# TITLE 17. CALIFORNIA AIR RESOURCES BOARD

## NOTICE OF PUBLIC HEARING TO CONSIDER THE PROPOSED ZERO-EMISSION AIRPORT SHUTTLE REGULATION

The California Air Resources Board (CARB or Board) will conduct a public hearing at the time and place noted below to consider approving for adoption the proposed Zero-Emission Airport Shuttle Regulations (California Code of Regulations, title 17, sections 95690.1 through 95690.7.).

DATE: February 21, 2019

TIME: 9:00 A.M.

LOCATION: California Environmental Protection Agency
California Air Resources Board
Byron Sher Auditorium
1001 I Street
Sacramento, California 95812

This item will be considered at a meeting of the Board, which will commence at 9:00 a.m., February 21, 2019, and may continue at 8:30 a.m., on February 22, 2019. Please consult the agenda for the hearing, which will be available at least ten days before February 21, 2019, to determine the day on which this item will be considered.

## WRITTEN COMMENT PERIOD AND SUBMITTAL OF COMMENTS

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 January 4, 2019. Written comments not physically submitted at the hearing must be submitted on or after January 4, 2019, and received **no later than 5:00 p.m. on February 19, 2019**. 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 regulation. Comments submitted in advance of the hearing must be addressed to one of the following:

Postal mail: Clerk of the Board, 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 Health and Safety Code sections 38501, 38505, 38510, 38560, 38566, 39002, 39003, 39500, 39516, 39600, 39601, 39602, 39602.5, 39650, 39658, 39659, 39677, 43013, 43018, 43100, 43101, 43102, 43104, 43105, and 43106. This action is proposed to implement, interpret, and make specific sections from Health and Safety Code Sections 38501, 38505, 38510, 38560, 39650, 39658, 39659, 39667, 43000, 43000.5, 43009, 43009.5, 43013, 43018, 43100, 43101, 43101.5, 43102, 43104, 43105, 43106, 43204, 43205, 43205.5, and 43600.

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

**Sections Affected**: Proposed adoption of California Code of Regulations, title 17, sections 95690.1, 95690.2, 95690.3, 95690.4, 95690.5, 95690.6, and 95690.7. CARB may also consider other changes to the sections affected, as listed earlier in this notice, during the course of this rulemaking process.

**Background and Effect of the Proposed Regulation**:

CARB is responsible for protecting the public from the harmful effects of air pollution and developing programs and actions to fight climate change. Meeting these public health goals necessitates the transition from internal combustion engines in both light-and heavy-duty applications toward zero-emission vehicle (ZEV) technology. The State Implementation Plan, California's roadmap toward achieving federal health based standards, identified zero-emission technology measures for this sector. The proposed Zero-Emission Airport Shuttle regulation would mandate the use of ZEV technology in a specific medium- and heavy-duty vehicle sector that is ideally suited for the technology. The proposed regulation would accelerate the adoption of zero-emission technology in airport shuttles and transition these fleets to full ZEV adoption by 2035. As part of a comprehensive suite of measures tasked to meet our air quality and climate goals this proposal would virtually eliminate tailpipe emissions from airport shuttles operating at and around California airports, thus improving the air quality in impacted communities both regionally and throughout the State. The proposed regulation is well-positioned to act as a mechanism for increasing adoption of zero emission technology in a compatible market sector. This acceleration of the use of zero-emission technology is necessary to provide cleaner air for all Californians while slowing down the effects of climate change.

California has a vast network of airports, serving both urban and rural communities, which provide a variety of essential functions critical to California's economy. Eleven of

the North American's top 100 passenger airports are located in California, with Los Angeles International Airport and San Francisco International Airport airports ranking number two and seven, respectively in terms of annual commercial airline passengers. This level of activity brings commensurate emissions. Reducing emissions of criteria pollutants, toxic air contaminants, and greenhouse gas (GHG) from all sectors, including the aviation sector, will support CARB's mission to meet federal health-based National Ambient Air Quality Standards (NAAQS) and California's climate change abatement goals.

Currently, almost 1,000 public and private airport shuttles operate in California, transporting travelers to parking lots, rental car offices, hotels, and other destinations at California's 13 largest airports. The shuttles themselves consist of vans, cutaways, and transit style buses and are owned either by local government agencies or by private businesses, such as independent off-airport parking lots and hotels. The majority of airport shuttles currently use gasoline and compressed natural gas, although some use electric, propane, and diesel.

