

## TITLE 13. CALIFORNIA AIR RESOURCES BOARD

### NOTICE OF PUBLIC HEARING TO CONSIDER A PROPOSED ADVANCED CLEAN TRUCKS REGULATION AND DRAFT ENVIRONMENTAL ANALYSIS PREPARED FOR THE REGULATION

This notice announces the availability of the Proposed Advanced Clean Trucks (ACT) Regulation and a Draft Environmental Analysis (Draft EA) for public comment. The California Air Resources Board (CARB or Board) will conduct a public hearing at the time and place noted below to consider the Proposed ACT Regulation.

DATE: December 12, 2019

TIME: 9:00 A.M.

LOCATION: California Environmental Protection Agency  
California Air Resources Board  
Byron Sher Auditorium  
1001 I Street  
Sacramento, California 95814

This item will be considered at a meeting of the Board, which will commence at 9:00 a.m., December 12, 2019, and may continue at 9:00 a.m., on December 13, 2019. Please consult the agenda for the hearing, which will be available at least ten days before December 12, 2019, to determine the day on which this item will be considered.

### **WRITTEN COMMENT PERIOD AND SUBMITTAL OF COMMENTS**

In accordance with the Administrative Procedure Act, interested members of the public may present comments orally or in writing at the hearing and may provide comments by postal mail or by electronic submittal before the hearing. The public comment period for this regulatory action will begin on October 25, 2019. Written comments not physically submitted at the hearing must be submitted on or after October 25, 2019, and **received no later than December 9, 2019**. Any written comments on the Draft EA must be submitted on or after October 25, 2019, and **received no later than December 9, 2019**. Comments submitted outside that comment period are considered untimely. CARB may, but is not required to, respond to untimely comments, including those raising significant environmental issues. CARB requests that when possible, written and email statements be filed at least ten days before the hearing to give CARB staff and Board members additional time to consider each comment. The Board also encourages members of the public to bring to the attention of staff in advance of the hearing any suggestions for modification of the proposed regulatory action. Comments submitted in advance of the hearing must be addressed to one of the following:

Postal mail: Clerks' Office, California Air Resources Board  
1001 I Street, Sacramento, California 95814

Electronic submittal: <http://www.arb.ca.gov/lispub/comm/bclist.php>

Please note that under the California Public Records Act (Gov. Code, § 6250 et seq.), your written and oral comments, attachments, and associated contact information (e.g., your address, phone, email, etc.) become part of the public record and can be released to the public upon request.

Additionally, the Board requests but does not require that persons who submit written comments to the Board reference the title of the proposal in their comments to facilitate review.

### **AUTHORITY AND REFERENCE**

This regulatory action is proposed under the authority granted in California Health and Safety Code, sections 38501, 38510, 38560, 38566, 39500, 39600, 39601, 39650, 39658, 39659, 39666, 39667, 43013, 43018, 43100, 43101, 43102, 43104. Reference: Sections 38501, 38505, 38510, 38560, 38580, 39000, 39003, 39650, 39655, 43000, 43000.5, 43013, 43016, 43018, 43100, 43101, 43102, 43104, 43105, 43106, 43205, 43205.5.

### **INFORMATIVE DIGEST OF PROPOSED ACTION AND POLICY STATEMENT OVERVIEW (GOV. CODE, § 11346.5, subd. (a)(3))**

#### **Sections Affected:**

Proposed adoption of sections 1963, 1963.1, 1963.2, 1963.3, 1963.4, 1963.5, 2012, 2012.1, 2012.2, and 2012.3, and to codify all of these into a new Article 3.1, title 13, California Code of Regulations.

#### **Documents Incorporated by Reference (Cal. Code Regs., tit. 1, § 20, subd. (c)(3)):**

The following would be incorporated in the regulation by reference as specified by the following sections:

- 40 CFR section 86.1803-01, amended on July 1, 2011, incorporated by reference in section 1963(c)(15)(A).

#### **Background and Effect of the Proposed Regulatory Action:**

Mobile sources and the fossil fuels that power them are the largest contributors to the formation of ozone, greenhouse gas (GHG) emissions, fine particulate matter (PM<sub>2.5</sub>), and toxic diesel particulate matter (PM). In California, the transportation sector alone accounts for 41 percent of total GHG emissions (50 percent when upstream emissions

from fuel is included) and is a major contributor to oxides of nitrogen (NOx) and PM emissions. The Proposed ACT Regulation will contribute to achieving the state's criteria pollutant and GHG reduction goals and cleaner technology targets.

