

TITLE 13 and TITLE 17. CALIFORNIA AIR RESOURCES BOARD

NOTICE OF PUBLIC HEARING TO CONSIDER 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 (ZERO-EMISSION POWERTRAIN CERTIFICATION 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 Powertrain Certification Regulation.

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 95814

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 10 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: 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 California Health and Safety Code, sections 8501, 38505, 38510, 38560, 38580, 39010, 39500, 39600, 39601, 40000, 43013, 43018, 43100, 43101, 43102, 43104, 43105, 43106, 43107 and 43806. This action is proposed to implement, interpret, and make specific California Health and Safety Code, sections 38501, 38505, 38510, 38560, 38580, 39002, 39003, 39010, 39017, 39033, 39500, 39600, 39601, 39610, 39650, 39657, 39667, 39701, 40000, 43000, 43000.5, 43009, 43009.5, 43013, 43017, 43018, 43100, 43101, 43101.5, 43102, 43104, 43105, 43106, 43107, 43202, 43204, 43205, 43205.5, 43206, 43210, 43211, 43212, 43213 and 43806 and California Vehicle Code section 28114.

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

Sections Affected:

Proposed amendments to California Code of Regulations, title 13, section 1956.8, title 17, section 95663, and the proposed adoption of the following document incorporated by reference therein: "California Standards and Test Procedures for New 2021 and Subsequent Model Heavy-Duty Zero-Emission Powertrains," adopted [INSERT ADOPTION DATE]. Proposed amendments to the "California Greenhouse Gas Exhaust Emission Standards and Test Procedures for 2014 and Subsequent Model Heavy-Duty Vehicles," last amended [INSERT AMENDMENT DATE], incorporated by reference in California Code of Regulations, title 17, section 95663.

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

The following documents are incorporated by reference in the "California Standards and Test Procedures for New 2021 and Subsequent Model Heavy-Duty Zero-Emission Powertrains":

- Society of Automotive Engineers International (SAE) Standard J1798: "Recommended Practice for Performance Rating of Electric Vehicle Battery Modules," as revised on July 8, 2008. Copyrighted.
- Section 1037.801, Title 40, Code of Federal Regulations, as last amended by United States Environmental Protection Agency (U.S. EPA) on July 1, 2015

The following documents are incorporated by reference in the proposed amended test procedure document entitled "California Greenhouse Gas Exhaust Emission Standards and Test Procedures for 2014 and Subsequent Model Heavy-Duty Vehicles," adopted October 21, 2014, last amended [INSERT AMENDMENT DATE]:

- Section 86.1803-01, Title 40, Code of Federal Regulations, as last amended by United States Environmental Protection Agency (U.S. EPA) on July 1, 2011.
- SAE J2402: "Road Vehicles-Symbols for Controls, Indicators, and Tell-Tales," as last revised January 7, 2010.
- International Organization for Standardization (ISO) 2575: "Road Vehicles – Symbols for controls, indicators, and tell-tales," as revised on July 1, 2010. Copyrighted.

Background and Effect of the Proposed Regulatory Action:

While California has made dramatic progress to improve its air quality, the state must continue its transition to significantly cleaner transportation and freight movement technologies to achieve its long-term climate and public health goals, which include:

- Reducing greenhouse gas (GHG) emissions to 40 percent below 1990 levels by 2030, as directed in Senate Bill (SB) 32, the California Global Warming Solutions Act¹;
- Reducing GHG emissions from the transportation sector to 80 percent below 1990 levels by 2050, as directed in Governor Brown's Executive Order B-16-2012²;
- Deploying 1.5 million zero-emission vehicles by 2025, as directed in Governor Brown's Executive Order B-16-2012;
- Deploying 5 million zero-emission vehicles by 2030, as directed in Governor Brown's Executive Order B-48-18³;
- Deploying 100,000 freight vehicles and equipment capable of zero-emission operation by 2030, as set forth in the California Sustainable Freight Action Plan⁴; and
- Achieving carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter, as directed in Governor Brown's Executive Order B-55-18⁵.

¹ Chap. 249, Stats. 2016 (Pavley) California HSC § 38566.

² Governor Brown's Executive Order B-16-2012: <http://www.gov.ca.gov/news.php?id=17472>, accessed on September 12, 2018.

³ Governor Brown Takes Action to Increase Zero-Emission Vehicles, Fund New Climate Investments: <https://www.gov.ca.gov/2018/01/26/governor-brown-takes-action-to-increase-zero-emission-vehicles-fund-new-climate-investments/>, accessed on September 12, 2018.