Shuttle operators have already recognized that ZEVs can be a good fit for their operations. Currently over 110 ZEV shuttles are in-use or are on order, including 33 in operation at Wally Park, a private off-airport parking business serving the Los Angeles International Airport that became the first all-electric airport shuttle fleet in the nation. These fleet owners utilized incentive funds to offset the incremental cost of the battery electric shuttles and are seeing operational benefits of reduced fueling and maintenance costs.

As noted previously, airport shuttles are small in number, relative to the larger transportation vehicle populations, and therefore their impact on air pollution is similarly small. However, airport shuttle operation characteristics (i.e., fixed short routes, stop- and go- operation, and low average speeds) are an optimal match to current battery electric vehicle technology. Therefore, this category of vehicles (along with transit buses) are a logical initiation point for medium- and heavy-duty ZEV implementation from which the technology can expand to the larger population of buses and trucks. Technology transformation regulations, like the proposed regulation, contribute to CARB's air quality and climate change goals by increasing the use of ZEVs in the medium- and heavy-duty on-road sector while providing a bridge toward zero-emission pathways in other sectors. This regulatory effort will expand medium- and heavy-duty electric charging and hydrogen fueling infrastructure, build consumer awareness and public visibility of ZEVs, send a market signal to assist in encouraging economies of scale, and support technology transfer to other medium- and heavy-duty on-road and off-road sections.

CARB has the authority to regulate mobile sources and to adopt motor vehicle standards and measures to attain ambient air quality standards and climate change requirements and goals. Furthermore, CARB is tasked with developing the State Implementation Plan, California's road map toward achieving the NAAQS. Additional oxides of nitrogen (NOx) and GHG emission reductions are needed from the transportation sector in order to attain the NAAQS, reduce individual health risk, and

meet climate change goals while promoting the transportation sector's transition to ZEV technology. Shuttles that serve California's commercial airports are among the first that will be required to transition to the cleanest technologies available.

**Objectives and Benefits of the Proposed Regulation:**

The Revised Proposed 2016 State Strategies for the State Implementation Plan included several areas that are key to launching heavy-duty zero-emission technology in the on-road heavy-duty sector including transit buses, delivery trucks, and airport shuttles. These efforts--besides providing NOx, particulate matter (PM), toxic air contaminant (TAC), and GHG emission reductions needed to clean the air--will increase the first wave of heavy-duty ZEV deployment. The purpose of the proposal is to implement one of these California State Implementation Plan (SIP) strategies, the Zero-Emission Airport Shuttle Bus measure. The proposed regulation would require public and private airport shuttle fleets to transition from internal combustion vehicles to ZEVs. Staff's proposal consists of an early action voluntary period followed by regulatory requirements. The proposal would increase the use of current commercially available medium- and heavy-duty zero-emission vehicles in applications that are ideally suited for its use while providing emission benefits to help meet mandated California's SIP strategies requirements and GHG climate reduction goals.

CARB staff worked extensively with stakeholders over the last two years conducting several public meetings to develop this proposal in a way that provides necessary air quality and climate change improvements while working with the industry's normal vehicle turnover rate. Staff's proposal to require ZEV operation by private and public airport shuttle fleet owners that service the 13 largest California airports would ensure successful adoption of ZEV technology, provide opportunity to compete for incentive funding, and provide the requisite time needed to develop supporting infrastructure. The proposal has three major components:

1. Annual reporting requirement, starting in 2022
    - Beginning January 1, 2022, an airport shuttle fleet owners must electronically report fleet information to CARB no later than March 1, 2022 and maintain records for at least 36 months from the date of submission to CARB.

2. Zero Emission Certification requirements
    - For 2026 and later model years, heavy-duty zero-emission airport shuttles will be required to be certified to the Enhanced Electric and Fuel-Cell Vehicle Certification Procedures to be compliant with this regulation.

3. In-use Fleet composition requirement with three compliance deadlines:
    - At least 33 percent of the fleet must be ZEVs by December 31, 2027;
    - At least 66 percent of the fleet must be ZEVs by December 31, 2031; and
    - 100 percent by December 31, 2035.

The proposed compliance benchmarks are designed to provide flexibility throughout the transition period, especially in earlier years, in acknowledgement of comments received regarding access to publicly available incentive funding opportunities. The proposal includes a no-backsliding provision to ensure continued progress as well as exemptions and extensions in order to ease the complete transformation to ZEVs.