The purpose of the Proposed ACT Regulation is to accelerate the use of zero-emission vehicles (ZEVs) in the medium-and heavy-duty truck sector and reduce the amount of harmful emissions generated from on-road mobile sources. The primary objectives of the proposed ACT regulation include the following:

- Accelerate first wave of zero-emission truck deployments in best suited applications;
- Achieve 100 percent zero-emission pickup-and-delivery in local applications by 2040;
- Support the Ports of Los Angeles and Long Beach Clean Air Action Plan for 100 percent zero-emission drayage trucks by 2035;
- Support AB 739 requiring California state government fleets to purchase ZEVs;
- Enable a large-scale transition to zero-emission technology;
- Maximize the total number of ZEVs deployed;
- Complement existing and future programs;
- Provide environmental benefits, especially in disadvantaged communities thereby supporting the implementation of AB 617;
- Ensure requirements are technologically feasible and cost effective; and
- Foster a self-sustaining zero-emission truck market.

The deployment of ZEVs meets goals identified in the State Implementation Plan (SIP), the 2017 Climate Change Scoping Plan, and the 2016 ZEV Action Plan that supports the Governor's Executive Orders B-16-12 and B-48-18, which call for 1.5 million ZEVs in California by 2025 and 5 million ZEVs by 2030, and establishes several milestones on the pathway towards meeting these targets. In 2018, Governor Brown issued Executive Order B-55-18, which sets a target to achieve carbon neutrality in California no later than 2045, and to achieve and maintain net negative emissions thereafter. The Proposed ACT Regulation directly supports achieving these goals through the required sale of ZEVs in California from all large medium- and heavy-duty vehicle manufacturers.

### Background and Program Overview

Zero-emission truck and buses can meet the needs of most local and regional operations with technology that is available today. Studies have shown that most straight trucks (designed with all axles on a single chassis), particularly those used in local delivery applications, do not travel more than 100 miles per day. A wide assortment of zero-emission trucks and buses are commercially available today that exceed 100 miles of available range. In addition, several battery electric and fuel cell models are being demonstrated that exceed over 200 miles per day.

The Proposed ACT Regulation was first identified as the "Last Mile Delivery" measure in the 2016 Mobile Source Strategy, which is part of the SIP and the 2017 Climate Change

Scoping Plan. This measure is needed for California to achieve established near- and long-term air quality and climate mitigation targets. Last mile delivery fleets are well suited for introducing zero-emission technology because they operate in urban centers, have stop and go driving cycles, and are centrally maintained and fueled. Therefore, development of the Proposed ACT Regulation began with an initial focus on these pickup-and-delivery applications; however, as development progressed staff found that other vocational uses have similar operating characteristics that are well suited for electrification. Additionally, zero-emission technology continues to improve rapidly, and costs continue to come down so that zero-emission trucks and buses are now being offered in a wide variety of vehicle classes with varying electric range and utility. Nearly one hundred different models are commercially available in California with more to come.

Zero-emission technology deployments are needed in the medium- and heavy-duty market to meet the state's emission reduction goals, but to date, the major truck manufacturers have been relatively absent in this space. For the past decade, smaller startup truck manufacturers have stepped in to fill market demand and have been designing and marketing zero-emission trucks. These startup companies have significantly advanced the technology. However, they do not yet have broad dealer networks or regional service facilities that can be leveraged quickly to provide support and maintenance services for large numbers of ZEVs. They also may lack the ability to deliver very large orders for major fleets that have been interested in operating zero emission trucks. This has hampered ZEV market expansion for early adopter fleets. At workshops discussing this proposal, a number of fleets that have been operating zero-emission trucks for years expressed concern about their experience in securing service and repairs to support their ZEVs in operation from smaller startups companies. In a few cases, orders for a large number of ZEVs were placed and not fulfilled. In addition, some of these fleets also had early experiences with ZEV products that were launched by large manufacturers that were also discontinued due to issues with their ZEV component suppliers.

The Proposed ACT Regulation is focused on requiring large truck manufacturers to sell zero-emission trucks in California to broaden the market and to send a clear signal that medium- and heavy- duty ZEVs will be a major part of California's overall strategy to reduce criteria emissions, reduce climate impacts, and reduce petroleum use. The Proposed ACT Regulation would also require one-time reporting from large entities about their contracting practices in meeting their transportation needs and how truck and bus owners currently use their vehicles. Information collected from these companies would help CARB structure future end-user regulatory strategies including whether large entities that hire truck fleets could become a point of regulation, help ensure a level playing field, and help CARB determine any appropriate exemptions or flexibilities. This information would be used in developing future regulations designed to further accelerate the purchase and use of ZEVs in fleets. Using both approaches of requiring manufacturers to build ZEVs and requirements to use them, in combination with early market support from funding programs, will significantly accelerate the market for ZEV technology.



## Summary of Proposal

The Proposed ACT Regulation includes two primary elements. First, it requires manufacturers to sell ZEVs as a percentage of annual truck and bus sales in California. Second, it requires one-time reporting of information from large organizations including retailers, manufacturers, and government agencies, about contracted services requiring the use of trucks and shuttles in addition to their heavy-duty vehicle fleet.

