point intermodal (IPI) handling from the ports to rail terminals (On-Dock at the ports, or at the port vicinity or Downtown terminals). IPI transport services leave goods intact in their marine containers for maximized speed in onward transport.

[16] We cut off travel distance to Northern California at Kettleman Station, California, along interstate highway 5. We do this because goods sent to Northern California from any origin market in this study all must travel through Kettleman Station. Thus, the distance between Kettleman, California and the Northern California locations would be the same under the baseline as under any relocation scenario to be considered in our analysis.

EXHIBIT 2. FLOW OF GOODS ENTERING THE SAN PEDRO BAY

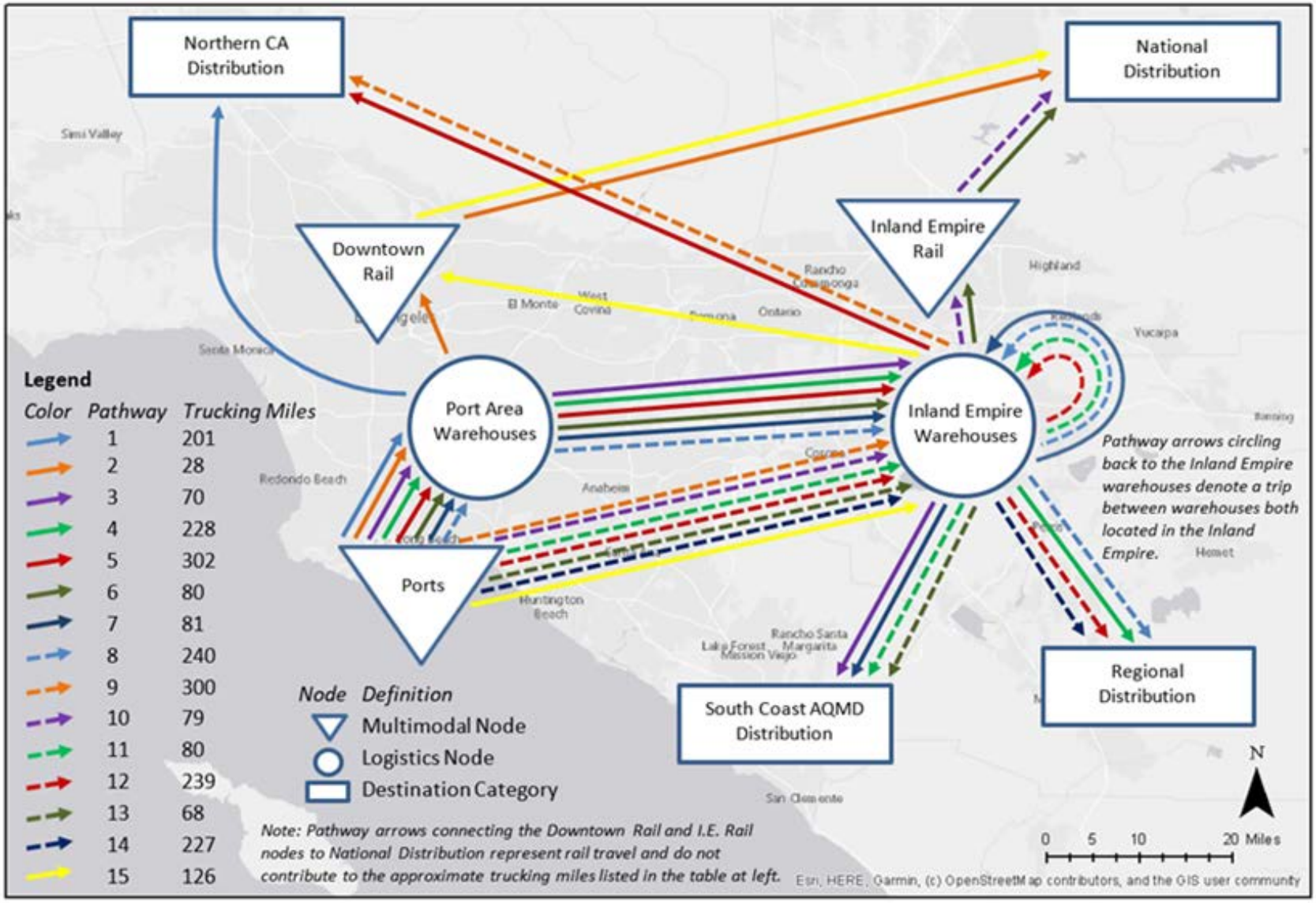


EXHIBIT 3. BASELINE GOODS PATHWAYS FOR GOODS SHIPMENTS SUBJECT TO RELOCATION

GOODS FLOW CATEGORY [A]	PATHWAY [B]	SOUTH COAST AQMD JURISDICTION LOGISTICS NODE 1 [C]	SOUTH COAST AQMD JURISDICTION LOGISTICS NODE 2 [D]	SOUTH COAST AQMD JURISDICTION LOGISTICS NODE 3 [E]	DESTINATION [F]	GOODS SHARE WITHIN CATEGORY [G]	GOODS SHARE OF TOTAL SUBJECT TO RELOCATION [H]	TRUCK MILES [I]
Category 1: National Origin, Destination in South Coast AQMD Jurisdiction	*Pathways not modeled. Change in transport distance assumed to be zero.*					**100%**	**-**	**NA**
Category 2: National Origin, bound for export	*Pathways not modeled. Change in transport distance assumed to be zero.*					**100%**	**-**	**NA**
Category 3: South Coast AQMD Jurisdiction Origin, bound for export	*Pathways not modeled. Change in transport distance assumed to be zero.*					**100%**	**-**	**NA**
Category 4: Imports	1	Port Area	-	-	Truck to Northern California Distribution	2.99%	1.45%	201
	2	Port Area	-	-	Downtown Rail to National Distribution	20.16%	9.76%	28
	3	Port Area	Inland Empire	-	Truck to South Coast AQMD Regional Distribution	2.45%	1.19%	70
	4	Port Area	Inland Empire	-	Truck to Non-District Regional Distribution	2.57%	1.25%	228
	5	Port Area	Inland Empire	-	Truck to Northern California Distribution	0.61%	0.30%	302
	6	Port Area	Inland Empire	-	Inland Empire Rail to National Distribution	3.53%	1.71%	80

GOODS FLOW CATEGORY [A]	PATHWAY [B]	SOUTH COAST AQMD JURISDICTION LOGISTICS NODE 1 [C]	SOUTH COAST AQMD JURISDICTION LOGISTICS NODE 2 [D]	SOUTH COAST AQMD JURISDICTION LOGISTICS NODE 3 [E]	DESTINATION [F]	GOODS SHARE WITHIN CATEGORY [G]	GOODS SHARE OF TOTAL SUBJECT TO RELOCATION [H]	TRUCK MILES [I]
	7	Port Area	Inland Empire	Inland Empire	Truck to South Coast AQMD Regional Distribution	0.59%	0.29%	81
	8	Port Area	Inland Empire	Inland Empire	Truck to Non-District Regional Distribution	0.63%	0.30%	240
	9	Inland Empire	-	-	Truck to Northern California Distribution	3.49%	1.69%	300
	10	Inland Empire	-	-	Inland Empire Rail to National Distribution	35.52%	17.20%	79
	11	Inland Empire	Inland Empire	-	Truck to South Coast AQMD Regional Consumption	3.39%	1.64%	80
	12	Inland Empire	Inland Empire	-	Truck to Non-District Regional Consumption	3.58%	1.73%	239
	13	Inland Empire	-	-	Truck to South Coast AQMD Regional Consumption	9.41%	4.56%	68
	14	Inland Empire	-	-	Truck to Non-District Regional Consumption	9.96%	4.82%	227
	15	Inland Empire	-	-	Downtown Rail to National Distribution	1.10%	0.53%	126
	Imported Goods Flow Pathways Total:					**100%**	**48.41%**	
Category 5: Origin and Destination of South Coast AQMD Jurisdiction	3	Port Area	Inland Empire	-	Truck to South Coast AQMD Regional Distribution	15.46%	5.39%	70
	7	Port Area	Inland Empire	Inland Empire	Truck to South Coast AQMD Regional Distribution	3.74%	1.30%	81
	11	Inland Empire	Inland Empire	-	Truck to South Coast AQMD Regional Consumption	21.38%	7.46%	80
	13	Inland Empire	-	-	Truck to South Coast AQMD Regional Consumption	59.42%	20.73%	68
	Goods with Origin and Destination in South Coast AQMD Jurisdiction Total:					**100%**	**34.89%**	

GOODS FLOW CATEGORY [A]	PATHWAY [B]	SOUTH COAST AQMD JURISDICTION LOGISTICS NODE 1 [C]	SOUTH COAST AQMD JURISDICTION LOGISTICS NODE 2 [D]	SOUTH COAST AQMD JURISDICTION LOGISTICS NODE 3 [E]	DESTINATION [F]	GOODS SHARE WITHIN CATEGORY [G]	GOODS SHARE OF TOTAL SUBJECT TO RELOCATION [H]	TRUCK MILES [I]
Category 6: South Coast AQMD Jurisdiction Origin and National Distribution Destination	1	Port Area	-	-	Truck to Northern California Distribution	3.56%	0.59%	201
	2	Port Area	-	-	Downtown Rail to National Distribution	23.96%	4.00%	28
	4	Port Area	Inland Empire	-	Truck to Non-District Regional Distribution	3.06%	0.51%	228
	5	Port Area	Inland Empire	-	Truck to Northern California Distribution	0.72%	0.12%	302
	6	Port Area	Inland Empire	-	Inland Empire Rail to National Distribution	4.20%	0.70%	80
	8	Port Area	Inland Empire	Inland Empire	Truck to Non-District Regional Distribution	0.74%	0.12%	240
	9	Inland Empire	-	-	Truck to Northern California Distribution	4.14%	0.69%	300
	10	Inland Empire	-	-	Inland Empire Rail to National Distribution	42.22%	7.05%	79
	12	Inland Empire	Inland Empire	-	Truck to Non-District Regional Consumption	4.26%	0.71%	239
	14	Inland Empire	-	-	Truck to Non-District Regional Consumption	11.83%	1.98%	227
	15	Inland Empire	-	-	Downtown Rail to National Distribution	1.31%	0.22%	126
	Goods with Origin in South Coast AQMD Jurisdiction and National Distribution Total:					**100%**	**16.70%**	
							Weighted Average Baseline Pathway Miles:	**95**

Notes:
1. The pathways shown in this exhibit reflect the goods flow pathways as represented in Leachman (2017).
2. This table shows pathways for each of the goods flow categories outlined in Exhibit 2. Because the categories with origin inside the South Coast AQMD jurisdiction are assumed to follow similar pathways to imported goods, they draw from the same pathways as the imported goods. The associated pathway share is scaled according to each goods category's share of the total analyzed goods, as shown in Exhibit 2.
3. Each pathway has 1-3 warehouses in its distribution chain, labeled by its location either near the ports of the San Pedro Bay or in the Inland Empire. To approximate the location of the average warehouse located in Los Angeles County near the ports, we use the location of the intermodal container transfer facility (ICTF). In the Inland Empire, we use a point halfway between the cities of Riverside and San Bernardino.
4. Because different warehouses fulfill different distributional functions, some goods visit multiple warehouses in the Inland Empire before leaving for their next destination.

To estimate the change in trucking distance associated with the relocation of a warehouse to an outlying market area, we follow an approach similar to the baseline. For each of the 15 pathways shown in Exhibits 2 and 3, we specify alternate pathways where a warehouse in that pathway relocates to each outlying market. Exhibit 4 maps the seven outlying markets considered in our analysis: North of District, Coastal Areas; North of District Bakersfield; South of District, San Diego; East of District, Desert Areas; Las Vegas; Western AZ; and Phoenix. For example, Exhibit 5 shows how pathways 1, 5 and 9 would change if warehouses on those pathways were to relocate from the South Coast AQMD jurisdiction to the Bakersfield area.

EXHIBIT 4. SOUTH COAST AQMD JURISDICTION AND RELOCATION MARKETS

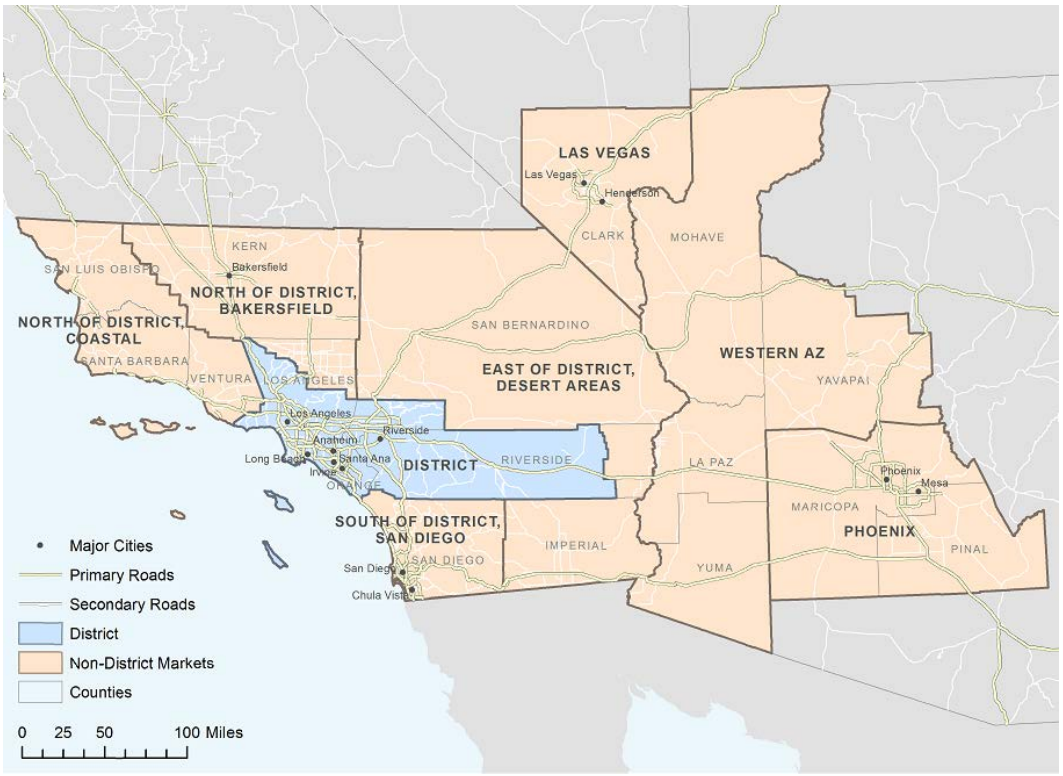
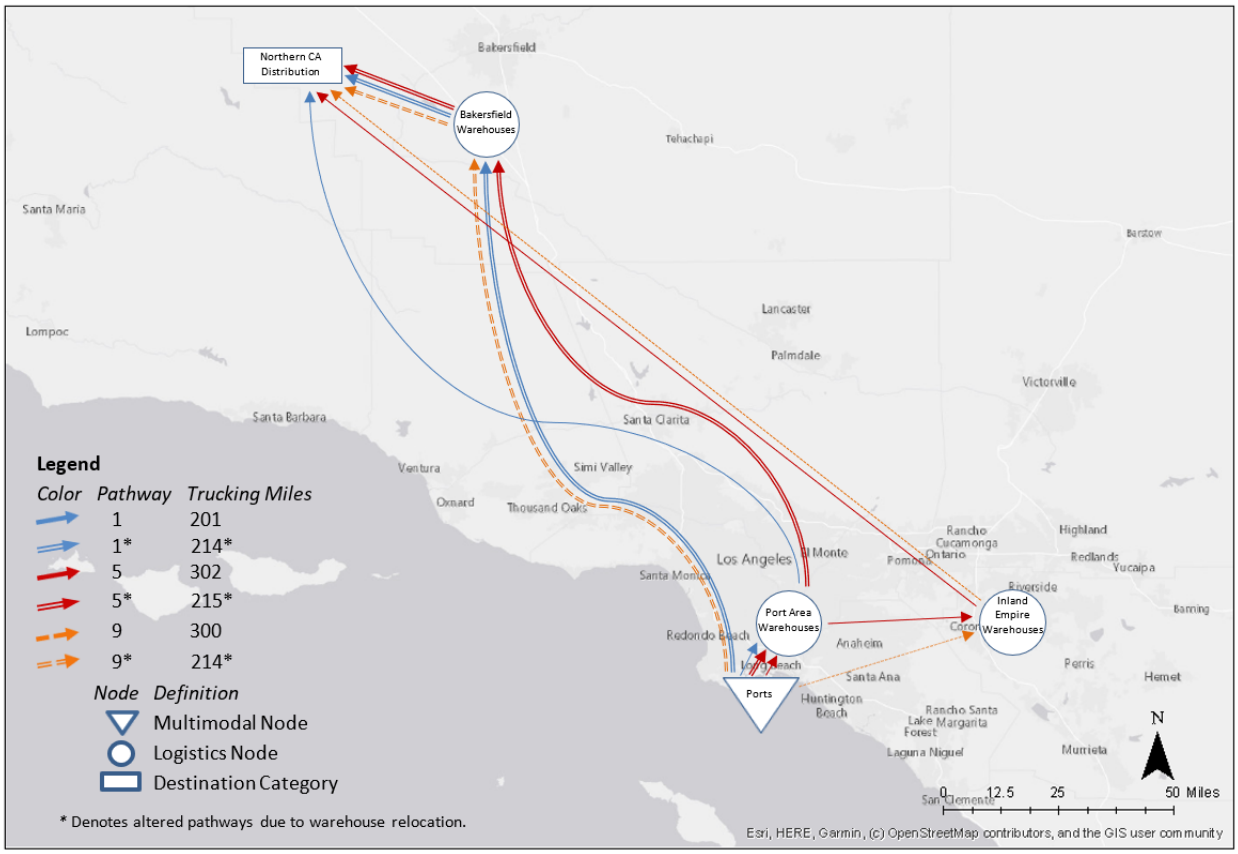