Major portions of California are not in attainment with the federal ozone 8-hour standards, including areas around commercial airports. Adoption of the proposed regulation will provide cleaner air for all Californians, especially in areas surrounding airports that includes disadvantaged and low-income communities, while slowing down the effects of climate change. Replacing combustion vehicles with electric vehicles will contribute to overall reductions of NOx and GHG emissions. The proposal will assist in attaining air quality standards, reducing health risks to individuals living in California, and meeting GHG goals.

The proposed regulation would apply to public and private fleet owners of medium- heavy-duty vehicles that provide airport shuttle service to and around large, medium, and small hub airports in California (see Table 1). In response to stakeholder feedback, staff's proposal stakeholder feedback does not apply to every airport in California or to every shuttle that stops at an airport.

**Table 1: Proposed List of California Airports**

| Airport Hub Type | California Airports |
|---|---|
| Large | Los Angeles International |
| | San Diego International |
| | San Francisco International |
| Medium | Hollywood Burbank |
| | Oakland International |
| | Ontario International |
| | John Wayne, Orange County |
| | Sacramento International |
| | Mineta San Jose International |
| Small | Fresno Yosemite International |
| | Long Beach |
| | Palm Springs International |
| | Santa Barbara |

The proposal is limited to these airports because they engage the vast majority of passenger traffic and the operation of ZEVs is a viable alternative. The proposed

regulation will apply to airport shuttle fleets containing one or more shuttles that meet the following conditions:

- Operates on a fixed destination route of 30-miles or less,
- Makes at least one stop at one of the 13 proposed airports, and
- Dispatched for service within a 15-mile radius from an airport.

These conditions work together to capture the current zero-emission technology operational characteristics best suited for ZEV deployment today. CARB's Medium- and Heavy- Duty Battery Electric Trucks and Buses Technology Assessments identified airport shuttles as readily suited for battery electric operation because of their well-defined routes. Limiting the scope to fixed destination routes enables fleets to manage current vehicle range limits based on current ZEV technology. Specifying maximum distance from the airport ensures the proposal will address those vehicles that demonstrate the low-mileage, stop-and-go operation, and low average speeds that are advantageous to the fuel (energy) economy benefits of electric vehicle operation.

The proposed regulation is expected to cumulatively reduce GHG emissions, relative to current conditions, by 500,000 metric tons of carbon dioxide equivalent ($CO_2e$) from 2020 – 2040 as well as reducing NOx and PM (see Table 2). By 2040, the proposed regulation is expected to have a beneficial economic impact of $30 million.

**Table 2: Cumulative Emission Reductions, 2020-2040**

| NOx (tons) | $PM_{2.5}$ (tons) | $CO_{2e}$ (million metric tonnes) |
|---|---|---|
| 138 | 2.5 | 0.5 |

While the proposed regulation would have a direct cost impact to airport shuttle fleet owners in the early years with a payback period of eight years, staff's cost analyses also show that operating costs, as well as maintenance and fuel costs, are beneficial when compared with combustion vehicles. Furthermore, staff specifically structured the proposal to include a voluntary early action period to facilitate the use of funding incentives to help mitigate the up-front capital costs.

In addition, the proposed regulation provides benefits from the avoided tailpipe emissions such as improvements to public health and worker safety while also providing toxic emission reductions in disadvantaged communities located near airports.

The anticipated benefits are summarized below:

Air Quality and Climate Benefits

The demanding air quality and climate protection goals that California faces require cleaner technologies be deployed, especially in the transportation sector. The proposed

regulation, as part of a larger portfolio for clean transportation and fuels, would assist in meeting California's climate change and air quality goals while having a positive net impact on the economy. The proposal helps reduce emissions several ways:

1) Beneficial impacts to disadvantaged and low-income communities;
2) Eliminate tailpipe emissions and excess emissions caused by deteriorated vehicles;
3) Reduce emissions from the oil and gas extraction and production processes; and
4) Establish zero emissions vehicle technology in a specific medium- and heavy-duty vehicle sector well suited for the technology.

Public Health and Worker Safety Benefits

The adoption of the proposed regulation will provide criteria pollutant, GHG, and other harmful exhaust emission reductions providing immediate air quality benefits to communities surrounding airports and reducing the impact of climate change. Reduced emissions will likely improve worker safety by reducing their exposure to harmful exhaust emissions. In addition, this benefit will extend to all people at airports including children and elderly sensitive subgroups.