### **ZEV Sales Requirement**

#### Applicability

- ZEV sales requirement applies to manufacturers that certify incomplete chassis or complete vehicles greater than 8,500 lbs. gross vehicle weight rating (GVWR)
- Manufacturers with less than 500 annual California sales are exempt, but may opt-in to earn credits for selling ZEVs

#### Sales Percentage

- Class 2b-3 group (consisting mainly of full size pickup trucks and vans) and Class 7-8 tractor group (consisting of on-road semi-trucks that haul trailers) ZEV sales begin at 3 percent of California sales beginning in 2024 model year (MY) and increase to 15 percent by 2030 MY (Class 2b-3 pickups would be excluded until 2027 MY)
- ZEV sales for all other vehicles in the Class 4-8 group begin at 7 percent of California sales in 2024 MY and increase to 50 percent in 2030 MY
- The ZEV sales percentage requirements remain constant past 2030 MY

#### Credits

- Manufacturers can earn credits starting with the 2021 MY
- Starting with the 2024 MY, ZEP Certification would be required, where applicable, for ZEVs to earn credits
- Compliance would be based on a credit and deficit system to provide flexibility for manufacturers to sell more ZEVs in one weight category and fewer in another
- Credits may be banked and traded
- Near-zero-emission vehicles (plug-in hybrids with some all-electric range) would earn partial credits, and could be used to offset up to half of each manufacturer's annual deficits through the 2030 MY

#### Manufacturer Reporting

- Manufacturers would need to report annually to demonstrate compliance, to earn credits, and to report details about credit trade transactions

### **Large Entity Reporting Requirement**

- Large entities are defined as a government agency or a private organization that met one of the following in calendar year 2019:
  - Received more than \$50 million in total annual gross revenue and operated a facility in California
  - Owned 100 or more Class 2b and greater vehicles and operated a facility in California
  - Dispatched 100 or more Class 2b and greater vehicles
- Large entities would be required to report information by April 1, 2021, about the following:
  - Their contracting practices with motor carriers and for services that require the use of shuttles or trucks, and
  - Those who own trucks and buses would need to report information about their fleets, how they are operated, and where they are assigned or dispatched
- To streamline the process, affected entities would be required to complete a one-time submittal of aggregated and approximate data for representative facilities, rather than detailed information about every facility.
  - Additionally, entities with vehicles would be required to report approximate, representative information about the vehicle types owned, rather than reporting operational data for every vehicle.

### **Objectives and Benefits of the Proposed Regulatory Action:**

The purpose of the Proposed ACT Regulation is to accelerate the use of zero-emission vehicles (ZEVs) in the medium-and heavy-duty truck sector and reduce the amount of harmful emissions generated from on-road mobile sources. For a list of the ten primary objectives of the proposed ACT regulation, please refer to the “Background and Effect of the Proposed Regulatory Action” on page 3. include the following:

#### *Environmental Benefits*

The Proposed ACT Regulation would assist in attaining air quality standards, reducing health risks to individuals living in California, and meeting climate change goals. The emission reductions achieved by staff’s proposal will contribute to the reduction of cumulative risk of mortality and morbidity from mobile source emissions in the state. The majority of these benefits will be in the state’s most populated and impacted areas near ports and city centers. These areas include the South Coast, San Francisco Bay Area, San Joaquin Valley, San Diego County, and the Sacramento Air Basins.

The Proposed ACT Regulation is expected to result in significant NO<sub>x</sub>, PM<sub>2.5</sub>, and GHG emission reductions due to replacing internal combustion powered vehicles with zero-emission technology. ZEVs produce no tailpipe emissions, reduce brake wear PM emissions, and have lower associated upstream emissions. Table ES-1 summarizes the expected criteria emission benefits in 2031 and 2040. These emission reductions contribute to the State SIP Strategy and Climate Change Scoping Plan.

**Table ES-1: Expected Emission Reductions of Proposed ACT Regulation**

<b>Calendar Year</b>	<b>NOx (tpd)</b>	<b>PM<sub>2.5</sub> (tpd)</b>	<b>WTW GHG (MMT/yr)</b>
2031	5.0	0.16	0.4
2040	16.9	0.46	1.7

*Economic Impacts*

ZEVs are more expensive upfront but provide operational savings in terms of lower fuel and maintenance costs. The Proposed ACT Regulation is expected to result in a total cost saving of \$4.9 billion to truck transportation in California compared to Business as Usual from 2020 through 2040, mostly due to fuel cost savings. This estimate includes infrastructure cost, higher cost of the vehicles, maintenance and fuel savings, and cost savings due to the Low Carbon Fuel Standard. It does not include vehicle or infrastructure incentives. Incentive programs such as the Hybrid and Zero-Emission Truck and Bus Voucher Incentive Program (HVIP), utility investments, and other funding may be used to offset some potential cost to consumers. The estimated total statewide health benefits derived from criteria emission reductions are estimated to be an additional \$5.7 billion in savings.