EXHIBIT 5. ILLUSTRATION OF PATHWAYS 1, 5, AND 9 GOODS FLOW WITH WAREHOUSE RELOCATION



Due to complexities inherent in the routing of goods through warehouses, we make several simplifying assumptions to estimate the trucking distance associated with relocation of a warehouse to each outlying market area. These include the following:

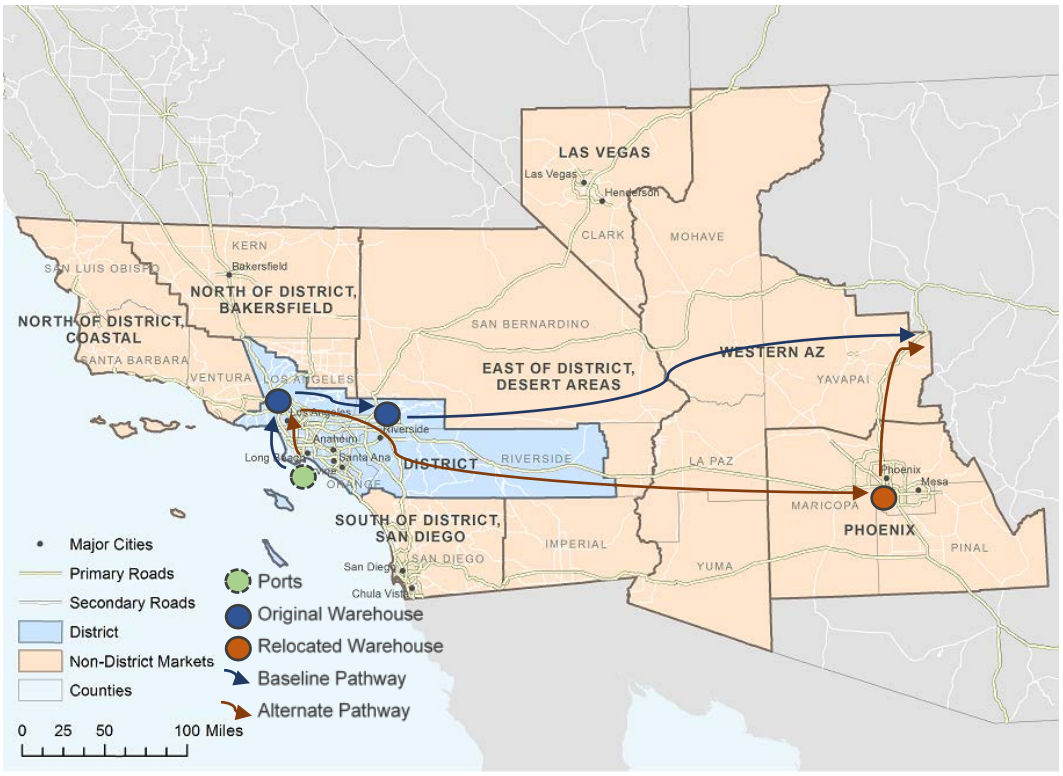
- ***Only final warehouse in pathway chain relocates:*** Estimation of travel distance associated with warehouse relocation is complicated since a given warehouse may represent one of many stops on a shipment's transit to its ultimate destination. Thus, the increase in distance associated with warehouse relocation may depend, in part, on where the warehouse sits along a pathway.[17]

  For example, it seems unlikely the first warehouse in Exhibit 6 (just north of the San Pedro Bay ports) would relocate to Phoenix, resulting in much higher transportation costs due to its goods routing from the San Pedro Bay ports to Arizona and then back to the Inland Empire, then back out for distribution outside the South Coast AQMD jurisdiction. It is more likely the *second* warehouse in the baseline pathway would relocate to Phoenix, having a more modest effect on total travel distance.

[17] Each warehouse's location within the supply chain may also affect whether it is likely to relocate. For example, warehouses serving transloading functions based on proximity to the port area may be unlikely to relocate.

For the purposes of estimating the distance associated with alternate good pathways for those pathways involving multiple warehouses, we only estimate the change in distance based on relocation of the last warehouse located inside South Coast AQMD jurisdiction in the pathway. This approach assumes it is unlikely goods would be trucked outside the South Coast AQMD jurisdiction to an intermediary warehouse and then back into the South Coast AQMD jurisdiction to another warehouse due to the increase this would have on transportation costs. For imported goods, warehouses earlier in the chain are more likely to serve functions directly relevant to goods processing from the ports or firm in the South Coast AQMD jurisdiction and would be less likely to relocate further from the ports.

EXHIBIT 6. SAMPLE GOODS PATHWAY WITH RELOCATION ALTERNATIVE



- ***Impact of multiple warehouses on a goods pathway relocating***: If multiple warehouses from a given pathway relocate to the same outlying market, the net change in distance traveled is not likely to be significantly different than one warehouse relocating. In each scenario, the goods are trucked from the South Coast AQMD jurisdiction to the outlying market one time, and distances between warehouses within each market area are assumed marginal. We do not consider how travel distance associated with one warehouse relocating is affected by the relocation of other warehouses on the same goods pathway.

- ***No splitting of pathways between multiple outlying market areas:*** We do not account for multiple warehouses from a given pathway relocating to different outlying markets because the transportation costs of doing so are likely to be prohibitive.
- ***Warehouse locations:*** To approximate the change in travel distance between the baseline and each alternate pathway, we make use of common warehouse locations to estimate transportation distances:
  - For goods pathways using warehouses in the ports vicinity, we use the intermodal container transfer facility (ICTF) as an approximate warehouse location.[18]
  - For goods pathways using warehouses in the Inland Empire, we use a point halfway between the cities of Riverside and San Bernardino as an approximate warehouse location.
  - For alternate goods pathways using warehouses in each outlying market area, we use the geographic centroid of existing warehouses in that market area as the approximate warehouse location.

  While these assumptions do not provide the most precise estimate of the change in distances for each individual warehouse, they provide a reasonably accurate representation of the magnitude of this change for a typical warehouse.
- ***Re-orientation of goods pathways:*** We do not consider any re-orientation of goods pathways (or the share of goods that follow each pathway) due to warehouse relocation or other effects resulting from implementation of the ISR.

Based on these assumptions, we estimated the distance associated with each combination of pathway and outlying market area, as presented in Exhibit 7. For example, consider pathway 10 in goods flow category 4 (imported through the ports) and category 6 (produced locally within the South Coast AQMD jurisdiction). In each instance, the baseline version of pathway 10 has the goods stop once at a warehouse in the Inland Empire, then trucked to the Inland Empire intermodal rail terminal where they are loaded for national distribution. In each alternate version of pathway 10, the Inland Empire warehouse is replaced with a warehouse in each outlying market area, and the goods are trucked onward to the appropriate local intermodal rail terminal from there. The net change in total truck miles traveled for each market area is captured in the row for pathway 10 in Exhibit 7 as the difference between the value for each outlying market and the baseline value.

[18] The ICTF is located approximately five miles north of the ports of the San Pedro Bay, near the intersections of the 405 and 710 Freeways at 2401 East Sepulveda Boulevard in Long Beach, California. 90810.

EXHIBIT 7. RELOCATION PATHWAYS, TRUCK TRAVEL DISTANCE

GOODS FLOW CATEGORY	PATHWAY	TRUCK TRAVEL DISTANCE WITH WAREHOUSE RELOCATION (MILES)								GOODS SHARE WITHIN CATEGORY[1]	GOODS SHARE OF TOTAL SUBJECT TO RELOCATION[2]
		BASELINE	SAN DIEGO	DESERT AREAS	COASTAL AREAS	BAKERSFIELD	LAS VEGAS	WESTERN AZ	PHOENIX		
Category 1: National Origin, South Coast AQMD Jurisdiction destination	*Pathways not modeled. Change in transport distance assumed to be zero.*									**100%**	**-**
Category 2: National Origin, bound for export	*Pathways not modeled. Change in transport distance assumed to be zero.*									**100%**	-
Category 3: South Coast AQMD Jurisdiction Origin, bound for export	*Pathways not modeled. Change in transport distance assumed to be zero.*									**100%**	**-**
Category 4: Imports	1	201	395	309	260	214	652	699	919	2.99%	1.45%
	2	28	124	136	178	160	298	371	384	20.16%	9.76%
	3	70	197	153	198	316	521	560	693	2.45%	1.19%
	4	228	317	291	304	411	566	592	669	2.57%	1.25%
	5	302	396	311	262	215	653	700	920	0.61%	0.30%
	6	80	125	138	180	161	299	372	385	3.53%	1.71%
	7	81	247	167	305	417	535	565	699	0.59%	0.29%

GOODS FLOW CATEGORY	PATHWAY	TRUCK TRAVEL DISTANCE WITH WAREHOUSE RELOCATION (MILES)								GOODS SHARE WITHIN CATEGORY[1]	GOODS SHARE OF TOTAL SUBJECT TO RELOCATION[2]
		BASELINE	SAN DIEGO	DESERT AREAS	COASTAL AREAS	BAKERSFIELD	LAS VEGAS	WESTERN AZ	PHOENIX		
	8	240	367	305	411	512	580	597	674	0.63%	0.30%
	9	300	395	309	260	214	652	699	919	3.49%	1.69%
	10	79	124	136	178	160	298	371	384	35.52%	17.20%
	11	80	245	165	303	415	533	563	697	3.39%	1.64%
	12	239	365	303	409	510	579	595	673	3.58%	1.73%
	13	68	196	151	196	315	520	559	692	9.41%	4.56%
	14	227	316	289	302	410	565	591	668	9.96%	4.82%
	15	126	124	136	178	160	298	371	384	1.10%	0.53%
Category 5: Origin and Destination of South Coast AQMD Jurisdiction	3	70	197	153	198	316	521	560	693	15.46%	5.39%
	7	81	247	167	305	417	535	565	699	3.74%	1.30%
	11	80	245	165	303	415	533	563	697	21.38%	7.46%
	13	68	196	151	196	315	520	559	692	59.42%	20.73%
Category 6: South Coast AQMD Jurisdiction Origin and National Distribution Destination	1	201	395	309	260	214	652	699	919	3.56%	0.59%
	2	28	124	136	178	160	298	371	384	23.96%	4.00%
	4	228	317	291	304	411	566	592	669	3.06%	0.51%

GOODS FLOW CATEGORY	PATHWAY	TRUCK TRAVEL DISTANCE WITH WAREHOUSE RELOCATION (MILES)								GOODS SHARE WITHIN CATEGORY[1]	GOODS SHARE OF TOTAL SUBJECT TO RELOCATION[2]
		BASELINE	SAN DIEGO	DESERT AREAS	COASTAL AREAS	BAKERSFIELD	LAS VEGAS	WESTERN AZ	PHOENIX		
	5	302	396	311	262	215	653	700	920	0.72%	0.12%
	6	80	125	138	180	161	299	372	385	4.20%	0.70%
	8	240	367	305	411	512	580	597	674	0.74%	0.12%
	9	300	395	309	260	214	652	699	919	4.14%	0.69%
	10	79	124	136	178	160	298	371	384	42.22%	7.05%
	12	239	365	303	409	510	579	595	673	4.26%	0.71%
	14	227	316	289	302	410	565	591	668	11.83%	1.98%
	15	126	124	136	178	160	298	371	384	1.31%	0.22%
TOTAL WEIGHTED AVERAGE:		95	196	170	219	271	442	493	574	**TOTAL:**	**100%**
DIFFERENCE FROM BASELINE:		0	101	75	123	176	347	398	479		

Notes:

1. Each percentage value in this column represents a pathway's share of the goods flow for a given goods flow category. For example, pathway 1 accounts for 2.99 percent of the goods flow for goods flow category 1.
2. Each percentage value in this column represents that category and pathway's combined share of the goods flow across all goods subject to alternate routing to different warehouses under the ISR. For example, goods that are imported and follow pathway 1 make up 1.1 percent of the goods subject to potential re-routing.

Using the baseline distances in Exhibit 3 with the distances associated with outlying markets in Exhibit 7, it is possible to estimate the change in trucking distance associated with warehouse relocation. The change in distance for a given warehouse, however, would depend on the pathway(s) the warehouse in question serves. Some warehouses may serve a single pathway only, while others may serve several. Because warehouse-specific pathway information is unavailable, the change in distance for a given warehouse is uncertain. To account for this uncertainty, we specify two pathway scenarios designed to yield low-end and high-end estimates of the change in warehouse relocations associated with the ISR:

1. ***Composite pathway scenario:*** Under this scenario, we assume each warehouse is representative of the entire South Coast AQMD jurisdiction's warehousing sector and serves all 15 pathways shown in Exhibits 2 and 3 in proportion to the goods flow associated with each pathway. Thus the change in trucking distance associated with relocating to a given outlying market area is the difference between the weighted average of the weighted average trucking distance across all 15 pathways for the outlying market area in question (shown near the bottom of Exhibit 7) and the baseline trucking distance across all 15 pathways (shown in the bottom of Exhibit 3). For both the baseline and outlying markets, we weight the pathway-specific distances by the percentage share of goods volume as derived from Leachman (2017) (column H in Exhibit 3).[19] Following this approach, the weighted average baseline distance is 95 miles (see Exhibit 3), and the weighted average distance for the outlying markets ranges from 170 miles for the Desert Areas to 574 miles for the Phoenix area.

2. ***Specialized pathway sensitivity scenario:*** This scenario is designed to account for the possibility that some warehouses may specialize in any one pathway, with the exception of a limited number of pathways. Rather than using the weighted distance across all pathways for a given outlying area, we conduct the analysis iteratively one pathway at a time, assuming all warehouses are on a given pathway for each iteration of the analysis. After running the analysis for all pathways, we calculate the weighted average of the resulting warehouse relocation estimates, using the goods volumes associated with each pathway as weights. For example, based on the distances in Exhibit 7 associated with the Bakersfield market area, we conduct the relocation analysis iteratively based on one-way distances of 160 miles (pathway 2), 316 miles (pathway 3), etc. and calculate the weighted average of the resulting number of relocations.