Health and Benefits in Disadvantaged Communities

The proposed regulation reduces NOx, $PM_{2.5}$, emissions, resulting in health benefits for Californians, including in disadvantaged and low-income communities. Eleven of the nation's top 100 passenger airports are in California. A large road network supporting this high level of activity results in disproportionate pollutant burden in regions surrounding airports. Although California is making progress towards meeting the health-based NAAQS, some of the most populated areas surrounding major commercial airports continue to experience disproportionately high levels of pollution. The impact is even more severe for disadvantaged communities.

Increase in Employment Opportunities

With more than ten ZEV Original Equipment Manufacturers (OEM) currently located in California, it is highly plausible that the increased demand for this technology would result in higher employment opportunities in the manufacturing sector, including employment in disadvantaged communities. Examples include Motiv Power and Phoenix Motorcars, two small business ZEV manufacturers located in economically disadvantaged communities. In addition the required infrastructure will also create a favorable environment for employment growth in infrastructure manufacturing, installation, and maintenance markets.

Establishing Zero Emissions Technology in the Medium- and Heavy-Duty Sector

Success of any new technology heavily depends on consumer acceptance. By transporting a large volume of passengers at airports, manufacturers of ZEV airport

shuttles have the exclusive opportunity to create positive impressions across a wide sector of the population through direct real-life experience. The projected increase in air travel would mean increased visibility and exposure to ZEV operation.

The superior fuel efficiency of ZEVs operating in this sector improves with the low speeds and frequent stops operation. The airport shuttle sector is of optimum size to initiate the introduction of ZEV technology cutaways, vans, and buses to consumers.

Infrastructure is an important aspect of the proposed regulation as it will lead to an increased demand for charging infrastructure. Multi-modal charging infrastructure, supporting both medium- and heavy- and light-duty ZEVs, at hotel and airport parking facilities would send a strong signal to ZEV manufacturers and consumers.

An additional benefit is that ZEVs are quieter than their fossil-fueled counterparts. The appreciation of the lower noise level would further increase consumer acceptance and could become a vital catalyst for the supply-chain market growth.

CARB staff developed the proposed regulation through an extensive two year public process, including meeting with airport authorities, ZEV manufacturers, various industry associations, and trade organizations. Prior to each public meeting, CARB staff posted information regarding these workshops and meetings and other associated materials on the Airport Shuttle Bus (ASB) website (https://www.arb.ca.gov/msprog/asb/asb.htm). Specifically, staff solicited public input on the regulatory proposal at the June 30, 2017; December 4, 2017; March 7, 2018; and March 8, 2018, meeting.

These pre-rulemaking discussions gave an opportunity for government, industry and other stakeholders to engage in an open discussion regarding CARB's efforts. CARB staff developed the proposal based on research, survey results, analysis, and feedback from stakeholders.

**Comparable Federal Regulations:**

Currently, there are no comparable federal regulations.

**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 regulation, CARB conducted a search of any similar regulations on this topic and concluded that the proposed regulation is neither inconsistent nor incompatible with existing state regulations. California has regulations in place that set new engine standards and in-use fleet regulations. A brief description of two other CARB in-use regulations that reduce diesel PM and NOx in heavy-duty diesel fueled vehicles is as follows:

- Private entities must comply with the Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and Other Criteria Pollutants from In-Use Heavy-Duty Diesel-Fueled Vehicles, also known as the CARB-Truck and Bus

Regulation for diesel vehicles weighing more than 14,000 pounds GVWR. (Cal. Code of Regs., tit. 13, § 2025). This regulation is different from the proposed Zero-Emission Airport Shuttle regulation in that it applies to a sector that is not covered under the proposed regulation and contains different requirements.

- Any municipality or utility that owns leases, or operates an on-road, diesel-fueled heavy-duty vehicle must comply with California's Diesel Particulate Matter Control Measure for Municipality or Utility On-road Heavy-Duty Diesel Fueled Vehicles (Cal. Code of Regs., tit. 13, § 2022 et seq.). This regulation is different from the proposed Zero-Emission Airport Shuttle regulation in that it applies to a sector that is not covered under the proposed regulation and contains different requirements.