The Proposed ACT Regulation requires that manufacturers must build and sell more costly zero-emission trucks, certify their powertrain using the ZEP Certification procedure, and report information to CARB as part of their regulatory requirements. The research, manufacture, certification, and development of ZEVs by manufacturers will contribute to the companies' costs associated with the Proposed ACT Regulation. However, the required ZEV sales can also count towards compliance with the existing California and federal Phase 2 GHG regulations simultaneously. Reporting requirements for vehicle manufacturers are not expected to be significant since most of the information needed is already reported as part of Phase 2 GHG compliance. It is not straightforward to predict how these costs and cost-savings would be passed on to consumers. Vehicle pricing is complex, and different manufacturers could use different strategies to pass on these costs. It is possible that manufacturers may pass on incremental ZEV costs through the price of ZEVs themselves, through the rest of their non-ZEV fleet, or some combination thereof. Consumers may also be affected by the increased cost of taxes due to potentially higher cost of vehicles but may benefit from the operational cost savings.

The Proposed ACT Regulation also requires one-time reporting for large companies and government agencies who would need to report about their California facility locations, and how they and their contractors move freight and perform other services. Large fleet owners would also need to report information about what vehicles they own, and how they operate. The cost of complying with this one-time reporting requirement is not expected to be significant.

### *Challenges and Long-Term Benefits*

Although ZEV technology has advanced rapidly in recent years, there are still challenges both fleets and manufacturers have to address to successfully deploy ZEVs. Common challenges for deploying zero-emission technologies include high upfront capital costs for both vehicle purchase and fueling/charging infrastructure expansion, challenges with scalability, managing electricity costs, vehicle operation flexibility, and workforce training.

Continued improvements in ZEV costs and performance are still needed to facilitate the full transition to zero-emission technology. However, the transition to zero-emission technology is essential for California to meet its long-term air quality and climate protection goals.

The Proposed ACT Regulation provides sufficient time for manufacturers to bring new ZEVs to the market, aided by several major funding programs to support early demonstrations and to kick start the market by reducing the incremental costs of commercial zero-emission technologies. Fleet owners can also benefit from lower operating and maintenance costs including Low Carbon Fuel Standard credits to significantly reduce operating costs while supporting the low carbon fuel market. As ZEV sales increase, technology improves, and incremental costs decline, a self-sustaining medium- and heavy-duty ZEV market is achievable in a wide range of applications.

### **Comparable Federal Regulations:**

There are no comparable federal regulations, necessitating the Proposed ACT Regulations to protect public health and achieve climate protection benefits.

### **An Evaluation of Inconsistency or Incompatibility with Existing State Regulations (Gov. Code, § 11346.5, subd. (a)(3)(D)):**

During the process of developing the proposed regulatory action, CARB conducted a search of any similar regulations on this topic and concluded these regulations are neither inconsistent nor incompatible with existing state regulations.

### **DISCLOSURE REGARDING THE PROPOSED REGULATION**

### **Fiscal Impact/Local Mandate Determination Regarding the Proposed Action (Gov. Code, § 11346.5, subds. (a)(5)&(6)):**

The determinations of the Board's Executive Officer concerning the costs or savings incurred by public agencies and private persons and businesses in reasonable compliance with the proposed regulatory action are presented below.

*Cost to Any Local Agencies and School Districts Requiring Reimbursement under section 17500 et seq.*

Pursuant to Government Code sections 11346.5, subdivision (a)(5) and 11346.5, subdivision (a)(6), the proposed regulatory action is a mandate that would create costs and cost-savings to local agencies, but not to school districts. However, these costs to local agencies are not reimbursable by the State under Government Code, title 2, division 4, part 7 (commencing with section 17500). The mandate is not reimbursable because costs associated with the proposed regulation apply generally to all entities that purchase affected vehicles and respond to the reporting requirement, including local agencies. Therefore, the regulation does not constitute a “Program” imposing any unique requirements on local agencies as set forth in section 17514 of the California Government Code.

The Proposed ACT Regulation directly impacts local government entities, who are local agencies. Cities and counties are required to complete the Large Entity Reporting requirement in 2021. There are 58 counties and 482 cities in California and each would be required to report information about their fleets and the type of transportation services for which they contract.

Many cities and counties in California levy a Utility User Tax on electricity usage. This tax varies from city to city and ranges from no tax to 11 percent. A value of 3.53 percent was used in this analysis representing a population-weighted average (SCO, 2016)<sup>1</sup>. By increasing the amount of electricity used, there will be an increase in the amount of the utility user tax revenue collected by cities and counties.