   This scenario models specialization for most, but not all, pathways. A number of sources suggest warehouses in the South Coast AQMD jurisdiction are unlikely to specialize in the pathways that route goods to Northern California (pathways 1, 5, and 9 in Exhibits 2 and 3 above). Specifically, a 2013 survey of warehouses in the South Coast AQMD jurisdiction found among the warehouses that ship goods to Northern California, goods on this route accounted for no more than 40 percent

[19] This excludes goods included in categories 1 through 3 in Exhibit 1 since those goods flows are assumed to be unaffected by changes in warehouse relocation.

of the goods handled.[20] This 40 percent value represented the highest percentage among all survey respondents.

Furthermore, unlike the other outlying market areas considered in this analysis, Northern California is located in close proximity to another major port, the Port of Oakland. To minimize transportation costs, it is likely most cargo owners with goods bound for Northern California would ship them through the Port of Oakland rather than the San Pedro Bay ports in Southern California. This would suggest warehouses in the South Coast AQMD jurisdiction would not find specialization in Northern California goods pathways to be economically viable. The fact that most cargo ships that visit the San Pedro Bay ports also visit the Port of Oakland (see Exhibit 8) further supports this conclusion, as it suggests the costs of distributing goods to Northern California are lower via the Port of Oakland than through the San Pedro Bay ports.

EXHIBIT 8. OVERLAP BETWEEN VESSELS VISITING SAN PEDRO BAY PORTS AND THE PORT OF OAKLAND

YEAR	% OF SHIPS VISITING SAN PEDRO BAY PORTS THAT VISIT OAKLAND
2019	77%
2018	72%
2017	74%
2016	78%

Source: South Coast AQMD staff analysis of the IHS-Seaweb data.

Based on this information, we include a single Northern California composite pathway in the iterative analysis conducted for the specialized pathway sensitivity scenario. Drawing on the results of the South Coast AQMD warehouse survey described above, the specialized pathway sensitivity scenario assumes 40 percent of the goods flow handled by warehouses that serve Northern California are bound for Northern California. These are allocated across the Northern California pathways (1, 5, and 9) in proportion to the percentages shown in Exhibit 3 for these pathways.[21]

Of the remaining 60 percent of the goods handled by these warehouses, we assume 30 percent remains in the South Coast AQMD jurisdiction and 30 percent is distributed nationally. These figures are also based on the South Coast AQMD

[20] South Coast AQMD, SCAQMD High Cube Warehouse Truck Trip Study White Paper Summary of Business Survey Results, June 2014, available at http://www.aqmd.gov/docs/default-source/ceqa/handbook/high-cube-warehouse-trip-rate-study-for-air-quality-analysis/business-survey-summary.pdf?sfvrsn=2.

[21] For example, pathways 1, 5, and 9 cumulatively account for account for 4.84 percent of the goods flow potentially affected by the warehouse ISR in Exhibit 3 above. Pathway 1 accounts for 2.04 percent, which is 42.1 percent of the 4.84 percent across all three pathways (2.04/4.84=42.1 percent). Therefore, given that we assume 40 percent of the goods flow is on Northern California pathways under this scenario, we assume that 16.9 percent follows pathway 1 (0.421 × 0.40=16.9 percent).

warehouse survey. For those warehouses that reported more than 30 percent of goods distributed to Northern California, the highest percentage reported for out of state distribution was 23 percent. Because our modeling shows warehouses specializing in national distribution are more conducive to relocation than warehouses distributed locally, we view 30 percent for national distribution as a reasonable conservative estimate. This leaves the remainder, 30 percent for local distribution.

We allocate both the 30 percent distributed nationally and 30 percent distributed locally proportionately to the goods flow pathways associated with each category. Based on these assumptions, Exhibit 9 shows the assumed allocation across pathways for those warehouses that serve the Northern California market. Note that the pathways in Exhibit 9 are organized by destination region (i.e., Northern California, national distribution, and local distribution).

EXHIBIT 9. ALLOCATION OF GOODS ACROSS PATHWAYS FOR WAREHOUSES IN THE SOUTH COAST AQMD JURISDICTION THAT SERVE NORTHERN CALIFORNIA

PATHWAY	PATHWAY DESCRIPTION	PATHWAY REGION	PATHWAY PERCENT
1	Truck to Northern California Distribution	Northern California	16.9%
5	Truck to Northern California Distribution	Northern California	3.5%
9	Truck to Northern California Distribution	Northern California	19.7%
2	Downtown Rail to National Distribution	National	10.0%
6	Inland Empire Rail to National Distribution	National	1.8%
10	Inland Empire Rail to National Distribution	National	17.7%
15	Downtown Rail to National Distribution	National	0.5%
3	Truck to South Coast AQMD Regional Distribution	Local	3.7%
4	Truck to Non-District Regional Distribution	Local	1.0%
7	Truck to South Coast AQMD Regional Distribution	Local	0.9%
8	Truck to Non-District Regional Distribution	Local	0.2%
11	Truck to South Coast AQMD Regional Consumption	Local	5.1%
12	Truck to Non-District Regional Consumption	Local	1.4%
13	Truck to South Coast AQMD Regional Consumption	Local	14.1%
14	Truck to Non-District Regional Consumption	Local	3.8%

Within the framework of the specialized pathway scenario analysis, the iteration of the analysis conducted for warehouses that serve Northern California is given a weight equal to the sum of the goods flow percentages across the Northern California pathways, as presented in Exhibit 3 (or 4.8 percent).

Trucking Cost Impacts

The estimated change in trucking distance derived from the methods outlined above is a key input into our analysis of the trucking cost impacts associated with warehouse

relocation. The following equation details our approach for estimating these trucking cost impacts.

$$(1)\quad \Delta T_r = (2 \times \Delta D_r) \times cpm \times (p \times s) \times cf$$

Where $\Delta T_{,r}$ is the change in trucking costs associated with relocating a warehouse from the South Coast AQMD jurisdiction to outlying market area *r;*

$\Delta D_{,r}$ is the change in one-way goods pathway trucking distance associated with relocating a warehouse from the South Coast AQMD jurisdiction to outlying market area *r*;

cpm is the trucking cost per mile;

p is the number of truck trips per 1000 square feet of warehouse space;

s is the warehouse square footage divided by 1000;[22] and

cf is a conversion factor for converting warehouse truck trips to pathway trips.

Below we describe our approach for specifying each of these analytic elements.

Two-Way Trucking Distance

The change in trucking distance is critical in the estimation of the trucking cost impacts associated with warehouse relocation. The distance estimates presented in the previous section, however, reflect the one-way distance impacts associated with warehouse relocation. In practice, warehouse relocation would also increase the distance trucks travel going in the other direction (i.e., back toward the South Coast AQMD jurisdiction). To account for this effect, we multiply the one-way distances presented above to estimate the two-way trucking distance impact associated with warehouse relocation. This two-way distance is represented as $(2 \times \Delta D_{,r})$ in Equation 1.

Trucking Cost Per Mile

The results of the travel distance calculations are used in conjunction with per-mile costs for trucking transport. We use per-mile trucking costs for the West region from the American Transportation Research Institute's 2019 annual report on trucking costs.[23] This value is $1.84 per mile for Class 8 trucks, adjusted for inflation from 2018 to 2019 dollars using the GDP implicit price deflator.[24] To approximate the value for Class 4-7 trucks, we use the ratio of per-mile costs for straight trucks reported by ATRI in 2017 with the 2019 annual report's data. This value is $1.77 per mile for Class 4-7 trucks. As a

[22] The term $(p \times s)$ therefore represents the number of truck trips for a warehouse.

[23] Murray, D. & Glidewell, S. 2019. "An Analysis of the Operational Costs of Trucking: 2019 Update." American Transportation Research Institute.

[24] We use annual gross domestic product implicit price deflators to inflate prices to the current dollar year (2019). These values were obtained from the Federal Reserve Bank of St. Louis Economic Research Division (FRED) and are indexed to 2012 (2012 = 100.00). The values are as follow: 2018=110.42, 2019=112.35.

U.S. Bureau of Economic Analysis, Gross domestic product (implicit price deflator) [A191RD3A086NBEA], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/A191RD3A086NBEA, October 11, 2020.

sensitivity analysis on this value, we also consider data from Freightwaves (2020), which reports lower- and upper-bound estimates of $1.16 and $3.05 per mile, respectively.[25]

We note two caveats regarding these trucking cost values. First, we do not consider potential differences in traffic between driving inside and outside the South Coast AQMD jurisdiction. We apply the trucking costs per mile, which do not rely on driving time. Second, we do not account for changes in the number of truck trips possible in a single driver's day as a result of warehouse relocation. This exclusion could underestimate the true cost of warehouse relocation, as drivers would have more downtime that they would prefer to spend transporting goods.

Number of Trips

As shown in Equation 1 above, we calculate the number of trips relative to each warehouse by multiplying the trip rate (trips per 1,000 square feet) by the square footage of each warehouse. We use South Coast AQMD's trip rates per 1,000 square feet of warehousing space included as default rates in the current draft ISR text.[26] These values are presented in Exhibit 10.

EXHIBIT 10. TRUCK TRIP RATES PER 1000 SQUARE FEET OF WAREHOUSE SPACE

WAREHOUSE TYPE	CLASS 8	CLASS 4-7
High Cube Transload & Short-Term Storage (≥200k sf)[1]	0.33	0.12
Warehouse (100k – 200k sf)[1,2]	0.21	0.14
Cold Storage (≥100k sf)[1]	0.75	0.29
Trip rates adapted by South Coast AQMD based on the following studies: [1] "Truck Trip Generation Study," 2003. City of Fontana, San Bernardino County. [2] "High Cube Warehouse Vehicle Trip Generation Analysis," 2016. Prepared for South Coast Air Quality Management District and National Association of Industrial and Office Properties by the Institute of Transportation Engineers.		

To apply the trip rates presented in Exhibit 10 in the relocation analysis, we adjust them in two ways. The first adjustment relates to the difference between a truck trip to or from a single warehouse versus a trip over an entire goods flow pathway. Because our analysis relies upon the distance along goods flow pathways, it must also use estimates of the total number of pathway trips (i.e., trips over the entire pathway). Because one full trip along a goods flow pathway may involve stops at several warehouses, a pathway trip may include truck trips to/from individual warehouses. In other words, one pathway trip may include more than one truck trip to/from warehouses. To convert the warehouse level truck trips

[25] Henry, C. "What is the Total Cost Per Mile for truckload carriers?" January 13, 2020. Freightwaves.com.

[26] "Draft WAIRE Menu Technical Report" March 3, 2020. South Coast Air Quality Management District.

in Exhibit 10 to pathway trips, we divide the number of truck trips by the number of warehouses per pathway.

The second adjustment reflects how truck trips are defined in the data presented in Exhibit 10. Specifically, a truck trip means the one-way trip a truck or tractor makes to or from a site with at least one warehouse to deliver or pick up goods stored at that warehouse for later distribution to other locations. Based on this definition, a truck or tractor entering a warehouse site and then leaving that site counts as two trips.

Putting this accounting practice in the context of a single warehouse situated along a goods flow pathway, the trip values in Exhibit 10 would lead to overestimation of the number of trips along a pathway. For example, consider a pathway that includes a single warehouse between the Port of Long Beach and the Inland Empire Rail Terminal. If a shipment of goods is transported to the one warehouse on this pathway and subsequently shipped from that warehouse to the rail terminal, the trip data for the warehouse in question would count that shipment as two separate truck trips: one inbound to the warehouse form the port and one outbound from the warehouse to the rail terminal. This results in double counting of trips through the warehouse. To avoid double counting, we divide the trip rates presented in Exhibit 10 by two.

These two adjustments together constitute the conversion factor *cf* shown in Equation 1 above. Specifically, the conversion factor is calculated as follows:

(2) $cf = \frac{1}{w_p} \times \frac{1}{2}$

Where *cf* is the factor converting warehouse truck trips to pathway trips; and

w_p is the number of warehouses along a given goods flow pathway.

Based on Equation 2, we derived the values of *cf* shown in the right-most column in Exhibit 11. The final row of the exhibit includes the weighted average value across pathways, using the proportion of the goods flow associated with each pathway as weights.

EXHIBIT 11. DERIVATION OF CONVERSION FACTORS

PATHWAY NUMBER [A]	PATHWAY DESCRIPTION [B]	NUMBER OF WAREHOUSES ON PATHWAY [C]	CONVERSION FACTOR [D]=1/(C×2)
1	Truck to Northern California Distribution	1	0.50
2	Downtown Rail to National Distribution	1	0.50
3	Truck to South Coast AQMD Regional Distribution	2	0.25
4	Truck to Non-District Regional Distribution	2	0.25
5	Truck to Northern California Distribution	2	0.25
6	Inland Empire Rail to National Distribution	2	0.25
7	Truck to South Coast AQMD Regional Distribution	3	0.17
8	Truck to Non-District Regional Distribution	3	0.17
9	Truck to Northern California Distribution	1	0.50
10	Inland Empire Rail to National Distribution	1	0.50
11	Truck to South Coast AQMD Regional Consumption	2	0.25
12	Truck to Non-District Regional Consumption	2	0.25
13	Truck to South Coast AQMD Regional Consumption	1	0.50
14	Truck to Non-District Regional Consumption	1	0.50
15	Downtown Rail to National Distribution	1	0.50
	Weighted Average Across Pathways	1.27	0.39

Rail Cost Impacts

In addition to changes in trucking costs, the cost of rail transport is also affected by alternate goods pathways involving warehouse relocation to outlying market areas. Our assessment of the change in rail costs is based on a similar equation as specified above for trucking costs:

$$(3)\quad \Delta R_r = \Delta D_r \times cpm_r \times (p \times s) \times cf$$

Where ΔR_r is the change in rail costs associated with relocating a warehouse from the South Coast AQMD jurisdiction to outlying market area *r*;

ΔD_r is the change in rail goods pathway distance associated with relocating a warehouse from the South Coast AQMD jurisdiction to outlying market area *r*;

cpm_r is the rail cost per mile;

p is the number of *truck* trips per 1000 square feet of warehouse space, and

s is the warehouse square footage divided by 1000.[27]

cf is a conversion factor for converting warehouse truck trips to pathway trips.

Although this equation is based on the number of *truck* trips (*p*), we use this equation because we derive the *rail* cost per mile from the ratio of rail costs per ton mile to

[27] The term ($p \times s$) therefore represents the number of truck trips for a warehouse.

trucking costs per ton mile, as reported by the Congressional Budget Office.[28] This source reports per-ton-mile freight costs for rail of $0.051 and corresponding per-ton-mile freight costs by truck of $0.156. Based on these values, we calculate a *rail* cost per mile using the following equation:

$$(4) \qquad cpm_r = \left(\frac{cptm_r}{cptm_t}\right) \times (cpm_t)$$

Where cpm_r is the rail cost per mile;

$cptm_r$ is the rail cost per ton-mile;

$cptm_t$ is the trucking cost per ton-mile;

cpm_t is the trucking cost per mile used in the Trucking Costs section, $1.84 per mile.

In effect, applying the estimate of cpm_r as specified in Equation 4 to the specification of costs in Equation 3 provides an estimate equivalent of scaling trucking costs estimated from Equation 1 by the ratio of rail costs per ton mile to trucking costs per ton mile, approximately one-third. This estimate excludes other costs relevant to rail travel, such as added time and changes in reliability.

Change in Rail Distance

Following the potential relocation of a warehouse to an outlying market, some goods pathways that result in rail transport for national distribution will make use of different rail terminals than they do currently within the South Coast AQMD jurisdiction. The result is a change in rail miles traveled for some goods pathways, in addition to the change in truck miles traveled.

For example, if a warehouse serving national distribution via rail were to relocate from the South Coast AQMD jurisdiction to Las Vegas, the result would be an increase in trucking miles and a decrease in total rail miles traveled. This is because goods trucked the initial stretch of the journey east would have been on a train in the baseline for that portion of their journey.