The proposed regulation will require Zero-Emission Airport Shuttles to be certified for sale in California. A rigorous certification process has been the foundation of CARB's emission standards. It ensures that vehicles meet applicable emission standards throughout their useful life. For the nascent zero-emission technology, excessive or premature deterioration of the emission control system is not a concern. However, other factors become more important. Transparency about system capabilities, warranty, and recall provisions are all critically important protections for the consumer. This is especially true when regulations are requiring their use as with the proposed regulation. The current certification process for ZEVs used in the airport shuttle sector are in the process of being revised.

CARB conducted separate rulemaking to consider the Proposed California Greenhouse Gas Emissions Standards for Medium- and Heavy-duty engines and Vehicles and the Proposed Amendments to the Tractor-Trailer GHG Regulation (CARB, Phase 2 Initial Statement of Reason and 15-day changes) and the Proposed Alternative Certification Requirements and Test Procedure for Heavy-duty Electric and Fuel-Cell Vehicles and Proposed Standards and Test Procedures for Zero-Emission Powertrains. These rulemakings were noticed but are not effective because it has not been approved by Office of Administrative Law and filed with the Secretary of State. Under Phase 2, heavy-duty electric and fuel cell vehicles may generate GHG credits through the 2027 MY, credits derived for such vehicles are multiplied by 4.5 and 5.5, respectively, when determining GHG fleet averages. Heavy-duty electric and fuel cell vehicles are considered to have no tailpipe emissions under Phase 2.

Proposed Alternative Certification Requirements and Test Procedures for Heavy-Duty Electric and Fuel-Cell Vehicles and Proposed Standards and Test Procedures for Zero-Emission Powertrains (ZEPCert) would build upon existing certification requirements set forth in California's Phase 2 regulation. The proposal would establish a more-robust, alternative certification pathway that manufacturers could use, at their own discretion, to certify their heavy-duty electric and fuel-cell vehicles and the zero-emission powertrains they use.

ZEPCert will help ensure that zero-emission powertrains, along with the heavy-duty vehicles they are designed for, are reliable in their intended applications. The measure is expected to help drive technology innovation and refinement, empower fleet decision-making by increasing consumer confidence in the technology, and provide data to inform future measures that accelerate the overall transition to the zero-emission technologies which California needs to meet its long-term air quality and climate goals. Model year 2026 and later heavy-duty zero-emission airport shuttles will be required to meet ZEPCert requirements to comply with the proposed regulation.

CARB staff carefully reviewed these current regulations in the development of the proposed regulation and determined that the proposed regulation is different in its application, different in the sectors covered, and will achieve additional emission reductions by removing all tailpipe emissions from airport shuttles, which were not previously prohibited.

The adoption of the proposed regulation will provide criteria pollutant, GHG, and other harmful exhaust emission reductions providing immediate air quality benefits to communities surrounding airports and reducing the impact of climate change.

## 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 regulation are presented below.

*Cost to any Local Agency or School District Requiring Reimbursement under section 17500 et seq.:*

Under Government Code sections 11346.5, subdivision (a)(5) and 11346.5, subdivision (a)(6), the Executive Officer has determined that the proposed regulation would not impose a mandate on any local agency or school district, but the regulations would create costs to local agencies and school districts, however these costs would not be reimbursable by the State under Government Code, title 2, division 4, part 7, (commencing with section 17500). The costs on airport operators are not reimbursable because they are voluntary and not mandated by the State because airport shuttle bus services are voluntary. The government jurisdictions that operate airports in general, and transit services in particular, are not obligated to provide these facilities or services. (*See Arcadia Unified School Dist. v. State Dept. of Ed.* (1992) 2 Cal.4th 251, 264 [school districts not obligated to provide transit services].) Costs of optional services are not mandated and are not subject to reimbursement. (State Administrative Manual § 6606; *Dept. of Finance v. Com. on State Mandates* (2003) 30 Cal.4th 727, 735; see also *Com. on State Mandates Test Claim No. 03-TC-01* (May 26, 2011), available at: https://www.csm.ca.gov/decisions/504.pdf.)

The proposed Zero-Emission Airport Shuttle regulation directly impacts local government entities that operate California's airports. The costs and cost-savings to these local agencies varies annually. Specific costs to each agency depend on the size of the fleets, the number of shuttles already in their fleets, and existing airport planning efforts that mitigate the need for shuttles. These airport efforts include increasing the walkable access to airport facilities, electric rail "people mover" projects, and improving connectivity with existing public transportation systems. Without additional funding support, upfront costs from purchasing zero-emission airport shuttles and improving or adding infrastructure would outweigh cost-savings in the early years of the regulation adoption. Over time, the cost savings in maintenance, fuels costs, credit values from Low Carbon Fuel Standard (LCFS) program, and the build out of infrastructure is estimated to result in in an overall cost-savings to the airports. Annual and Fiscal Year costs to local government entities are located in the Initial Statement of Reason (ISOR) Appendix C.