Fuel taxes on gasoline and diesel to fund transportation improvements at the state, county, and local levels. Displacing gasoline and diesel with electricity and hydrogen will decrease the total amount of gasoline and diesel dispensed in the state, resulting in a reduction in fuel tax revenue collected by local governments.

Sales taxes are levied in California to fund a variety of programs at the state and local level. The Proposed ACT Regulation will require the sale of more expensive zero-emission trucks in California which will result in direct increase in sales tax revenue collected by local governments. Overall, local sales tax revenue may increase less than the direct increase from vehicle sales if overall business spending doesn’t increase.

The local government fleet is estimated to make up 2.9 percent of California’s fleet based on information from manufacturers and the Department of General Services. A proportionate amount of the total costs are assumed to pass-through to local governments.

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<sup>1</sup> (SCO, 2016) California State Controller’s Office, User Utility Tax Revenue and Rates (web page: [https://sco.ca.gov/Files-ARD-Local/LoSCzcRep/2016-17\\_Cities\\_UUT.pdf](https://sco.ca.gov/Files-ARD-Local/LoSCzcRep/2016-17_Cities_UUT.pdf), last accessed June 2019).



The estimated fiscal impacts to local government compared to a business as usual baseline are estimated -\$0.6 million over the first three years of the regulation and \$4 million over the regulatory lifetime.

*Cost or Savings for State Agencies:*

The Proposed ACT Regulation will impose costs on CARB. The Proposed ACT Regulation would have a small impact on staffing resources and would require two additional Air Pollution Specialist positions responsible for administering contracts to set up the reporting systems, assisting stakeholders with inquiries, data analysis and auditing of information submitted by manufacturers and fleets, supporting ACT enforcement actions and other general implementation duties. Each position has a fully burdened cost to CARB of \$180,000 in Fiscal Year (FY) 2020-2021 and \$179,000 every year afterwards.

The manufacturer reporting requirement will require modifying an existing reporting system or developing a new system to handle the reporting. The estimated cost is up to \$200,000 in FY 2020-2021 in contracting costs to set up a method for performing credit calculations and to track credit transactions to determine compliance with the rule.

Similarly, the fleet and large entity reporting requirement will require developing a new system to upload or receive reported data. The estimated cost is \$200,000 in FY 2020-2021 in contracting costs to set up the large entity reporting system.

Fuel taxes on gasoline and diesel fund transportation improvements at the state, county, and local levels. Displacing gasoline and diesel with electricity and hydrogen will decrease the total amount of gasoline and diesel dispensed in the state. This will result in a reduction in revenue collected by the state for use in multiple levels of government.

The Energy Resource Fee is a \$0.0003/kWh surcharge levied on consumers of electricity purchased from electrical utilities. The revenue collected is deposited into the Energy Resources Programs Account of the General Fund which is used for ongoing energy programs and projects deemed appropriate by the Legislature, including but not limited to, activities of the California Energy Commission.

The state collects registration fees to fund transportation improvements at the state, county, and local levels. The fee structure for ZEVs is different from diesel vehicles with some fees such as the Vehicle License Fee being higher and others such as weight fees being lower. These differences result in lower registration fees for the ZEVs. These lower fees result in reduced revenue collected by the state for use in transportation services.

Sales taxes are levied in California to fund a variety of programs at the state and local level. This Proposed ACT Regulation will require the sale of more expensive zero-emission trucks in California which will result in higher sales tax collected by the state

governments. Overall, state sales tax revenue may increase less than the direct increase from vehicle sales if overall business spending doesn't increase.

The state government fleet is estimated to make up 2.1 percent of California's fleet based on information from manufacturers and the Department of General Services. A proportionate amount of the total costs are assumed to pass-through to the state government.

The estimated fiscal impacts to the state government compared to a business as usual baseline are estimated -\$1.4 million over the first three years of the regulation and -\$2.1 billion over the regulatory lifetime.

*Other Non-Discretionary Costs or Savings on Local Agencies:*

The Proposed ACT Regulation affects local agencies, but is not expected to impose any non-discretionary costs or saving to local agencies.

*Cost or Savings in Federal Funding to the State:*

The Proposed ACT Regulation is not expected to impose any costs or saving in Federal Funding to the State.

**Housing Costs (Gov. Code, § 11346.5, subd. (a)(12)):**

The Executive Officer has also made the initial determination that the proposed regulatory action will not have a significant effect on housing costs. Nothing in the regulation is expected to impact housing costs.

**Significant Statewide Adverse Economic Impact Directly Affecting Business, Including Ability to Compete (Gov. Code, §§ 11346.3, subd. (a), 11346.5, subd. (a)(7), 11346.5, subd. (a)(8)):**

The Executive Officer has made an initial determination that the proposed regulatory action would not have a significant statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states, or on representative private persons.