To accomplish this, we identify the relevant intermodal rail facilities in each outlying market area using maps from the National Transportation Atlas Database (NTAD) and the Burlington Northern Santa Fe Railway Company (BNSF), outlined in Exhibit 12 and mapped in Exhibit 13.

[28] Austin, D. 2015. "Pricing Freight Transport to Account for External Costs." Congressional Budget Office.

EXHIBIT 12. RELEVANT INTERMODAL FACILITIES

MARKET	CITY	STATE	INTERMODAL FACILITY NAME	ZIP CODE	LATITUDE/ LONGITUDE
North of District, Coastal	Santa Maria	CA	Yellow-Santa Maria-Ca Terminal	93454	34.97587/-120.43372
North of District, Bakersfield	Bakersfield	CA	BNSF-Bakersfield-Ca	93308	35.45047/-119.09855
District	Los Angeles	CA	BNSF-Los Angeles-Ca	90023	34.01267/-118.19678
East of District, Desert Areas	Barstow	CA	BNSF-Barstow-Ca	92311	34.89532/-117.04787
Inland Empire	San Bernardino	CA	BNSF-San Bernardino-Ca	92411	34.10644/-117.32037
South of District, San Diego	Chula Vista	CA	BNSF-San Diego-Ca	91911	32.59299/-117.08152
Las Vegas	Las Vegas	NV	Up-Las Vegas-Nv	89106	36.16162/-115.15788
Western AZ	Kingman	AZ	Lucky 7 Transportation, Inc.-Kingman-Az	86401	35.22756/-114.00087
Phoenix	Glendale	AZ	BNSF-Phoenix Intermodal Facility	85301	33.51873/-112.16439

Sources:
BNSF Railway, (2020). "BNSF 6003 Rail Miles Inquiry Tool." Accessed July 2020. http://www.bnsf.com/bnsf.was6/RailMiles/RMCentralController

Bureau of Transportation Statistics, (2020). "Layer: Intermodal Freight Facilities." National Transportation Atlas Database. Accessed July 2020. https://www.arcgis.com/home/item.html?id=88ebd67fdc3c4d8ba6f0ee9311960eec

EXHIBIT 13. MAP OF RELEVANT INTERMODAL FACILITIES



Exhibit 14 shows the baseline rail distance per relevant pathway, as well as the pathway-specific rail distance for each outlying market area. The difference between the pathway-specific values for each outlying market area and the pathway-specific values for the baseline are used for the specialized pathway sensitivity scenario described above. For the Composite pathway scenario, we use the weighted average of the rail distance values shown in Exhibit 14, using the proportion of the goods flow associated with each pathway as weights. The change in weighted average distance for each outlying market area is shown at the bottom of Exhibit 14. The weighted average change in rail distance is negative for some market areas and positive in others.

EXHIBIT 14. RELOCATION SCENARIOS, RAIL TRAVEL

GOODS FLOW CATEGORY	PATHWAY	RAIL TRAVEL DISTANCE (MILES)								GOODS SHARE WITHIN CATEGORY	GOODS SHARE OF TOTAL SUBJECT TO RELOCATION
		BASELINE	SAN DIEGO	DESERT AREAS	COASTAL AREAS	BAKERSFIELD	LAS VEGAS	WESTERN AZ	PHOENIX		
Category 1: National Origin, South Coast AQMD Jurisdiction destination	*Pathways not modeled. Change in transport distance assumed to be zero.*									**100%**	**-**
Category 2: National Origin, bound for export	*Pathways not modeled. Change in transport distance assumed to be zero.*									**100%**	-
Category 3: South Coast AQMD Jurisdiction Origin, bound for export	*Pathways not modeled. Change in transport distance assumed to be zero.*									**100%**	**-**
Category 4: Imports	**2**	890	968	753	1283	893	1091	524	592	20.16%	**9.76%**
	6	830	968	753	1283	893	1091	524	592	3.53%	**1.71%**
	10	830	968	753	1283	893	1091	524	592	35.52%	**17.20%**
	15	830	968	753	1283	893	1091	524	592	1.10%	**0.53%**
	ELSE	0	0	0	0	0	0	0	0	39.69%	**19.21%**
Category 5: Origin and Destination of South Coast AQMD Jurisdiction	*No pathways affected by changes in rail travel.*									100%	-

GOODS FLOW CATEGORY	PATHWAY	RAIL TRAVEL DISTANCE (MILES)								GOODS SHARE WITHIN CATEGORY	GOODS SHARE OF TOTAL SUBJECT TO RELOCATION
		BASELINE	SAN DIEGO	DESERT AREAS	COASTAL AREAS	BAKERSFIELD	LAS VEGAS	WESTERN AZ	PHOENIX		
Category 6: South Coast AQMD Jurisdiction Origin and National Distribution Destination	**2**	890	968	753	1283	893	1091	524	592	23.96%	**4.00%**
	6	830	968	753	1283	893	1091	524	592	4.20%	**0.70%**
	10	830	968	753	1283	893	1091	524	592	42.22%	**7.05%**
	15	830	968	753	1283	893	1091	524	592	1.31%	**0.22%**
	ELSE	0	0	0	0	0	0	0	0	28.31%	**4.73%**
TOTAL WEIGHTED AVERAGE:		**350**	**399**	**310**	**528**	**368**	**449**	**216**	**244**	**TOTAL:**	**100%**
TOTAL DIFFERENCE FROM BASELINE:		**0**	**49**	**-40**	**178**	**18**	**99**	**-134**	**-106**		

Notes:

- The change in rail travel distance only affects the four pathways with national rail distribution as their destination, as listed in Exhibit 3. Rather than onloading the goods at either the Downtown Los Angeles or Inland Empire (San Bernardino) rail terminals, the warehouse relocation necessitates onloading goods at rail terminals in the outlying markets.
- We assume relocated warehouses in both the Coastal Areas and Bakersfield outlying markets will continue to use the in-District rail terminals due to the lack of alternate rail terminals. The resulting increase in truck travel distance is accounted for in the truck travel distance calculations.

Number of Trips

As with trucking, we use South Coast AQMD's trip rates per 1,000 square feet of warehousing space included as default rates in the current draft ISR text (see values in Exhibit 10).[29] We calculate the number of trips relative to each warehouse by multiplying the trip rate by the square footage of each warehouse. We also apply the conversion factor described in the trucking cost section above (*cf*) to convert warehouse level trips to pathway trips.

Total Transportation Cost Impacts

To obtain a value for the total effect on transportation costs due to warehouse relocation, we sum the effects on trucking costs and rail costs:

$$\Delta TC_r = \Delta T_r + \Delta R_r$$

Where $\Delta TC_{d,r}$ is the total change in transportation costs associated with relocating a warehouse from the South Coast AQMD jurisdiction to outlying market area *r*;

$\Delta T_{d,r}$ is the change in trucking costs associated with relocating a warehouse from the South Coast AQMD jurisdiction to outlying market area *r*;

$\Delta R_{d,r}$ is the change in rail costs associated with relocating a warehouse from the South Coast AQMD jurisdiction to outlying market area *r*;

This value represents the incremental effect on transportation costs resulting from relocating a warehouse to a given market.

Transportation Cost Impacts Limitations

While the data sources and methods described in this analysis provide reasonable estimates of the transportation cost impact associated with warehouse relocation from the South Coast AQMD jurisdiction, it is important to expand on several limitations which may affect the accuracy of the analysis:

- The goods pathway framework for the analysis is a parsimonious representation of a complex supply chain ecosystem, as exists in the South Coast AQMD jurisdiction. While analyzing the shipment of goods and the location of logistics nodes in this way was necessary to develop this analysis, it is important to note it does not capture every nuance of logistics in the South Coast AQMD jurisdiction.
- The CFS data used to estimate the allocation of goods across different goods flow categories (e.g., imports, locally source goods consumed locally, etc.) is ambiguous regarding the inclusion or exclusion of imports. For the purposes of this analysis, we assumed the CFS data does not reflect imports as they arrive at the San Pedro Bay ports. If we were to assume all imports are reflected in the CFS data upon their arrival at the San Pedro Bay ports, the estimated change in trucking distance would, on average, be seven percent higher than estimated here. To the extent that we underestimate the change in trucking distance, we may

[29] "Draft WAIRE Menu Technical Report" March 3, 2020. South Coast Air Quality Management District.

underestimate the costs of relocation and overestimate the degree to which warehouses relocate outside the South Coast AQMD jurisdiction.

- While the per-mile cost estimates we include for both trucking and rail are relatively comprehensive in what they include, they do not capture all cross-medium differences between the two methods. Differences in travel time or reliability between trucking and rail are not considered in these applications.
- This analysis is meant to capture incremental changes in travel cost due to the relocation of an individual warehouse. It does not capture other cost effects, e.g. a logistics company reorienting its business organization away from the San Pedro Bay ports, making changes to warehousing operations to decrease required floor space, or increasing full-truckload shipments.

RENTAL COSTS

This analysis estimates the average change in annual rents for a warehouse relocating to an outlying market area. Based on rental cost data from CoStar, we calculate an average annual rental price per square foot specific to warehouses likely to relocate (excluding cold storage facilities, which we assume will not relocate).[30] We then take the difference from the value for the South Coast AQMD jurisdiction to obtain the expected change in annual rent per square foot due to the typical warehouse relocating to each of the outlying market areas. Exhibit 15 illustrates the expected cost changes due to differences in rent.

EXHIBIT 15. DIFFERENCES IN RENTAL PRICES ACROSS MARKETS - YEAR 2019

MARKET	AVERAGE YEARLY RENTAL PRICE PER SQUARE FOOT	DIFFERENCE FROM DISTRICT BASELINE ($/SQUARE FOOT)
South Coast AQMD Jurisdiction Average	**$10.61**	-
Non-District Average	**$6.99**	($3.62)
Bakersfield	$4.03	($6.57)
Coastal Areas	$9.32	($1.29)
Desert Areas	$9.75	($0.86)
San Diego	$11.07	$0.46
Las Vegas	$7.54	($3.07)
Phoenix	$5.99	($4.62)
Western AZ	$3.84	($6.77)

[30] The CoStar data are summarized in "Technical Memorandum on Real Estate Markets Neighboring the South Coast AQMD Jurisdiction", prepared by Derek Ehrnschwender and Jason Price, Industrial Economics, for South Coast AQMD. December 12, 2020.

LABOR COSTS

This analysis estimates the average change in warehouse labor costs associated with operating a warehouse in the outlying markets rather than in the South Coast AQMD jurisdiction. This analysis is based upon a cross-geographic comparison of the typical employment required for a distribution warehouse developed by The Boyd Company.[31]

This report measures differences in warehouse labor costs for several cities in the Southwestern U.S. for a model 500,000 square foot distribution warehouse. Where the cities considered in the Boyd report align with the market areas considered in this analysis, we rely on the labor cost values included in the report.

Some California market areas, specifically the South Coast AQMD jurisdiction, Coastal Areas, Bakersfield, and San Diego markets, do not align with the geographic areas captured in the Boyd report. In these cases, we use the Boyd estimate for the Inland Empire as a starting point and scale this value based on county-level wage rates available in California's 2014 Occupational Employment Statistics survey and the mix of occupational categories employed by a warehouse (as specified in the Boyd report).[32,33] For example, to derive an estimate for the Bakersfield area, we multiplied the Inland Empire cost value from the Boyd report by the ratio of the Kern County warehouse wage rate to the Riverside County warehouse wage rate. The estimated labor costs for each market area are captured in Exhibit 16. All labor rates have been adjusted to 2019 dollars.

EXHIBIT 16. DIFFERENCES IN COST OF LABOR ACROSS MARKETS – 2019$

MARKET	ESTIMATED ANNUAL LABOR COSTS, MODEL 500,000 SQUARE FOOT WAREHOUSE (2015)	ESTIMATED ANNUAL LABOR COSTS PER 1,000 SQUARE FEET	DIFFERENCE FROM DISTRICT BASELINE ($/1000sqft)
South Coast AQMD Jurisdiction*	$6,689,241	$13,378	$-
Bakersfield*	$6,733,087	$13,466	$87.69
Coastal Areas*	$6,690,483	$13,381	$2.48
San Diego*	$6,324,682	$12,649	$(729.12)
Desert Areas	$6,794,841	$13,590	$211.20
Las Vegas	$5,506,778	$11,014	$(2,364.93)
Phoenix	$5,707,995	$11,416	$(1,962.49)
Western AZ	$5,153,621	$10,307	$(3,071.24)

*Denotes market areas not fully captured in Boyd (2015). To obtain estimates for these market areas, we adjust the Boyd estimates using a representative sample of county-level labor rates available in California's 2014 Occupational Employment Statistics survey.

[31] The Boyd Company (2015). "Comparative Distribution Costs in Port and Intermodal-Proximate Cities: Distribution Warehouse Site Selection."

[32] State of California Employment Development Department (2015). Occupational Employment Statistics and Wages.

33 This mix of personnel includes one first-line supervisor of helpers, laborers, and material movers; one first-line supervisor of transportation and material-moving machine operators, two heavy and tractor-trailer truck drivers; one light truck or delivery service driver; and five laborers and freight, stock, and material movers.

POWER COSTS

We also consider differences in electricity cost across market areas. Boyd (2015) reports power costs for a model 500,000 square foot distribution warehouse across several cities in the Southwestern U.S. Boyd (2015) applies the same power costs to all of the California areas included in the report. We assume these values apply to all market areas in California, regardless of whether they are included in the Boyd report. These estimates are reported in Exhibit 17.

EXHIBIT 17. DIFFERENCES IN COST OF POWER ACROSS MARKETS - YEAR 2019

MARKET	ESTIMATED ANNUAL POWER COSTS, MODEL 500,000 SQUARE FOOT WAREHOUSE AS CONSIDERED IN BOYD (2015)	ESTIMATED ANNUAL LABOR COSTS PER 1,000 SQUARE FEET	DIFFERENCE FROM DISTRICT BASELINE ($/1000sqft)
South Coast AQMD Jurisdiction	$899,066	$1,798	$-
Bakersfield	$899,066	$1,798	$-
Coastal Areas	$899,066	$1,798	$-
San Diego	$899,066	$1,798	$-
Desert Areas	$899,066	$1,798	$-
Las Vegas	$825,234	$1,650	$(147.66)
Phoenix	$624,379	$1,249	$(549.38)
Western AZ	$703,039	$1,406	$(392.05)

MOVING COSTS

This analysis accounts for the costs of physically moving warehouse operations to a new site. We rely on a one-time moving cost of $160,000 per facility, derived from moving cost estimates from Petersen and Aase (2016).[34] This estimate takes into account several cost categories, including transportation, labor, and inventory storage costs, across one-week, two-week and three-week moving scenarios. We calculate the average of these three scenarios' costs to obtain our moving cost estimate.

DEVELOPMENT FEES

In the slack capacity scenario we account for the development of potential new warehouse capacity to meet potential new demand for warehouses relocated from the South Coast AQMD jurisdiction. Developers that undertake such projects will incur a number of one-time development or impact fees charged by the various jurisdictions in outlying market areas, including fire and rescue fees, transportation mitigation fees, etc. For the purposes of estimating the costs of relocation, we assume such costs will ultimately be borne by warehouse operators who pay rent to the building owner. We annualize these costs over the full 20-year time horizon of our analysis, using discount rates of 1 percent and 4 percent. Although development fees may be reflected in current

[34] Petersen, Charles G., and Gerald R. Aase (2016). "Issues in Distribution Center Relocation." Open Journal of Business and Management 4, No. 01.

rents for outlying markets where warehouse capacity could be developed, these fees may not be fully reflected in current rents if no warehouse development has occurred since the development fees were last revised.