Local government agencies that operate airports will need to identify means of addressing the incremental cost differences of zero-emission airport shuttles in the early implementation years before the economies of scale and technology improvements substantially reduce the capital vehicle and infrastructure costs. The proposed regulation is structured to provide the opportunity for fleet owners to be eligible for grant funding, which could substantially reduce or eliminate the incremental cost of deploying zero-emission airport shuttles.

The State is committed to provide funding to help with the transition to zero-emission technologies. There are several funding sources that could offset the incremental costs (see the ISOR Chapter I, Section G). For example, on May 31, 2018, the California Public Utility Commission (CPUC) unanimously approved transportation electrification projects proposed by three major Investor Owner Utilities, with a total of $738 million including $236 million from Pacific Gas and Electric and $343 million from Southern California Edison on medium- and heavy-duty infrastructure, required under Senate Bill 350, chapter 547, statutes of 2015. This approval will reduce the infrastructure costs to airports in those utility service areas. In addition, on May 25, 2018, CARB approved allocations of Volkswagen Environmental Trust Funds that included up to $65 million for zero-emission shuttles. Funds from both of these programs are available to public and private fleet shuttle owners.

The proposed regulation would not impose additional costs on school districts.

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

The proposed regulation affects local government agencies that operate airports and is expected to impose additional non-discretionary costs from capital vehicle and infrastructure purchases as well as non-discretionary cost-savings resulting from operating the zero-emission airport shuttles. Annual and Fiscal Year costs and cost-savings to local government entities are located in the Appendix C of the ISOR. As previously discussed the impact depends on many factors including existing airport

planning efforts to reduce the need for shuttles and cost sharing opportunities (see ISOR Chapter I, Section G).

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

Airports may apply for federal grants administered through the Federal Aviation Administration (FAA) to purchases airport shuttles and corresponding infrastructure. Airports will remain eligible for this program until the final compliance date of the proposed regulation. No other impacts to federal funding to the state are anticipated due to the proposed regulation.

*Cost or Savings for State Agencies:*

Under Government Code sections 11346.5, subdivision (a)(6), the Executive Officer has concluded that the proposed regulation would create costs to a State agency in that it would result in costs to CARB due to the anticipated hiring of additional staff. This regulatory action would not result in savings to any State agency.

The proposed regulation is anticipated to require CARB hiring of two additional Air Pollution Specialists (APS) to support implementation and enforcement, starting in the 2020-2021 fiscal year. The cost for an APS position is $173,000 for the first year with an annual cost in subsequent years of $172,000. The hiring of those two requested positions would be spread out from 2020 to 2023. One APS is needed starting in FY 2020-2021 and the other APS is needed in FY 2022-2023. Funding for these positions is expected to come from the Motor Vehicle Account or other funding source.

The proposed regulation is not expected to have adverse impacts on other state agencies.

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

The Executive Officer has also made the initial determination that the proposed regulation will not have a significant effect on 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 regulation would not have a statewide adverse economic impact directly affecting businesses.

No significant impacts to the competitive advantages or disadvantages for businesses currently doing business in the state are anticipated. All businesses owning or operating fleets that service airports in California would be subject to the same proposed zero-emission vehicle requirements, regardless of in-state and out-of-state ownership status. The proposed requirements would not create any competitive disadvantage to businesses located in California.

Types of Businesses

The proposed regulation will apply to public and private fleet owners of medium- and heavy-duty vehicles that provide airport shuttle service to and around hub airports in California. Businesses impacted by the proposed regulation include hotels, off-airport parking companies, and other businesses which provide transportation between their business locations and California airports.

Compliance Requirements

Compliance requirements are previously discussed in the "Objective and Benefits" section beginning on page 4 of this Notice.

**Results of The Economic Impact Analysis/Assessment (Gov. Code, § 11346.5, subd. (a)(10)):**

**NON-MAJOR REGULATION: Statement of the Results of the Economic Impact Assessment (EIA):**

A detailed assessment of the economic impacts of the proposed regulation can be found in Chapter VIII, "Economic Impact Assessment," and in Appendix C of the ISOR.