**MAJOR REGULATION: Statement of the Results of the Standardized Regulatory Impact Analysis (Gov. Code, § 11346.3, subd. (c)) [Work in Progress]:**

In August 2019, CARB submitted a Standardized Regulatory Impact Analysis (SRIA) to the Department of Finance (DOF) for its review. CARB has updated the Proposed ACT Regulation since the original SRIA submittal, and to address DOF comments. The revisions are discussed in the ISOR, Chapter IX.

### *The Creation or Elimination of Jobs within the State*

The Proposed ACT Regulation is estimated to result in a slightly positive job impact from approximately 2025 to 2040. These changes in employment represent less than 0.04 percent of baseline California employment. The total employment impacts are net of changes at the industry level. As the requirements of the Proposed ACT Regulation go into effect, the industries generally realizing reductions in production cost or increases in final demand see an increase in employment growth. This includes the truck transportation, construction, and manufacturing sectors and upstream industries. The largest decrease in employment results from the public sector, which is estimated to realize a decrease in fuel and sales tax revenue and registration fees. The oil and gas extraction industry and automotive repair and maintenance industry see a decreased employment growth rate due to a reduction in final demand for their goods and services.

### *The Creation of New Businesses or the Elimination of Existing Businesses within the State*

The overall jobs and output impacts of the Proposed ACT Regulation are very small relative to the total California economy, representing changes of less than 0.03 percent. The trend of decreasing production costs for the truck transportation industry has the potential to result in an expansion or increases in businesses in this industry if sustained over time. However, the decreasing trend in demand for gasoline and diesel fuel following the implementation of this Proposed ACT Regulation has the potential to result in a decrease in businesses in this industry if sustained over time.

### *The Competitive Advantages or Disadvantages for Businesses Currently Doing Business within the State*

The Proposed ACT Regulation imposes a sales mandate on large truck manufacturers. These truck manufacturers are headquartered and produce vehicles entirely out-of-state for a national and international market. There are small manufacturing entities in- and out-of-state that would not be required to sell ZEVs in California. Any risk of creating a competitive advantage is mitigated by the 500 vehicle sales threshold. Any small manufacturer that is able to increase sales would become subject to the same ZEV requirements as other large manufacturers.

Early credit generation incentives are proposed to benefit all manufacturing entities, and therefore would not give an explicit competitive advantage or disadvantage to competing manufacturers.

### *The Increase or Decrease of Investment in the State*

Private domestic investment consists of purchases of residential and nonresidential structures and of equipment and software by private businesses and nonprofit

institutions. It is used as a proxy for impacts on investments in California because it provides an indicator of the future productive capacity of the economy.

The relative changes to growth in private investment for the Proposed ACT Regulation show an increase of private investment of about \$177 million in 2030 and \$428 million in 2040, or less than 0.01 percent of a business as usual baseline investment.

#### *The Incentives for Innovation in Products, Materials, or Processes*

Staff is proposing incentives for early ZEV sales by allowing credits to be generated from ZEV sales starting with the 2021 MY, 3 years prior to the first sales requirements in the 2024 MY. Staff anticipates growth in industries that manufacture ZEV technologies, including first and second tier suppliers for manufacturers of ZEVs, which will strengthen the supply chain, and promote technology improvements earlier than they would have otherwise occurred. This growth will help foster and support a self-sustaining medium- and heavy-duty ZEV market.

#### *The Benefits of the Regulations, Including, But Not Limited to, Benefits to the Health, Safety, and Welfare of California Residents, Worker Safety, and the State's Environment and Quality of Life, Among Any Other Benefits Identified By the Agency*

The Proposed ACT Regulation would reduce GHG, PM, and NOx emissions. The Proposed ACT Regulation is expected achieve a reduction of 5.0 tpd of NOx and 0.16 tpd of PM<sub>2.5</sub> by 2031 which is a key year in meeting the SIP. It would continue to achieve additional emissions reductions past 2031 as ZEV sales percentages stay flat and continue to increase the number of ZEVs in the fleet. The Proposed ACT Regulation is also expected to cumulatively reduce well-to-wheel GHG emissions by 11.2 million metric tons of carbon dioxide (MMT CO<sub>2</sub>) from 2020 to 2040.

The Proposed ACT Regulation would also result in benefits to businesses and the State of California as a whole, as summarized here and discussed in detail in the ISOR Chapter V. Truck and bus owners through lowered total cost of ownership and lower fuel costs can reduce their overall costs by using ZEVs. Utility providers would benefit from shifting electricity load to off-peak periods and increased electricity demand, and could lower electricity costs due to increased utilization of infrastructure. Additionally, utilities will better be able to meet the requirements of SB350. Benefits from energy savings and reduction on petroleum fuel dependence are realized by the State as a whole, as well as disadvantaged communities and the State's economy.