Due to the lack of comprehensive data on impact fees related to development of warehousing properties in the Southwest, IEc conducted a review of applicable fees across the seven outlying market areas included in this analysis. This review relied on a selection of sources, including municipal government websites, reports commissioned by governmental associations, and city council ordinances. After compiling the relevant impact fees for each of the seven markets, IEc then converted the estimates to 2019 dollars per square foot. The results of this analysis, outlined in Exhibit 18, show a range of development fees per 1000 square feet by market area.

MODELING OF RELOCATION DECISIONS

Based on the costs of ISR compliance and the costs of relocation calculated, we estimate the number of warehouses that relocate from the South Coast AQMD jurisdiction to the outlying market areas. We develop estimates for different analytic scenarios designed to capture uncertainty regarding the capacity available in each outlying market area (i.e., the medium term capacity area and slack capacity scenario) and uncertainty regarding the goods pathways served by individual warehouses (i.e., the composite pathway scenario and specialized pathway sensitivity scenario).

For each scenario, our modeling of the preferences of an individual warehouse is based on the annualized cash flows associated with ISR compliance and the annualized cash flows associated with relocation, over a 20-year time horizon. For a given analytic scenario, we assume that a warehouse operator's square footage is relocated to an outlying market if the cost condition and capacity condition described in the overview section are met (i.e., if relocation costs for at least one outlying area are less than ISR compliance costs and the available capacity in that area is sufficient to absorb that warehouse's square footage).

Our modeling of this decision accounts not only for the capacity available in each outlying market area prior to introduction of the ISR but also how the relocation decisions of individual warehouses dynamically affect the capacity available in a specific market area and the ability of other warehouses to relocate to that area. The procedure that we follow to capture these dynamics and estimate the number of warehouse relocations is as follows:

- ***Step 1 - Identify the hierarchy of relocation preferences for each warehouse:*** Based on the costs of ISR compliance and relocation, the analysis determines not only whether a given warehouse operation would realize a cost savings by relocating, but also determines the ranking of outlying market areas in terms of the net cost savings that would be realized by relocating.

EXHIBIT 18. DEVELOPMENT IMPACT FEES

MARKET	IMPACT FEE CATEGORY									
	Transportation	Fire & Rescue	Police	School	Water & Sewer	Library	Park	Other	Total (Impact)	**Total ($/1000 sqft)**
Bakersfield	$0.09/sqt	$0.55/sqt	$0.14/sqft	$0.61/sqft	-	$0.13/sqft	-	$0.07/sqft	$1.59/sqft	**$ 1590**
Coastal Areas	$1.48/sqt	$0.43/sqt	$0.25/sqt	$ 0.63/sqft	-	$ 0.79/sqft	-	$0.44/sqft	$ 4.02/sqft	**$ 4020**
San Diego	$ 4.9/sqft	$ 0.1/sqft	$ 0.19/sqft	-	-	-	-	-	$ 5.19/sqft	**$ 5190**
Desert Areas	$0.16/sqt	$0.39/sqt	-	-	-	-	-	-	$ 0.55/sqft	**$ 550**
Las Vegas	$0.94/sqt	-	-	-	-	-	-	$0.01/sqft	$ 0.95/sqft	**$ 950**
Phoenix	$0.85/sqt	$0.22/sqt	$ 0.15/sqft	-	-	$ 0.02/sqft	$ 0.27/sqft	$0.38/sqft	$ 2.23/sqft	**$ 2230**
Western AZ	$0.26/sqt	$ 0.4/sqft	$ 0.14/sqft	-	-	-	-	$0.01/sqft	$ 0.81/sqft	**$ 810**

- ***Step 2 – Array warehouses from largest to smallest:*** To account for the degree to which the relocation decision of a given warehouse affects capacity in the outlying market areas and the potential capacity available for other warehouses considering relocation, we model the warehouses sequentially from largest to smallest. The rationale for this ordering is that the cost impacts of the ISR would likely be more significant for larger warehouses and they would therefore have the greatest motivation to relocate.
- ***Step 3 – Model relocations to most preferred outlying market area:*** Focusing on the most preferred outlying market area for each warehouse operation for which relocation would yield a cost savings, we model the relocation of warehouses in sequence from largest to smallest. The decision of the first warehouse wishing to relocate affects the capacity available in its chosen market area for the second warehouse. The decision of the second warehouse similarly affects capacity available in its chosen market area for the third, and so on. After modeling relocations to individual market areas, we tally the warehouse square footage relocated to each area. Exhibit 19 shows the assumed capacity available as the starting point for the analysis.
- ***Step 4 – Model relocations to second most preferred outlying market area:*** For those warehouses that were unable to relocate to their most preferred outlying market area due to capacity constraints, we move on to modeling relocations for the second most preferred market area. Starting with the largest of these warehouses, the decision of the first such warehouse affects the capacity available in its chosen market area for the second largest of these warehouses. The decision of the second largest of these warehouses similarly affects the capacity available in its chosen market area for the third largest, and so on. After modeling relocations to individual market areas, we tally the warehouse square footage relocated to each area.
- ***Step 5 – Repeat Step 4 for the third, fourth, and fifth most preferred outlying market areas:*** After modeling relocations to the second most preferred market area, we move on sequentially to the third, fourth, and fifth most preferred areas. After modeling relocations to individual market areas, we tally the warehouse square footage relocated to each area. Consideration of the sixth and seventh most preferred outlying market areas was not necessary to avoid capacity constraints.
- ***Step 6 – Sum warehouse square footage relocated to each market area:*** Based on the decisions modeled in the previous steps, we sum the total square footage relocated to each outlying market area.

The process outlined above yields the estimated square footage of warehouse space relocated to each outlying market area. To estimate the number of warehouse operations relocated to each market area, we divide these square footage values by the average square footage per warehouse modeled in this analysis (258,409 square feet). As noted above, the warehouses modeled include all warehouses affected by the ISR, excluding

cold storage warehouses and warehouses at manufacturing facilities. We follow this approach rather than reporting results for individual warehouses due to the uncertainties inherent in individual warehouse costs and relocation decisions. Because our analysis is based on average unit costs applied to all warehouses rather than costs data specific to individual warehouses and because relocation decisions at the individual warehouse level will be based on factors that we have not quantified here, results focused on relocations of individual warehouses would introduce a false sense of precision into the analysis.

EXHIBIT 19. AVAILABLE WAREHOUSE CAPACITY BY MARKET AREA AND CAPACITY SCENARIO (SQUARE FEET)

MARKET	CAPACITY SCENARIO	
	MEDIUM TERM	SLACK CAPACITY
Bakersfield	6,993,909	339,982,129
Coastal Areas	1,083,385	29,361,532
Desert Areas	12,469,835	328,554,568
Las Vegas	7,023,141	460,719,182
Phoenix[1]	35,764,196	28,756,628
San Diego	3,014,243	120,694,750
Western AZ	475,023	164,244,225

Notes:

1. Estimated medium term capacity for the Phoenix market exceeds slack capacity. This reflects CoStar's reporting of the square footage of parcels available for industrial development in the Phoenix area and CoStar's forecast of industrial development in the Phoenix area. As described in the source memo cited below, our slack capacity estimates are based on the former less the latter, plus projected vacancies. For the Phoenix area, the first part of this expression (i.e., the former less the latter) is a negative number, implying that future industrial developments exceed land zoned for industrial use. This could reflect an implicit assumption in the CoStar forecast that land not currently zoned for industrial development will be converted to industrial. It may also be due to the approach described in the source document below to adjust for the fact that CoStar does not distinguish between future developments on large parcels that can accommodate a 100,000 square foot warehouse and development on other parcels.

Source: Values derived from CoStar data, as analyzed and reported in Technical Memorandum on Real Estate Markets Neighboring the South Coast AQMD Jurisdiction, prepared by Derek Ehrnschwender and Jason Price, Industrial Economics, for South Coast AQMD. December 12, 2020.

ATTACHMENT 5

RESULTS OF INDIRECT SOURCE RULE WAREHOUSE RELOCATION ANALYSIS

IEc

MEMORANDUM | 12 DECEMBER 2020

TO Victor Juan, Ian MacMillan, Paul Stroik, and Shah Dabirian, South Coast Air Quality Management District (South Coast AQMD)

FROM Jason Price, Derek Ehrnschwender, and Nick Manderlink; IEc

SUBJECT Results of Indirect Source Rule Warehouse Relocation Analysis

INTRODUCTION

This memo presents the results of IEc's analysis of potential warehouse relocations that might occur in response to the South Coast Air Quality Management District's (South Coast AQMD's) warehouse indirect source rule (ISR). The relocation results presented in this memo are based on the methods described in IEc's November 30, 2020 memo entitled "ISR Relocation Model – Methodology." Drawing on the approach presented in that memo, this analysis assumes a warehouse operator will relocate if the net costs of ISR compliance exceed the net costs of relocating outside the South Coast AQMD jurisdiction, as long as warehouse capacity is available in areas outside the South Coast AQMD.

The potential destination markets considered for warehouses located in the South Coast AQMD jurisdiction in this analysis include the following:

- **North of District, Bakersfield:** All of Kern County and the non-South Coast AQMD portion of Los Angeles County, including Lancaster and Palmdale.
- **North of District, Coastal:** All of Ventura County, Santa Barbara County, and San Luis Obispo County. Contains the Port of Hueneme, located in Ventura County.
- **East of District, Desert Areas:** All of Imperial County and the non-South Coast AQMD portions of San Bernardino County, including Victorville, and Riverside County.
- **South of District, San Diego:** All of San Diego County, which includes the Port of San Diego.
- **Las Vegas:** All of Clark County, Nevada, which includes the city of Las Vegas.
- **Phoenix:** All of Maricopa County and Pinal County, Arizona.
- **Western Arizona:** All of the four Arizona counties to the west of Phoenix: Yuma, La Paz, Mohave, and Yavapai counties.

SPECIFICATION OF ANALYTIC SCENARIOS

Our estimates of relocation depend on several factors, most significantly on our assumptions regarding the following:

- Each outlying market's capacity to absorb warehouses from the South Coast AQMD jurisdiction.

- The transportation distance implications of relocating to each outlying market.

To account for the uncertainty in these parameters, we estimate relocation under different analytic scenarios defined according to each of these parameters, as detailed below. Together these scenarios enable the estimation of low-end and high-end relocation estimates that bound our estimates of warehouse relocations. Scenarios that assume lower warehousing capacity in outlying markets will yield relocation estimates lower than scenarios that assume relatively high capacity availability. Similarly, scenarios that assume less specialization in the routing of goods will yield lower relocation estimates than scenarios that assume more routing specialization.

CAPACITY SCENARIOS

A key uncertainty in the relocation analysis is the capacity of outlying markets to absorb warehousing activity operating in the South Coast AQMD jurisdiction. Existing capacity in these outlying markets is fairly limited relative to the square footage of warehouse space in the South Coast AQMD jurisdiction, though warehouse space could be constructed on land zoned for industrial development in these areas. Whether and to what degree such development would occur in response to an ISR is a key question for the purposes of our analysis. To address this uncertainty, we estimate relocations under two capacity scenarios:

- ***Medium-term capacity***: This measure of capacity includes current vacant capacity and new capacity proposed or currently under construction in the outlying market areas. This scenario, in effect, assumes no new construction of warehouse space beyond what is already planned in the outlying market areas. It provides a reasonable representation of capacity until such time that new capacity developments can obtain approval and complete construction.
- ***Slack capacity:*** This measure of capacity includes projected warehouse vacancies and also assumes all land that is (1) zoned for industrial development in the outlying market areas and (2) is within 2 miles of a major road is developed into warehouse space. Because it is unlikely that all this land would be developed into warehouse space, this measure of capacity represents an upper bound estimate of warehouse capacity in outlying markets.

For both capacity scenarios, we account for capacity constraints such that the warehouse square footage relocated to a given area does not exceed available capacity in that area.

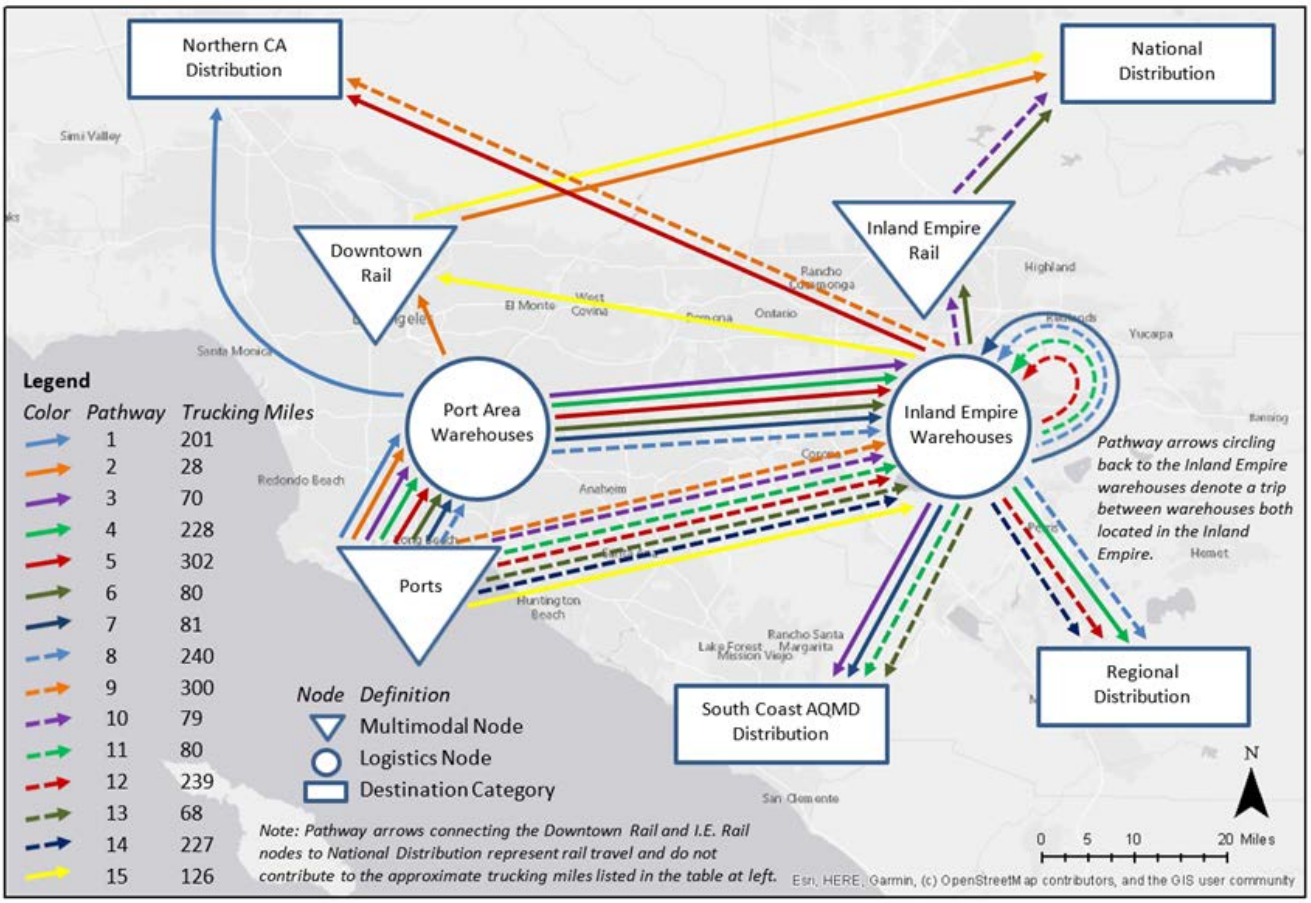
PATHWAY SCENARIOS

The single most important variable in estimating the transportation cost impacts of relocation is the change in transport distance. The change in distance depends on both the route goods follow through the South Coast AQMD jurisdiction and the specific outlying market area to which a warehouse might relocate. To account for the routing of goods, we rely on a series of goods flow pathways derived from Leachman (2017) and the Bureau of Transportation Statistics' Commodity Flow Survey.[1] Shown in Exhibit 1, each of these goods-flow pathways represents a routing of goods through the South Coast AQMD jurisdiction. If a warehouse were to relocate outside of the area, the flow of goods

[1] Leachman, R. 2017. "Strategic Initiatives for Inland Movement of Containerized Imports at San Pedro Bay." Institute for Transport Studies, University of California at Berkeley.

handled by that warehouse would deviate from one or more of the pathways shown in Exhibit 1, potentially leading to an increase in transport distance (and costs).