The Creation or Elimination of Jobs within the State of California:

The Executive Officer has concluded that the proposed regulation would have an effect on the creation or elimination of jobs within the State of California. However, this impact is expected to be minimal. As described in Chapter VIII, "Economic Impact Assessment," of the ISOR, the overall impact of the proposed regulation is likely a cost savings to business. There are net costs in early years for initial zero-emission shuttle and infrastructure investments which could be passed on to the consumer or could result in a decrease in service or other cost saving measures. If a fleet decreased service then some jobs in the industry could be lost. However, since Appendix C of the ISOR shows costs could be passed to consumers with a small increase in price, it is anticipated that decrease in service will be minimal if any.

A small number of jobs could be created in industries associated with zero-emission shuttle manufacturing, conversion, maintenance, and support due to the increased demand for these technologies.

Businesses Creation, Elimination, and Expansion:

The Executive Officer has concluded that the proposed regulation would have a minimal impact on the creation or elimination of business within the State of California, the creation of new businesses or elimination of existing businesses within the State of California, or the expansion of businesses currently doing business within the State of

California. A detailed assessment of the proposed economic impacts of the proposed regulation can be found in Chapter VIII, "Economic Impact Assessment," of the ISOR.

Benefits to Health and Welfare

The adoption of the proposed regulation will remove harmful tailpipe emissions from airport shuttles providing cleaner air for airport travelers that include sensitive receptors (children and the elderly), communities surrounding airports, and reducing fleet operators' occupational exposure. Operation of zero-emission shuttles requires no use of petroleum fuels and will help California achieve the state's GHG reduction goals. GHG emission reductions result from the avoided fuel combustion and from mining and refining processes. GHG emissions can remain in the atmosphere for decades. Removal of GHG emissions will reduce the impacts of climate change on the state's environment.

In addition, the operation of zero-emission shuttles will provide a synergy that will help accelerate the transition to zero-emission technologies in other transportation sectors.

A summary of these benefits is provided, please refer to "Objectives and Benefits", under the Informative Digest of Proposed Action and Policy Statement Overview Pursuant to Government Code 11346.5(a)(3) discussion beginning on page 4 of this Notice. Benefits to worker safety and the state's environment are addressed on page 7 of this Notice.

**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 regulation 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. The proposed Zero-Emission Airport Shuttle regulation would impose additional costs and cost-savings on entities that own or operate airport shuttle fleets that serve California's airports. This includes private off-airport parking lots, hotels near airport that provide shuttle, and airport shuttle service companies that provide shuttle service for hotels. Anticipated costs from the proposed Zero-Emission Airport Shuttle regulation would include capital expenditure costs, such as purchase of zero-emission airport shuttles, capital infrastructure costs, electricity costs, and annual reporting costs. The cost-savings include maintenance, fuel costs, and credits from the LCFS program.

The costs and cost-savings to these entities vary annually. Specific costs to each entity depend on the size of the fleets and the number of zero-emission airport shuttles already in their fleets. Although businesses incur costs in every year, the investment in

zero-emission airport shuttles will result in net cost savings over time. Examples of costs for different business types and sizes as well as potential price impacts to customers are located in Appendix C of the ISOR.

Without additional funding support, upfront costs from purchasing ZEVs and improving or adding infrastructure would outweigh cost-savings in the early years of the regulation adoption. Private businesses that operate airport shuttle fleets will need to identify means of addressing the incremental cost differences in the early implementation years before the economies of scale and technology improvements substantially reduce the capital vehicle and infrastructure costs. The staff's proposal is structured to allow private and public fleet owners to be eligible for grant funding, which could substantially reduce, or eliminate, the incremental cost of deploying ZEVs.

The State is committed to provide funding to help with the transition to zero-emission technologies. There are several funding sources that could offset the incremental costs (see the Initial Statement of Reason (ISOR) Chapter I, Section G). In May 2018, action by the CPUC and CARB approved up to $803 million (see page 11 of this Notice under the Costs to Local Agency section for more details) that can be applied toward the incremental costs for public and private fleets.

**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 regulation would affect small businesses. The proposed Zero-Emission Airport Shuttle regulation would impose additional costs and cost-savings on small businesses that own or operate airport shuttle fleets that includes private off-airport parking lots, hotels near airport that provide shuttle, and airport shuttle service companies that provide shuttle service for hotels.