#### *Department of Finance Comments and Responses*

**1. DOF Comment:** In general, Finance concurs with the methodology used to estimate impacts of proposed regulations. The SRIA clearly lays out for the public the proposed regulatory impacts, and does a good job of showing how this proposed regulation fits in with the overall strategy for California to reduce emissions. However, the SRIA also must be modified to include benefits – such as avoided health costs – on an annual basis.

**Response:**

The analysis in the ISOR has been updated to display annual avoided health cost benefits rather than just showing the total for the analysis period. There are three types of benefits modeled in the analysis: avoided health costs, avoided social cost of carbon, and direct cost savings. The annual valuation of health benefits and social cost of carbon are displayed in Chapter V. Annual direct costs and associated savings are displayed in Chapter IX.

**Business Report (Gov. Code, §§ 11346.5, subd. (a)(11); 11346.3, subd. (d)):**

In accordance with Government Code sections 11346.5, subdivisions (a)(11) and 11346.3, subdivision (d), the Executive Officer finds the reporting requirements of the proposed regulatory action which apply to businesses are necessary for the health, safety, and welfare of the people of the State of California.

**Cost Impacts on Representative Private Persons or Businesses (Gov. Code, § 11346.5, subd. (a)(9)):**

In developing this regulatory proposal, CARB staff evaluated the potential economic impacts on representative private persons or businesses. Manufacturers are responsible for meeting the ZEV sales percentage requirement, but none of the regulated manufacturers build vehicles in California. Most fleets do not currently have a requirement to purchase ZEVs. As a result, manufacturers bear risk in that they may have to sell vehicles below cost to fleets to meet the requirements of the regulation. Any ZEV costs that manufacturers cannot pass on through sale of their ZEVs may be added to the cost of the rest of their non-ZEV fleet, or the manufacturer may not pass on the cost and must absorb the cost themselves. The impacts are discussed in the ISOR, Chapter IX. There are no direct costs to individuals as a result of this regulation; however, individuals may experience indirect costs resulting from macroeconomic effects. Individuals may see health benefits due to ZEVs displacing non-ZEV vehicles and providing statewide, regional, and local emission benefits. Manufacturers and fleets will see increased and decreased costs as a result of this rule and will pass through to individuals in the state.

**Effect on Small Business (Cal. Code Regs., tit. 1, § 4, subds. (a) and (b)):**

The Executive Officer has also determined under California Code of Regulations, title 1, section 4, that the proposed regulatory action would not affect small businesses. There is no expected direct cost on small businesses under the Proposed ACT Regulation. No manufacturers or fleets who would be regulated under this rule are small businesses.



Small businesses who operate trucks will not be required to purchase zero-emission trucks, but may independently decide to do so. This may enable cost savings for small businesses due to electric trucks' lower cost of operation.

**Consideration of Alternatives (Gov. Code, § 11346.5, subd. (a)(13)):**

Before taking final action on the proposed regulatory action, the Board must determine that no reasonable alternative considered by the Board, or that has otherwise been identified and brought to the attention of the Board, would be more effective in carrying out the purpose for which the action is proposed, would be as effective and less burdensome to affected private persons than the proposed action, or would be more cost-effective to affected private persons and equally effective in implementing the statutory policy or other provisions of law.

The analysis of such alternatives can be found in Chapter X of the ISOR for the proposed alternatives. Staff has discussed six alternative concepts in the ISOR, including stricter and less stringent ZEV sales requirements, credit for low NOx engines paired with ZEV sales requirement, fleet ZEV purchase requirements, the Truck and Engine Manufacturers Association's targeted sector sales requirement coupled with a purchase requirement proposal, and proposals from environmental groups.

No alternative proposed was found to be less burdensome and equally effective in achieving the purposes of the regulation in a manner that ensures full compliance with the authorizing law. The Board has not identified any reasonable alternatives that would lessen any adverse impact on small business.

**STATE IMPLEMENTATION PLAN REVISION**

If adopted by CARB, CARB plans to submit the proposed regulatory action to the U.S. EPA for approval as a revision to the SIP required by the federal Clean Air Act (CAA). The adopted regulatory action would be submitted as a SIP revision because it adopts regulations intended to reduce emissions of air pollutants in order to attain and maintain the National Ambient Air Quality Standards promulgated by U.S. EPA pursuant to the CAA.