EXHIBIT 1. GOODS FLOW PATHWAYS



PATHWAY	SOUTH COAST AQMD LOGISTICS NODE 1	SOUTH COAST AQMD LOGISTICS NODE 2	SOUTH COAST AQMD LOGISTICS NODE 3	DESTINATION
1	Port Area	-	-	Truck to Northern California Distribution
2	Port Area	-	-	Downtown Rail to National Distribution
3	Port Area	Inland Empire	-	Truck to South Coast AQMD Regional Distribution
4	Port Area	Inland Empire	-	Truck to Non-District Regional Distribution
5	Port Area	Inland Empire	-	Truck to Northern California Distribution
6	Port Area	Inland Empire	-	Inland Empire Rail to National Distribution
7	Port Area	Inland Empire	Inland Empire	Truck to South Coast AQMD Regional Distribution
8	Port Area	Inland Empire	Inland Empire	Truck to Non-District Regional Distribution
9	Inland Empire	-	-	Truck to Northern California Distribution
10	Inland Empire	-	-	Inland Empire Rail to National Distribution
11	Inland Empire	Inland Empire	-	Truck to South Coast AQMD Regional Consumption
12	Inland Empire	Inland Empire	-	Truck to Non-District Regional Consumption
13	Inland Empire	-	-	Truck to South Coast AQMD Regional Consumption
14	Inland Empire	-	-	Truck to Non-District Regional Consumption
15	Inland Empire	-	-	Downtown Rail to National Distribution

The change in transport distance associated with relocating to each of the outlying market areas identified above depends on the distribution of goods (and truck trips) across each of the pathways shown in Exhibit 1. Thus, the transportation cost implications associated with a warehouse's relocation depend on the pathway(s) in Exhibit 1 that the warehouse serves. Any given warehouse could, theoretically, serve all 15 pathways, a single pathway, or any combination of the pathways shown in Exhibit 1.

To capture the uncertainty associated with the pathway(s) a given warehouse serves, we estimate relocation under two pathway scenarios:

- ***Composite pathway:*** Under this scenario, we assume each warehouse is representative of the warehousing sector as a whole in the South Coast AQMD jurisdiction and serves all 15 pathways shown in Exhibit 1 in proportion to the goods flow associated with each pathway. Under this approach the change in transport distance associated with relocating to a given outlying market area is the weighted average of the change in distance for all 15 pathways, using the goods volumes associated with each pathway as weights.
- ***Specialized pathway sensitivity:*** The specialized pathway sensitivity scenario allows for the possibility of pathway specialization, with the exception of a limited number of pathways. To assess relocations with specialization, we conduct the analysis iteratively one pathway at a time, assuming all warehouses are on a given pathway for each iteration of the analysis. After running the analysis for all pathways, we calculate the weighted average of the resulting warehouse relocation estimates, using the goods volumes associated with each pathway as weights.

  This scenario models specialization across most pathways. Based on a survey of warehouses conducted by South Coast AQMD, it is unlikely warehouses in the South Coast AQMD jurisdiction specialize in the pathways on which goods are routed to northern California. Among the surveyed warehouses that ship goods to northern California, goods on this route accounted for no more than 40 percent of the goods handled.[2] Given that Oakland is a major port city and that approximately 75 percent of the cargo ships that deliver goods to the San Pedro ports also stop at the Port of Oakland,[3] this finding is not surprising. Based on this information, the specialized pathway sensitivity scenario assumes that 40 percent of the goods flow handled by warehouses that serve northern California are bound for northern California and that the remaining 60 percent remains in the South Coast AQMD jurisdiction or is distributed nationally.

As indicated above, the pathway and capacity scenarios, together, yield varying estimates of warehouse relocations associated with the ISR. These scenario combinations, listed in increasing number of warehouse relocations, are as follows:

- Composite pathway, medium term capacity

[2] South Coast AQMD, SCAQMD High Cube Warehouse Truck Trip Study White Paper Summary of Business Survey Results, June 2014, available at http://www.aqmd.gov/docs/default-source/ceqa/handbook/high-cube-warehouse-trip-rate-study-for-air-quality-analysis/business-survey-summary.pdf?sfvrsn=2.

[3] South Coast AQMD staff analysis of the IHS-Seaweb data.

- Composite pathway, slack capacity
- Specialized pathway sensitivity, medium term capacity
- Specialized pathway sensitivity, slack capacity

The results below provide additional insights on the number of relocations associated with these scenarios.

ISR SCENARIOS ANALYZED

The scenarios analyzed by IEc represent different levels of rule stringency under a potential ISR. As described in the 6 October 2020 draft rule text released to the public, the ISR will give warehouse operators significant flexibility in how they meet the requirements of the rule. For example, warehouse operators may choose combinations of various emissions reduction measures to accumulate a required number of Warehouse Actions and Investments to Reduce Emissions (WAIRE) points, or they may pay a mitigation fee that will finance efforts within the South Coast AQMD jurisdiction to reduce trucking-related NO_x emissions. In both cases, the costs incurred by a warehouse operator will depend, in part, on the number of truck trips to and from the warehouse. If warehouse operators lack information on the number of trips to and from a warehouse, they may estimate the number of annual truck trips based on the warehouse's square footage and the truck trip rates stipulated in the rule itself.

Due to the significant flexibility afforded by the ISR, the compliance strategy that would be implemented by a given warehouse is highly uncertain and would likely depend on warehouse-specific factors that we are not able to account for in this analysis. Such factors may include the physical configuration of a warehouse, space available for onsite electric vehicle charging infrastructure, and whether the warehouse operator owns its own fleet of trucks. Because we are not able to account for these and other site-specific factors that may influence compliance decisions, we analyze scenarios specified as an annual cost per square foot of warehouse space, at different levels of regulatory stringency. These values, as provided to IEc by South Coast AQMD staff, reflect what the mitigation fee would potentially be at different levels of stringency, based on the truck trip rates included in the ISR. Exhibit 2 lists each of these scenarios. For each of the scenarios shown in Exhibit 2, we compare the costs of relocation to the costs of compliance to determine the number of warehouses likely to relocate.

EXHIBIT 2. ISR COMPLIANCE COST SCENARIOS ANALYZED

SCENARIO	COST PER SQUARE FOOT (YEAR 2019$)
Scenario 1	$0
Scenario 2	$0.50
Scenario 3	$1.00
Scenario 4	$1.50
Scenario 5	$1.75
Scenario 6	$2.00

RESULTS

Exhibits 3A through 3F summarize the estimated number of warehouse relocations for each of the ISR scenarios listed in Exhibit 2. For each ISR compliance cost scenario, the exhibits show the estimated number of relocations for each combination of pathway scenario and capacity scenario at a discount rate of one percent. We also conducted the analysis based on a discount rate of four percent, and the results, which are available upon request, are identical to those presented here. In addition, the exhibits show the total number of relocations to all outlying markets, as well as the distribution of relocations across outlying markets. For example, Exhibit 3E shows 16 relocations when the ISR compliance cost is $1.75 per square foot under the specialized pathway sensitivity, slack-capacity scenario. Of the 16 relocations, 6 are to the North of District/Bakersfield market area.

The results in Exhibit 3A show we project up to 10 warehouse relocations when compliance costs are $0 per square foot, suggesting up to 10 warehouses in the South Coast AQMD jurisdiction may relocate in the absence of the ISR.

This result, in part, reflects the assumptions of the specialized pathway sensitivity scenario. As described above, we examine warehouse relocation iteratively for individual pathways under the specialized pathway sensitivity scenario. For individual iterations of the analysis, all warehouses are assumed to be on just one of the pathways shown above in Exhibit 1. After estimating relocations associated with individual pathways, we calculate the weighted average of the warehouse relocations projected across each of the iterations of the analysis, using the volume of goods on each pathway as weights.

Therefore, for some iterations of the analysis, we assume several warehouses are exclusively on pathways on which relocation is advantageous, even though they may not be on these pathways at all, or may simultaneously be on other pathways on which relocation is less advantageous. For this reason, we consider the specialized pathway sensitivity scenario results to be very conservative estimates of warehouse relocation.

In practice, the warehouses projected to relocate with $0/square foot in ISR compliance costs may be on multiple pathways that, when examined together, would not suggest warehouse relocation. This is borne out under the composite distance pathway scenario (i.e, when warehouses are assumed to serve all pathways in proportion to the goods flow on each pathway), as no warehouses are projected to relocate under this scenario when ISR compliance costs are $0 per square foot.

EXHIBIT 3A. ESTIMATED WAREHOUSE RELOCATIONS - $0/SQUARE FOOT ISR COSTS*

PATHWAY SCENARIO	CAPACITY SCENARIO	DISCOUNT RATE	RELOCATIONS (NO. OF WAREHOUSES)							
			TOTAL - ALL MARKETS	BAKERSFIELD	COASTAL AREAS	DESERT AREAS	LAS VEGAS	PHOENIX	SAN DIEGO	WESTERN AZ
Specialized Pathway Sensitivity	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	10	0	0	10	0	0	0	0
Composite Distance	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	0	0	0	0	0	0	0	0

EXHIBIT 3B. ESTIMATED WAREHOUSE RELOCATIONS - $0.50/SQUARE FOOT ISR COSTS*

PATHWAY SCENARIO	CAPACITY SCENARIO	DISCOUNT RATE	RELOCATIONS (NO. OF WAREHOUSES)							
			TOTAL - ALL MARKETS	BAKERSFIELD	COASTAL AREAS	DESERT AREAS	LAS VEGAS	PHOENIX	SAN DIEGO	WESTERN AZ
Specialized Pathway Sensitivity	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	10	0	0	10	0	0	0	0
Composite Distance	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	0	0	0	0	0	0	0	0

EXHIBIT 3C. ESTIMATED WAREHOUSE RELOCATIONS - $1.00/SQUARE FOOT ISR COSTS*

PATHWAY SCENARIO	CAPACITY SCENARIO	DISCOUNT RATE	RELOCATIONS (NO. OF WAREHOUSES)							
			TOTAL - ALL MARKETS	BAKERSFIELD	COASTAL AREAS	DESERT AREAS	LAS VEGAS	PHOENIX	SAN DIEGO	WESTERN AZ
Specialized Pathway Sensitivity	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	10	0	0	10	0	0	0	0
Composite Distance	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	0	0	0	0	0	0	0	0

**Values for individual market areas may not sum to total due to rounding.*

EXHIBIT 3D. ESTIMATED WAREHOUSE RELOCATIONS - $1.50/SQUARE FOOT ISR COSTS*

PATHWAY SCENARIO	CAPACITY SCENARIO	DISCOUNT RATE	RELOCATIONS (NO. OF WAREHOUSES)							
			TOTAL - ALL MARKETS	BAKERSFIELD	COASTAL AREAS	DESERT AREAS	LAS VEGAS	PHOENIX	SAN DIEGO	WESTERN AZ
Specialized Pathway Sensitivity	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	10	0	0	10	0	0	0	0
Composite Distance	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	0	0	0	0	0	0	0	0

EXHIBIT 3E. ESTIMATED WAREHOUSE RELOCATIONS - $1.75/SQUARE FOOT ISR COSTS*

PATHWAY SCENARIO	CAPACITY SCENARIO	DISCOUNT RATE	RELOCATIONS (NO. OF WAREHOUSES)							
			TOTAL - ALL MARKETS	BAKERSFIELD	COASTAL AREAS	DESERT AREAS	LAS VEGAS	PHOENIX	SAN DIEGO	WESTERN AZ
Specialized Pathway Sensitivity	Medium Term	1%	1	0	0	0	0	0	0	0
	Slack Capacity	1%	16	6	0	10	0	0	0	0
Composite Distance	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	0	0	0	0	0	0	0	0

EXHIBIT 3F. ESTIMATED WAREHOUSE RELOCATIONS - $2.00/SQUARE FOOT ISR COSTS*

PATHWAY SCENARIO	CAPACITY SCENARIO	DISCOUNT RATE	RELOCATIONS (NO. OF WAREHOUSES)							
			TOTAL - ALL MARKETS	BAKERSFIELD	COASTAL AREAS	DESERT AREAS	LAS VEGAS	PHOENIX	SAN DIEGO	WESTERN AZ
Specialized Pathway Sensitivity	Medium Term	1%	1	0	0	0	0	0	0	0
	Slack Capacity	1%	16	6	0	10	0	0	0	0
Composite Distance	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	0	0	0	0	0	0	0	0

**Values for individual market areas may not sum to total due to rounding.*

While the 10 warehouse relocations projected under the $0 ISR compliance cost scenario may suggest several warehouses will find it advantageous to relocate in the absence of the ISR, we do not currently observe such relocations occurring. This reflects the fact that the results in Exhibits 3A through 3F likely overstate relocations under the $0 per square foot ICR compliance cost scenario as well as scenarios with costs greater than $0. This overestimation of relocations is likely due to several factors we are not able to capture quantitatively in our analysis, including, but are not necessarily limited to, the following:

- ***Labor availability***: In many of the outlying markets, the labor force is significantly smaller than in the South Coast AQMD jurisdiction. With a smaller labor pool to draw from, warehouse operators may be reluctant to commit to relocation.
- ***Proximity to customers:*** While our analysis captures the transportation cost impact of relocating, the value of proximity to customers may go beyond the change in transportation costs. For example, proximity is important for meeting customer expectations/demands with respect to delivery time.
- ***Risk of warehouse development in outlying markets:*** Most of the warehouse relocations projected by our analysis are under the slack capacity scenario, under which land zoned for industrial use may be developed into warehouse space. Although land is available in most outlying markets to develop warehouse space, warehouse developers may find such investments too risky to pursue.

  Other than potential demand from warehouse operators relocating from the South Coast AQMD jurisdiction, warehouse owners would have limited clientele to support significant growth in the warehouse sector in these outlying markets. If market conditions were to change in the South Coast AQMD jurisdiction after development of the ISR, warehouse operators may move back after their lease ends, leaving owners of newly constructed warehouses in the outlying markets with no source of revenue. Due to this risk, investors may be reluctant to build new warehouse space in these markets.
- ***Barriers to warehouse development in outlying markets:*** Large-scale warehouse developments in the outlying market areas may encounter resistance in obtaining project approval. Local planning boards and the residents who they represent may seek to limit the number of warehouse developments due to concerns about increased truck traffic, the aesthetic impacts of multiple warehouse developments, or other concerns.

Because relocations are projected under the $0 ISR compliance cost scenario due to the factors outlined above, we estimate relocations for each ISR compliance cost scenario as the difference between relocations for that scenario and relocations projected when ISR compliance costs are zero. For example, with ISR compliance costs of $1.75 per square foot under the specialized pathway sensitivity scenario and the slack capacity scenario, we estimate 6 warehouse relocations (16 relocations as presented in Exhibit 3E less 10 relocations as presented in Exhibit 3A). Applying this approach, Exhibit 4 presents the number of relocations incremental to those projected with an ISR compliance cost of $0 per square foot.