Anticipated costs from the proposed Zero-Emission Airport Shuttle regulation would include capital expenditure costs, such as purchase of zero-emission airport shuttles, capital infrastructure costs, electricity costs, and annual reporting costs. The cost-savings include maintenance, fuel costs, and credits from the LCFS program. Although small businesses incur costs in every year, the investment in zero-emission airport shuttles will result in net cost savings over time. A detailed assessment of the economic impacts of the proposed regulation on a small business as well as potential price impacts to customers can be found in Appendix C of the ISOR.

Cost sharing opportunities identified in the "Cost Impacts on Representative Private Persons or Businesses" section on page 14 of this Notice are also available to small businesses.

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

Before taking final action on the proposed regulation, 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 VIII of ISOR for these proposed alternatives. Staff has discussed several alternative concepts in the ISOR, including stricter compliance requirements, less stringent compliance requirements, small business, accelerated phase-in, a no phase-in, use of ultra-low NOx engines, and a performance standard alternative. The Board has not identified any reasonable alternatives that would lessen any adverse impact on small business.

## STATE IMPLEMENTATION PLAN REVISION

If adopted by the Board, CARB plans to submit the proposed regulation to the United States Environmental Protection Agency (U.S. EPA) for approval as a revision to the California State Implementation Plan (SIP) as 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 Zero-Emission Airport Shuttle Regulation, has prepared a joint draft environmental analysis (Draft EA), which analyzes the proposed Regulation in accordance with the requirements of its regulatory program certified by the Secretary of Natural Resources. (California Code of Regulation, title 17, sections 60006-60008; California Code of Regulation, title 14, section 15251, subdivision (d).) The Draft EA assesses the potential for significant adverse and beneficial environmental impacts associated with the proposed actions and provides a programmatic environmental analysis of the reasonably foreseeable compliance responses that could result from implementation of the proposed regulation.

The resource areas from the California Environmental Quality Act (CEQA) Guidelines Environmental Checklist were used as a framework for a programmatic environmental analysis of the direct, and reasonably foreseeable indirect, environmental impacts resulting from implementation of the proposed regulation. The Draft EA provides an analysis of both the beneficial and adverse impacts and feasible mitigation measures for the reasonably foreseeable compliance responses associated with the recommended amendments.

The Draft EA concluded implementation of the proposed regulation could result in the following short-term and long-term beneficial and adverse impacts:

- Beneficial impacts to energy demand, air quality, and greenhouse gases;

- Less than significant impacts, or no impacts, to energy, mineral resources, population employment, housing, public service, and recreation; and
- Potentially significant adverse impacts to aesthetics, agricultural and forest resources, short-term air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use planning, noise, mineral resources, transportation and traffic, and utilities and service systems.

The potentially significant and unavoidable adverse impacts are primarily related to short-term, construction-related activities. This explains why some resource areas are identified above as having both less-than-significant impacts and potentially significant impacts. Please refer to the Draft EA for further details.

The Draft EA is included as Appendix B to the ISOR and can be obtained from CARB's website at: http://www.arb.ca.gov/regact/2018/asb18/asb18.htm

Copies of the Draft EA may also be obtained from CARB's Public Information Office, 1001 I Street, First Floor, Environmental Services Center, Sacramento, California, 95814.

## 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 alterno 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 envié 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 regulation may be directed to the agency representative Katherine Garrison, Air Resources Engineer, Carl Moyer Off-Road Section, at (916) 322-1522 or (designated back-up contact) Anthony Poggi, Air Pollution Specialist, Alternatives Strategies Section, at (916) 324-9424.

## AVAILABILITY OF DOCUMENTS

CARB staff has prepared a Staff Report (Initial Statement of Reasons (ISOR)) for the proposed regulation, which includes a summary of the economic and environmental impacts of the proposal. The report is entitled: Proposed Zero-Emission Airport Shuttle 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, Air Resources Board, 1001 I Street, Visitors and Environmental Services Center, First Floor, Sacramento, California, 95814, on December 31, 2018.

Further, the agency representative to whom no substantive inquiries concerning the proposed administrative action may be directed is 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).

The public may request a copy of the modified regulatory text from CARB's Public Information Office, Air Resources Board, 1001 I Street, Visitors and Environmental Services Center, First Floor, Sacramento, California, 95814.

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 regulation, 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/asb19

CALIFORNIA AIR RESOURCES BOARD

Richard W. Corey
Executive Officer

Date: December 18, 2018

*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.*