**ENVIRONMENTAL ANALYSIS**

CARB, as the lead agency for the proposed regulation, has prepared a draft EA under its certified regulatory program (California Code of Regulations, title 17, sections 60000 through 60008) to comply with the requirements of the California Environmental Quality Act (CEQA; Public Resources Code section 21080.5). The EA concluded that implementation of the proposed regulation could result in: beneficial impacts to energy demand, and greenhouse gases; less than significant impacts, or no impacts, to air quality, energy demand, greenhouse gases, land use planning, mineral resources, population and housing, public service, and recreation; and potentially significant [indirect/secondary] adverse impacts to aesthetics, agricultural and forest resources, air quality, biological resources, cultural resources, geology and soils, hazards and

hazardous materials, hydrology and water quality, land use planning, mineral resources, noise, transportation and traffic, and utilities and service systems. The draft EA, included as Appendix D to the ISOR, is entitled Draft Environmental Analysis. Written comments on the draft EA will be accepted during a 45-day public review period starting on October 25, 2019 and ending at 5 pm on December 9, 2019.

### **SPECIAL ACCOMMODATION REQUEST**

Consistent with California Government Code Section 7296.2, special accommodation or language needs may be provided for any of the following:

- An interpreter to be available at the hearing;
- Documents made available in an alternate format or another language; and
- A disability-related reasonable accommodation.

To request these special accommodations or language needs, please contact the Clerk of the Board at (916) 322-5594 or by facsimile at (916) 322-3928 as soon as possible, but no later than 10 business days before the scheduled Board hearing. TTY/TDD/Speech to Speech users may dial 711 for the California Relay Service.

Consecuente con la sección 7296.2 del Código de Gobierno de California, una acomodación especial o necesidades lingüísticas pueden ser suministradas para cualquiera de los siguientes:

- Un intérprete que esté disponible en la audiencia;
- Documentos disponibles en un formato alternativo u otro idioma; y
- Una acomodación razonable relacionados con una incapacidad.

Para solicitar estas comodidades especiales o necesidades de otro idioma, por favor llame a la oficina del Consejo al (916) 322-5594 o envíe un fax a (916) 322-3928 lo más pronto posible, pero no menos de 10 días de trabajo antes del día programado para la audiencia del Consejo. TTY/TDD/Personas que necesiten este servicio pueden marcar el 711 para el Servicio de Retransmisión de Mensajes de California.

### **AGENCY CONTACT PERSONS**

Inquiries concerning the substance of the proposed regulatory action may be directed to the agency representative Craig Duehring, Manager, In-Use Control Measures Section, at (916) 323-2361 or (designated back-up contact) Paul Arneja, Air Resources Engineer, at (916) 322-5616.

### **AVAILABILITY OF DOCUMENTS**

CARB staff has prepared a Staff Report: Initial Statement of Reasons (ISOR) for the proposed regulatory action, which includes a summary of the economic and environmental impacts of the proposal. The report is entitled: Staff Report: Initial Statement of Reasons – Public Hearing to Consider the Proposed Advanced Clean Trucks Regulation.

Copies of the ISOR and the full text of the proposed regulatory language, may be accessed on CARB's website listed below, or may be obtained from the Public Information Office, California Air Resources Board, 1001 I Street, Visitors and Environmental Services Center, First Floor, Sacramento, California, 95814, on October 22, 2019.

The agency representative to whom nonsubstantive inquiries concerning the proposed administrative action may be directed to Bradley Bechtold, Regulations Coordinator, (916) 322-6533. The Board staff has compiled a record for this rulemaking action, which includes all the information upon which the proposal is based. This material is available for inspection upon request to the contact persons.

### **HEARING PROCEDURES**

The public hearing will be conducted in accordance with the California Administrative Procedure Act, Government Code, title 2, division 3, part 1, chapter 3.5 (commencing with section 11340).

Following the public hearing, the Board may vote on a resolution directing the Executive Officer to: make any proposed modified regulatory language that is sufficiently related to the originally proposed text that the public was adequately placed on notice and that the regulatory language as modified could result from the proposed regulatory action, and any additional supporting documents and information, available to the public for a period of at least 15 days; consider written comments submitted during this period; and make any further modifications as may be appropriate in light of the comments received available for further public comment. The Board may also direct the Executive Officer to: evaluate all comments received during the public comment periods, including comments regarding the Draft Environmental Analysis, and prepare written responses to those comments; and present to the Board, at a subsequently scheduled public hearing, the final proposed regulatory language, staff's written responses to comments on the Draft Environmental Analysis, along with the Final Environmental Analysis for action.


### **FINAL STATEMENT OF REASONS AVAILABILITY**

Upon its completion, the Final Statement of Reasons (FSOR) will be available and copies may be requested from the agency contact persons in this notice, or may be accessed on CARB's website listed below.

## **INTERNET ACCESS**

This notice, the ISOR and all subsequent regulatory documents, including the FSOR, when completed, are available on CARB's website for this rulemaking at <https://ww2.arb.ca.gov/rulemaking/2019/advancedcleantrucks>.

### **CALIFORNIA AIR RESOURCES BOARD**

  
\_\_\_\_\_  
Richard W. Corey  
Executive Officer

Date: October 8, 2019

*The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website at [www.arb.ca.gov](http://www.arb.ca.gov).*