EXHIBIT 4. WAREHOUSE RELOCATIONS, INCREMENTAL TO RELOCATIONS WITH ISR COSTS OF $0 PER SQUARE FOOT

PATHWAY SCENARIO	CAPACITY SCENARIO	DISCOUNT RATE	RELOCATIONS (NO. OF WAREHOUSES)							
			ALL MARKETS	BAKERSFIELD	COASTAL AREAS	DESERT AREAS	LAS VEGAS	PHOENIX	SAN DIEGO	WESTERN AZ
ISR Compliance Costs of $0.50 per Square Foot										
Specialized Pathway Sensitivity	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	0	0	0	0	0	0	0	0
Composite	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	0	0	0	0	0	0	0	0
ISR Compliance Costs of $1.00 per Square Foot										
Specialized Pathway Sensitivity	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	0	0	0	0	0	0	0	0
Composite	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	0	0	0	0	0	0	0	0
ISR Compliance Costs of $1.50 per Square Foot										
Specialized Pathway Sensitivity	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	0	0	0	0	0	0	0	0
Composite	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	0	0	0	0	0	0	0	0
ISR Compliance Costs of $1.75 per Square Foot										
Specialized Pathway Sensitivity	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	6	6	0	0	0	0	0	0
Composite	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	0	0	0	0	0	0	0	0
ISR Compliance Costs of $2.00 per Square Foot										
Specialized Pathway Sensitivity	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	6	6	0	0	0	0	0	0
Composite	Medium Term	1%	0	0	0	0	0	0	0	0
	Slack Capacity	1%	0	0	0	0	0	0	0	0

As shown in Exhibit 4, the incremental number of warehouse relocations varies from none when ISR costs are $0.50 per square foot to as high as 6 when ISR costs are $2.00 per square foot. Notably, no relocations are projected under the medium-term capacity scenario (when capacity in outlying markets is limited to current vacant capacity and new capacity proposed or currently under construction), incremental to the $0 per square foot ISR compliance cost scenario. This reflects the more limited capacity available under this scenario.

As context for the results presented in Exhibit 4, we estimate that 2,687 warehouses are likely to be affected by the ISR.[4] Thus, the projection of up to 6 warehouses relocating represent 0.2 percent of the universe of affected warehouses.

Our analysis also projects no warehouse relocations under the composite pathway scenario (i.e., when each warehouse is assumed to serve all 15 goods flow pathways). This finding is true both incremental to the $0 ISR compliance cost scenario (results in Exhibit 4) and for each scenario individually, prior to netting out the relocations projected when ISR compliance costs are $0 per square foot (results in Exhibits 3A to 3F).

The lack of relocations under the composite pathway scenario reflects the significant increase in transport distance for some pathways. Because the composite scenario models relocation based on the weighted average change in distance across all pathways, a significant increase in distance for a small number of pathways that account for a large portion of the goods flow drives up the weighted average change in transport distance such that the increased transportation costs associated with relocation outweigh any cost savings. For example, while relocation to the Bakersfield market area may reduce transport distance slightly for some pathways, transport distance increases by more than 130 miles one-way for pathway 2 and more than 245 miles for pathway 13; together these pathways account for approximately 39 percent of the goods flow volume.

Exhibit 4 shows most warehouse relocations, incremental to the $0 per square foot ISR compliance cost scenario, are concentrated in the Bakersfield market area under the specialized pathway sensitivity scenario and the slack capacity scenario. This result is driven by the lower rental costs in the Bakersfield Area ($4.03 per square foot per year) relative to the South Coast AQMD ($10.61 per square foot per year).[5] While transportation costs will increase if warehouses relocate to the Desert Areas, the increase is small enough for some northbound pathways that the rental cost savings are sufficient to yield a cost savings for these pathways.

This concentration of relocations in the Bakersfield market area differs slightly from the results shown in Exhibits 3A through 3F, which are *not* incremental to the $0 per square foot ISR compliance cost scenario. Although those results show a significant concentration of relocations in the Bakersfield area, they show a greater number of

[4] This figure reflects the sum of non-manufacturing warehouses and warehouses at manufacturing facilities as presented in "Technical Memorandum on Real Estate Markets Neighboring the South Coast AQMD Jurisdiction", prepared by Derek Ehrnschwender and Jason Price of Industrial Economics, prepared for the South Coast AQMD, 12 December 2020.

[5] Rent values obtained from CoStar, as summarized in "Technical Memorandum on Real Estate Markets Neighboring the South Coast AQMD Jurisdiction", prepared by Derek Ehrnschwender and Jason Price of Industrial Economics, prepared for the South Coast AQMD, 12 December 2020. Additional information on the costs considered in the analysis is available in "Indirect Source Rule Relocation Model – Methodology", prepared by Derek Ehrnschwender, Jason Price, and Nick Manderlink of Industrial Economics, prepared for the South Coast AQMD, 12 December 2020.

warehouses relocating to the Desert Areas. Because all of these relocations to the Desert Areas are projected when ISR compliance costs are $0 per square foot, they are netted out of the relocations reflected in Exhibit 4.

RELOCATIONS BY GOODS PATHWAY

For additional insights on projected warehouse relocations under the specialized pathway sensitivity scenario, the appendix to this memo shows warehouse relocations by goods pathway and outlying market. The appendix presents these results individually by ISR compliance cost scenario, without netting relocations under the $0 ISR compliance cost scenario. As shown in the appendix pathway 15 accounts for all projected warehouse relocations (under the slack capacity scenario). On this pathway, good are trucked to an intermodal rail terminal for national distribution.

SENSITIVITY ANALYSIS

The results presented above reflect average trucking costs of $1.84 per mile for Class 8 trucks and $1.77 per mile for Class 4-7 trucks, based on costs data published by the American Transportation Research Institute.[6] To assess the sensitivity of our results to alternative trucking unit cost values, we also conducted sensitivity analyses based on truck cost data from Freightwaves, which reports lower- and upper-bound estimates of $1.16 and $3.05 per mile, respectively.[7]

For the composite pathway scenario, we project no warehouse relocations when using either of these alternative trucking cost values, consistent with the primary results presented above. When we assess potential warehouse relocations under the specialized pathway sensitivity scenario, however, we find the use of alternative trucking cost assumptions has a significant effect on the estimated number of warehouse relocations.

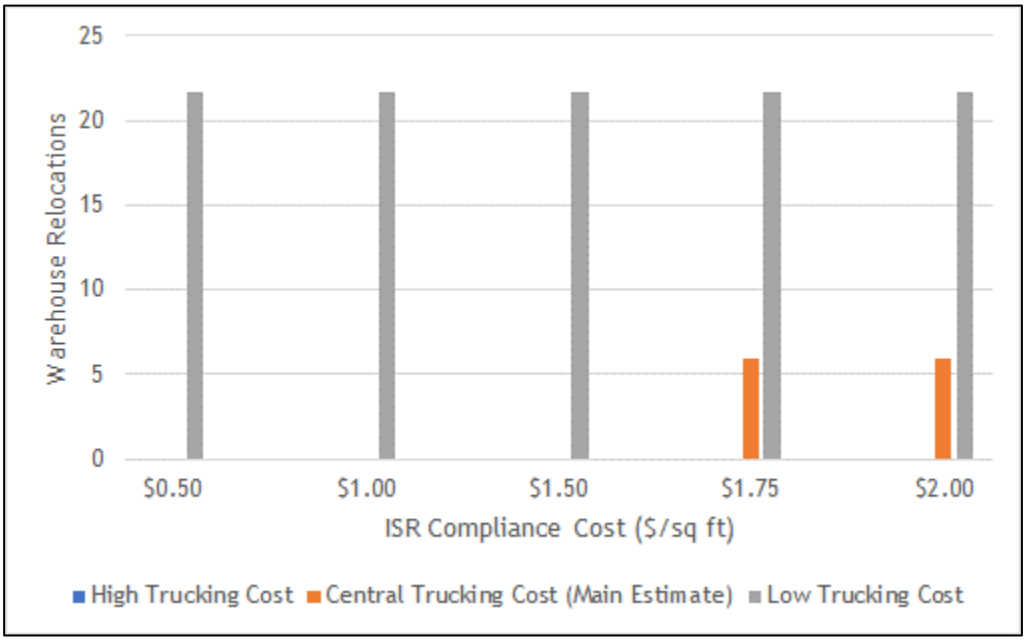
Focusing on relocations incremental to the $0 ISR compliance cost scenario, we project no relocations under the high trucking cost assumptions. This reflects the significant increase in transportation costs associated with relocating warehouses to the outlying market areas.

When using the low trucking cost assumptions, we project more relocations than when using the central trucking cost value. Across all five ISR compliance cost values, we estimate that 22 warehouses will relocate, compared to six warehouses based on our primary trucking cost assumptions. Exhibit 5 graphically illustrates the degree to which the assumed trucking cost affects the estimated number of warehouse relocations (under the specialized pathway sensitivity scenario).

[6] Murray, D. & Glidewell, S. 2019. "An Analysis of the Operational Costs of Trucking: 2019 Update." American Transportation Research Institute.

[7] Henry, C. "What is the Total Cost Per Mile for truckload carriers?" January 13, 2020. Freightwaves.com.

EXHIBIT 5. COMPARISON OF ESTIMATED WAREHOUSE RELOCATIONS UNDER ALTERNATIVE TRUCKING COST ASSUMPTIONS (SLACK CAPACITY, SPECIALIZED PATHWAY SENSITIVITY SCENARIO, 1% DISCOUNT RATE)



LIMITATIONS AND UNCERTAINTIES

The results presented above provide a reasonable representation of the warehouse relocations that may occur in response to the ISR and reflect the best information available on the factors that are likely to affect relocation decisions. Nevertheless, we acknowledge that the analysis is subject to a number of uncertainties, the most significant of which are summarized in Exhibit 6.

EXHIBIT 6. KEY UNCERTAINTIES AND IMPLICATIONS FOR RESULTS

DESCRIPTION OF UNCERTAINTY	IMPLICATIONS FOR RESULTS
Pathway uncertainty: This analysis relies on the concept of goods flow pathways to estimate the change in transportation distance associated with warehouse relocation. However, we do not know the pathways that individual warehouses serve. Absent such information, the pathway scenarios described above (i.e., composite pathway scenario and specialized pathway sensitivity scenario) provide a means of bounding the estimated number of relocations to account for this uncertainty.	Estimating the number of warehouse relocations under two pathway scenarios leads to a wide range of results. Whether the likely number of relocations is closer to the low end or high end of the range depends on the degree to which warehouse operations are more consistent with the composite scenario (warehouses serve all goods flow pathways) or the specialized pathway sensitivity scenario (warehouses specialize in individual pathways).
Unquantifiable factors: Our assessment of relocation decisions accounts for all factors that we are able to quantify with readily available data, specifically data related to the costs associated with remaining in the South Coast AQMD jurisdiction or relocating to an outlying market area. A number of factors that we are unable to quantify, however, may influence relocation decisions. These include (1) the	Many of these unquantifiable factors represent reasons why warehouse operators may want to remain in the South Coast AQMD. This suggests that our analysis may overestimate the number of warehouses that decide to relocate outside the area.

DESCRIPTION OF UNCERTAINTY	IMPLICATIONS FOR RESULTS
degree to which labor availability in outlying markets affects the decisions of warehouse operators, (2) advantages of being in close proximity to customers, (3) financial risks associated with developing warehouse space in outlying markets, and (4) barriers to developing warehouse space in outlying market areas.	
Assumption of no change in goods flow traffic: An implicit assumption of our analysis is that the volume of goods flowing through the South Coast AQMD jurisdiction would remain unchanged as a result of the rule. In practice it is possible the ISR could lead to a reduction in the volume of goods flowing through the region (e.g., through a reduction in import traffic at the Port of Long Beach). This reduction in volume could lead to warehouse relocation (e.g., to the port areas where goods are sent instead of the Port of Long Beach). Our analysis does not capture this effect.	To the degree goods are diverted away from the South Coast AQMD jurisdiction due to the ISR, we may underestimate the number of warehouse relocations.
Rents held constant: For the purposes of simulating the relocation decision-making process of warehouse operators, we held warehouse rents in the South Coast AQMD jurisdiction and in outlying markets constant at current levels. To the extent rent differences between the South Coast AQMD jurisdiction and outlying markets change over time, we may not accurately capture the relocation decisions of warehouse operators.	Absent knowledge of the degree to which relative rents are likely to change over time, we find it highly speculative to take a stance on whether the assumption of constant rents leads to underestimation or overestimation of relocations. However, the relocation of warehouses outside the SCAQMD jurisdiction could put upward pressure on rents in outlying markets and downward pressure on rents in the South Coast AQMD jurisdiction. Combined, these effects would narrow the difference between rent in the South Coast AQMD jurisdiction and less costly outlying markets, potentially limiting the number of warehouse relocations.

APPENDIX.

PROJECTED WAREHOUSE RELOCATIONS BY GOODS FLOW PATHWAY

EXHIBIT A1. RELOCATIONS BY PATHWAY AND MARKET AREA (SPECIALIZED PATHWAY SENSITIVITY SCENARIO) - $0/SQUARE FOOT ISR COSTS*

PATHWAY	PATHWAY DESCRIPTION	CAPACITY SCENARIO	DISCOUNT RATE	COMPONENTS OF WEIGHTED AVERAGE RELOCATION (NO. OF WAREHOUSES)							
				PATHWAY TOTAL	BAKERSFIELD	COASTAL AREAS	DESERT AREAS	LAS VEGAS	PHOENIX	SAN DIEGO	WESTERN AZ
1	Truck to Northern California Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
2	Downtown Rail to National Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
3	Truck to South Coast AQMD Regional Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
4	Truck to Non-District Regional Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
5	Truck to Northern California Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
6	Inland Empire Rail to National Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
7	Truck to South Coast AQMD Regional Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
8	Truck to Non-District Regional Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
9	Truck to Northern California Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
10	Inland Empire Rail to National Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
11	Truck to South Coast AQMD Regional Consumption	Medium Term	1%	0	0	0	0	0	0	0	0
12	Truck to Non-District Regional Consumption	Medium Term	1%	0	0	0	0	0	0	0	0
13	Truck to South Coast AQMD Regional Consumption	Medium Term	1%	0	0	0	0	0	0	0	0
14	Truck to Non-District Regional Consumption	Medium Term	1%	0	0	0	0	0	0	0	0
15	Downtown Rail to National Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
Weighted Average Across Pathways		**Medium Term**	**1%**	0	0	0	0	0	0	0	0
1	Truck to Northern California Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
2	Downtown Rail to National Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
3	Truck to South Coast AQMD Regional Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
4	Truck to Non-District Regional Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
5	Truck to Northern California Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
6	Inland Empire Rail to National Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
7	Truck to South Coast AQMD Regional Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
8	Truck to Non-District Regional Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0

EXHIBIT A1. RELOCATIONS BY PATHWAY AND MARKET AREA (SPECIALIZED PATHWAY SENSITIVITY SCENARIO) - $0/SQUARE FOOT ISR COSTS*

PATHWAY	PATHWAY DESCRIPTION	CAPACITY SCENARIO	DISCOUNT RATE	COMPONENTS OF WEIGHTED AVERAGE RELOCATION (NO. OF WAREHOUSES)							
				PATHWAY TOTAL	BAKERSFIELD	COASTAL AREAS	DESERT AREAS	LAS VEGAS	PHOENIX	SAN DIEGO	WESTERN AZ
9	Truck to Northern California Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
10	Inland Empire Rail to National Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
11	Truck to South Coast AQMD Regional Consumption	Slack Capacity	1%	0	0	0	0	0	0	0	0
12	Truck to Non-District Regional Consumption	Slack Capacity	1%	0	0	0	0	0	0	0	0
13	Truck to South Coast AQMD Regional Consumption	Slack Capacity	1%	0	0	0	0	0	0	0	0
14	Truck to Non-District Regional Consumption	Slack Capacity	1%	0	0	0	0	0	0	0	0
15	Downtown Rail to National Distribution	Slack Capacity	1%	10	0	0	10	0	0	0	0
Weighted Average Across Pathways		Slack Capacity	**1%**	10	**0**	0	10	0	0	0	0

**Values for individual market areas may not sum to total due to rounding.*

EXHIBIT A2. RELOCATIONS BY PATHWAY AND MARKET AREA (SPECIALIZED PATHWAY SENSITIVITY SCENARIO) - $0.50/SQUARE FOOT ISR*

PATHWAY	PATHWAY DESCRIPTION	CAPACITY SCENARIO	DISCOUNT RATE	COMPONENTS OF WEIGHTED AVERAGE RELOCATION (NO. OF WAREHOUSES)							
				PATHWAY TOTAL	BAKERSFIELD	COASTAL AREAS	DESERT AREAS	LAS VEGAS	PHOENIX	SAN DIEGO	WESTERN AZ
1	Truck to Northern California Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
2	Downtown Rail to National Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
3	Truck to South Coast AQMD Regional Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
4	Truck to Non-District Regional Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
5	Truck to Northern California Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
6	Inland Empire Rail to National Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
7	Truck to South Coast AQMD Regional Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
8	Truck to Non-District Regional Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
9	Truck to Northern California Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
10	Inland Empire Rail to National Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
11	Truck to South Coast AQMD Regional Consumption	Medium Term	1%	0	0	0	0	0	0	0	0
12	Truck to Non-District Regional Consumption	Medium Term	1%	0	0	0	0	0	0	0	0
13	Truck to South Coast AQMD Regional Consumption	Medium Term	1%	0	0	0	0	0	0	0	0
14	Truck to Non-District Regional Consumption	Medium Term	1%	0	0	0	0	0	0	0	0
15	Downtown Rail to National Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
Weighted Average Across Pathways		**Medium Term**	**1%**	0	0	0	0	0	0	0	0
1	Truck to Northern California Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
2	Downtown Rail to National Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
3	Truck to South Coast AQMD Regional Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
4	Truck to Non-District Regional Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
5	Truck to Northern California Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
6	Inland Empire Rail to National Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
7	Truck to South Coast AQMD Regional Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
8	Truck to Non-District Regional Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
9	Truck to Northern California Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0

EXHIBIT A2. RELOCATIONS BY PATHWAY AND MARKET AREA (SPECIALIZED PATHWAY SENSITIVITY SCENARIO) - $0.50/SQUARE FOOT ISR*

PATHWAY	PATHWAY DESCRIPTION	CAPACITY SCENARIO	DISCOUNT RATE	COMPONENTS OF WEIGHTED AVERAGE RELOCATION (NO. OF WAREHOUSES)							
				PATHWAY TOTAL	BAKERSFIELD	COASTAL AREAS	DESERT AREAS	LAS VEGAS	PHOENIX	SAN DIEGO	WESTERN AZ
10	Inland Empire Rail to National Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
11	Truck to South Coast AQMD Regional Consumption	Slack Capacity	1%	0	0	0	0	0	0	0	0
12	Truck to Non-District Regional Consumption	Slack Capacity	1%	0	0	0	0	0	0	0	0
13	Truck to South Coast AQMD Regional Consumption	Slack Capacity	1%	0	0	0	0	0	0	0	0
14	Truck to Non-District Regional Consumption	Slack Capacity	1%	0	0	0	0	0	0	0	0
15	Downtown Rail to National Distribution	Slack Capacity	1%	10	**0**	0	10	0	0	0	0
Weighted Average Across Pathways		Slack Capacity	**1%**	10	**0**	0	10	0	0	0	0

**Values for individual market areas may not sum to total due to rounding.*

EXHIBIT A3. RELOCATIONS BY PATHWAY AND MARKET AREA (SPECIALIZED PATHWAY SENSITIVITY SCENARIO) - $1.00/SQUARE FOOT ISR*

PATHWAY	PATHWAY DESCRIPTION	CAPACITY SCENARIO	DISCOUNT RATE	COMPONENTS OF WEIGHTED AVERAGE RELOCATION (NO. OF WAREHOUSES)							
				PATHWAY TOTAL	BAKERSFIELD	COASTAL AREAS	DESERT AREAS	LAS VEGAS	PHOENIX	SAN DIEGO	WESTERN AZ
1	Truck to Northern California Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
2	Downtown Rail to National Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
3	Truck to South Coast AQMD Regional Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
4	Truck to Non-District Regional Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
5	Truck to Northern California Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
6	Inland Empire Rail to National Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
7	Truck to South Coast AQMD Regional Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
8	Truck to Non-District Regional Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
9	Truck to Northern California Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
10	Inland Empire Rail to National Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
11	Truck to South Coast AQMD Regional Consumption	Medium Term	1%	0	0	0	0	0	0	0	0
12	Truck to Non-District Regional Consumption	Medium Term	1%	0	0	0	0	0	0	0	0
13	Truck to South Coast AQMD Regional Consumption	Medium Term	1%	0	0	0	0	0	0	0	0
14	Truck to Non-District Regional Consumption	Medium Term	1%	0	0	0	0	0	0	0	0
15	Downtown Rail to National Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
Weighted Average Across Pathways		**Medium Term**	**1%**	0	0	0	0	0	0	0	0
1	Truck to Northern California Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
2	Downtown Rail to National Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
3	Truck to South Coast AQMD Regional Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
4	Truck to Non-District Regional Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
5	Truck to Northern California Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
6	Inland Empire Rail to National Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
7	Truck to South Coast AQMD Regional Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
8	Truck to Non-District Regional Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0

EXHIBIT A3. RELOCATIONS BY PATHWAY AND MARKET AREA (SPECIALIZED PATHWAY SENSITIVITY SCENARIO) - $1.00/SQUARE FOOT ISR*

PATHWAY	PATHWAY DESCRIPTION	CAPACITY SCENARIO	DISCOUNT RATE	COMPONENTS OF WEIGHTED AVERAGE RELOCATION (NO. OF WAREHOUSES)							
				PATHWAY TOTAL	BAKERSFIELD	COASTAL AREAS	DESERT AREAS	LAS VEGAS	PHOENIX	SAN DIEGO	WESTERN AZ
9	Truck to Northern California Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
10	Inland Empire Rail to National Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
11	Truck to South Coast AQMD Regional Consumption	Slack Capacity	1%	0	0	0	0	0	0	0	0
12	Truck to Non-District Regional Consumption	Slack Capacity	1%	0	0	0	0	0	0	0	0
13	Truck to South Coast AQMD Regional Consumption	Slack Capacity	1%	0	0	0	0	0	0	0	0
14	Truck to Non-District Regional Consumption	Slack Capacity	1%	0	0	0	0	0	0	0	0
15	Downtown Rail to National Distribution	Slack Capacity	1%	10	0	0	10	0	0	0	0
Weighted Average Across Pathways		Slack Capacity	**1%**	10	0	0	10	0	0	0	0

**Values for individual market areas may not sum to total due to rounding.*

EXHIBIT A4. RELOCATIONS BY PATHWAY AND MARKET AREA (SPECIALIZED PATHWAY SENSITIVITY SCENARIO) - $1.50/SQUARE FOOT ISR*

PATHWAY	PATHWAY DESCRIPTION	CAPACITY SCENARIO	DISCOUNT RATE	COMPONENTS OF WEIGHTED AVERAGE RELOCATION (NO. OF WAREHOUSES)							
				PATHWAY TOTAL	BAKERSFIELD	COASTAL AREAS	DESERT AREAS	LAS VEGAS	PHOENIX	SAN DIEGO	WESTERN AZ
1	Truck to Northern California Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
2	Downtown Rail to National Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
3	Truck to South Coast AQMD Regional Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
4	Truck to Non-District Regional Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
5	Truck to Northern California Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
6	Inland Empire Rail to National Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
7	Truck to South Coast AQMD Regional Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
8	Truck to Non-District Regional Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
9	Truck to Northern California Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
10	Inland Empire Rail to National Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
11	Truck to South Coast AQMD Regional Consumption	Medium Term	1%	0	0	0	0	0	0	0	0
12	Truck to Non-District Regional Consumption	Medium Term	1%	0	0	0	0	0	0	0	0
13	Truck to South Coast AQMD Regional Consumption	Medium Term	1%	0	0	0	0	0	0	0	0
14	Truck to Non-District Regional Consumption	Medium Term	1%	0	0	0	0	0	0	0	0
15	Downtown Rail to National Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
Weighted Average Across Pathways		**Medium Term**	**1%**	0	0	0	0	0	0	0	0
1	Truck to Northern California Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
2	Downtown Rail to National Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
3	Truck to South Coast AQMD Regional Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
4	Truck to Non-District Regional Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
5	Truck to Northern California Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
6	Inland Empire Rail to National Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
7	Truck to South Coast AQMD Regional Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
8	Truck to Non-District Regional Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
9	Truck to Northern California Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0

EXHIBIT A4. RELOCATIONS BY PATHWAY AND MARKET AREA (SPECIALIZED PATHWAY SENSITIVITY SCENARIO) - $1.50/SQUARE FOOT ISR*

PATHWAY	PATHWAY DESCRIPTION	CAPACITY SCENARIO	DISCOUNT RATE	COMPONENTS OF WEIGHTED AVERAGE RELOCATION (NO. OF WAREHOUSES)							
				PATHWAY TOTAL	BAKERSFIELD	COASTAL AREAS	DESERT AREAS	LAS VEGAS	PHOENIX	SAN DIEGO	WESTERN AZ
10	Inland Empire Rail to National Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
11	Truck to South Coast AQMD Regional Consumption	Slack Capacity	1%	0	0	0	0	0	0	0	0
12	Truck to Non-District Regional Consumption	Slack Capacity	1%	0	0	0	0	0	0	0	0
13	Truck to South Coast AQMD Regional Consumption	Slack Capacity	1%	0	0	0	0	0	0	0	0
14	Truck to Non-District Regional Consumption	Slack Capacity	1%	0	0	0	0	0	0	0	0
15	Downtown Rail to National Distribution	Slack Capacity	1%	10	0	0	10	0	0	0	0
Weighted Average Across Pathways		Slack Capacity	**1%**	10	0	0	10	0	0	0	0

**Values for individual market areas may not sum to total due to rounding.*

EXHIBIT A5. RELOCATIONS BY PATHWAY AND MARKET AREA (SPECIALIZED PATHWAY SENSITIVITY SCENARIO) - $1.75/SQUARE FOOT ISR*

PATHWAY	PATHWAY DESCRIPTION	CAPACITY SCENARIO	DISCOUNT RATE	COMPONENTS OF WEIGHTED AVERAGE RELOCATION (NO. OF WAREHOUSES)							
				PATHWAY TOTAL	BAKERSFIELD	COASTAL AREAS	DESERT AREAS	LAS VEGAS	PHOENIX	SAN DIEGO	WESTERN AZ
1	Truck to Northern California Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
2	Downtown Rail to National Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
3	Truck to South Coast AQMD Regional Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
4	Truck to Non-District Regional Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
5	Truck to Northern California Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
6	Inland Empire Rail to National Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
7	Truck to South Coast AQMD Regional Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
8	Truck to Non-District Regional Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
9	Truck to Northern California Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
10	Inland Empire Rail to National Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
11	Truck to South Coast AQMD Regional Consumption	Medium Term	1%	0	0	0	0	0	0	0	0
12	Truck to Non-District Regional Consumption	Medium Term	1%	0	0	0	0	0	0	0	0
13	Truck to South Coast AQMD Regional Consumption	Medium Term	1%	0	0	0	0	0	0	0	0
14	Truck to Non-District Regional Consumption	Medium Term	1%	0	0	0	0	0	0	0	0
15	Downtown Rail to National Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
Weighted Average Across Pathways		**Medium Term**	**1%**	0	0	0	0	0	0	0	0
1	Truck to Northern California Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
2	Downtown Rail to National Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
3	Truck to South Coast AQMD Regional Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
4	Truck to Non-District Regional Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
5	Truck to Northern California Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
6	Inland Empire Rail to National Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
7	Truck to South Coast AQMD Regional Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
8	Truck to Non-District Regional Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
9	Truck to Northern California Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0

EXHIBIT A5. RELOCATIONS BY PATHWAY AND MARKET AREA (SPECIALIZED PATHWAY SENSITIVITY SCENARIO) - $1.75/SQUARE FOOT ISR*

PATHWAY	PATHWAY DESCRIPTION	CAPACITY SCENARIO	DISCOUNT RATE	COMPONENTS OF WEIGHTED AVERAGE RELOCATION (NO. OF WAREHOUSES)							
				PATHWAY TOTAL	BAKERSFIELD	COASTAL AREAS	DESERT AREAS	LAS VEGAS	PHOENIX	SAN DIEGO	WESTERN AZ
10	Inland Empire Rail to National Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
11	Truck to South Coast AQMD Regional Consumption	Slack Capacity	1%	0	0	0	0	0	0	0	0
12	Truck to Non-District Regional Consumption	Slack Capacity	1%	0	0	0	0	0	0	0	0
13	Truck to South Coast AQMD Regional Consumption	Slack Capacity	1%	0	0	0	0	0	0	0	0
14	Truck to Non-District Regional Consumption	Slack Capacity	1%	0	0	0	0	0	0	0	0
15	Downtown Rail to National Distribution	Slack Capacity	1%	16	6	0	10	0	0	0	0
Weighted Average Across Pathways		Slack Capacity	**1%**	**16**	**6**	**0**	**10**	0	0	0	0

**Values for individual market areas may not sum to total due to rounding.*

EXHIBIT A6. RELOCATIONS BY PATHWAY AND MARKET AREA (SPECIALIZED PATHWAY SENSITIVITY SCENARIO) - $2.00/SQUARE FOOT ISR*

PATHWAY	PATHWAY DESCRIPTION	CAPACITY SCENARIO	DISCOUNT RATE	COMPONENTS OF WEIGHTED AVERAGE RELOCATION (NO. OF WAREHOUSES)							
				PATHWAY TOTAL	BAKERSFIELD	COASTAL AREAS	DESERT AREAS	LAS VEGAS	PHOENIX	SAN DIEGO	WESTERN AZ
1	Truck to Northern California Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
2	Downtown Rail to National Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
3	Truck to South Coast AQMD Regional Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
4	Truck to Non-District Regional Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
5	Truck to Northern California Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
6	Inland Empire Rail to National Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
7	Truck to South Coast AQMD Regional Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
8	Truck to Non-District Regional Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
9	Truck to Northern California Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
10	Inland Empire Rail to National Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
11	Truck to South Coast AQMD Regional Consumption	Medium Term	1%	0	0	0	0	0	0	0	0
12	Truck to Non-District Regional Consumption	Medium Term	1%	0	0	0	0	0	0	0	0
13	Truck to South Coast AQMD Regional Consumption	Medium Term	1%	0	0	0	0	0	0	0	0
14	Truck to Non-District Regional Consumption	Medium Term	1%	0	0	0	0	0	0	0	0
15	Downtown Rail to National Distribution	Medium Term	1%	0	0	0	0	0	0	0	0
Weighted Average Across Pathways		**Medium Term**	**1%**	0	0	0	0	0	0	0	0
1	Truck to Northern California Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
2	Downtown Rail to National Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
3	Truck to South Coast AQMD Regional Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
4	Truck to Non-District Regional Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
5	Truck to Northern California Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
6	Inland Empire Rail to National Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
7	Truck to South Coast AQMD Regional Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
8	Truck to Non-District Regional Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
9	Truck to Northern California Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0

EXHIBIT A6. RELOCATIONS BY PATHWAY AND MARKET AREA (SPECIALIZED PATHWAY SENSITIVITY SCENARIO) - $2.00/SQUARE FOOT ISR*

PATHWAY	PATHWAY DESCRIPTION	CAPACITY SCENARIO	DISCOUNT RATE	COMPONENTS OF WEIGHTED AVERAGE RELOCATION (NO. OF WAREHOUSES)							
				PATHWAY TOTAL	BAKERSFIELD	COASTAL AREAS	DESERT AREAS	LAS VEGAS	PHOENIX	SAN DIEGO	WESTERN AZ
10	Inland Empire Rail to National Distribution	Slack Capacity	1%	0	0	0	0	0	0	0	0
11	Truck to South Coast AQMD Regional Consumption	Slack Capacity	1%	0	0	0	0	0	0	0	0
12	Truck to Non-District Regional Consumption	Slack Capacity	1%	0	0	0	0	0	0	0	0
13	Truck to South Coast AQMD Regional Consumption	Slack Capacity	1%	0	0	0	0	0	0	0	0
14	Truck to Non-District Regional Consumption	Slack Capacity	1%	0	0	0	0	0	0	0	0
15	Downtown Rail to National Distribution	Slack Capacity	1%	16	6	0	10	0	0	0	0
Weighted Average Across Pathways		Slack Capacity	**1%**	**16**	**6**	**0**	**10**	**0**	**0**	**0**	**0**

**Values for individual market areas may not sum to total due to rounding.*