⁴ Sustainable Freight Action Plan: http://www.casustainablefreight.org/documents/PlanElements/FINAL_07272016.pdf, July 2016.

⁵ Governor Brown's Executive Order B-55-18: <https://www.gov.ca.gov/wp-content/uploads/2018/09/9.10.18-Executive-Order.pdf>, September 2018.

Actions to deploy zero-emission technology will be essential to meeting these goals. Accordingly, CARB's 2016 State Strategy for the State Implementation Plan⁶, 2016 Mobile Source Strategy⁷, and the California Sustainable Freight Action Plan identify several measures intended to accelerate deployment of zero-emission technology in the mobile source sector. For heavy-duty on-road vehicles in particular, applications targeted by these measures include airport shuttle buses, transit buses, and delivery trucks. In addition, new zero-emission priorities have emerged since the publication of the aforementioned documents, and drayage trucks have also been identified for near-term deployment to zero-emission technology.

Staff believes the vehicles that would be targeted by these measures operate in applications that are well-suited, both technically and economically, for the first launch of zero-emission technologies in the heavy-duty sector. In fact, the proposal for the Innovative Clean Transit Regulation was presented to the Board at its September 2018 hearing and the proposal for the Zero-Emission Airport Shuttle Regulation will be considered at the same February 2019 hearing as this proposed regulatory action.

That said, the heavy-duty zero-emission industry is still relatively new, and thus is subject to many of the issues associated with any emerging market. For example, there is still substantial variability in vehicle quality and support; purchasers are still relatively unfamiliar with zero-emission technology and its operational impacts; and there is limited historical information available by which to judge manufacturers. Given time, staff believes the market could eventually resolve these issues on its own. However, considering California's near-term zero-emission goals, it's necessary to take actions today to help provide additional support to the market as the state begins to roll out its suite of heavy-duty zero-emission measures.

In order to provide this needed support, the proposed regulatory action would build upon existing certification requirements set forth in California's Heavy-Duty Phase 2 Greenhouse Gas Standards⁸ for heavy-duty electric and fuel-cell vehicles and establish an alternative certification procedure that helps ensure such vehicles are well-supported once deployed and consistent and reliable information is available to fleets when making purchase decisions. In addition, the proposed regulatory action would also establish new standards with certification requirements for zero-emission powertrains installed in heavy-duty electric and fuel-cell vehicles that certify to the proposed alternative procedure.

⁶ CARB; Proposed 2016 State Strategy for the State Implementation Plan; May 17, 2016; <http://www.arb.ca.gov/planning/sip/2016sip/2016statesip.pdf>.

⁷ CARB; 2016 Mobile Source Strategy, May 2016; <http://www.arb.ca.gov/planning/sip/2016sip/2016mobsrc.htm>.

⁸ CARB, Phase 2 and Tractor-Trailer Amendments Regulation, <https://www.arb.ca.gov/regact/2018/phase2/phase2.htm>, accessed September 25, 2018.

Specifically, staff's proposal would include the following:

New Alternative Certification Pathway for Heavy-Duty Electric and Fuel-Cell Vehicles

Staff's proposal would establish an alternative certification pathway for heavy-duty electric and fuel-cell vehicles⁹ that builds upon existing heavy-duty Phase 2 requirements. The proposed pathway would be available beginning with model year 2021. While the proposed Zero-Emission Powertrain Certification Regulation (ZEP Cert) does not establish a mandatory certification process, it creates a framework that would support both new, "cutting-edge" technologies (i.e., early along the commercialization arc) as well as those that have demonstrated commercial viability. Future zero-emission measures could incorporate the alternative certification pathway as a requirement. Until then, manufacturers, at their own discretion, could certify a heavy-duty electric or fuel-cell vehicle to either the existing Phase 2 requirements or the proposed alternative pathway requirements.

a. Required Use of a Certified Zero-Emission Powertrain

In order to certify a vehicle family in accordance with the proposed alternative vehicle certification pathway, the vehicles within said family would be required to use a zero-emission powertrain that is certified in accordance with the zero-emission powertrain requirements (further described below) that would be established by staff's proposal. While existing heavy-duty Phase 2 requirements do not include a mechanism to certify a zero-emission powertrain, staff is proposing to establish a separate zero-emission powertrain certification process as part of the proposed regulation to better accommodate the multi-stage manufacturing process of heavy-duty vehicles today.

b. Labeling

The proposed ZEP Cert provisions would require vehicle manufacturers to include a compliance statement on their Phase 2 vehicle labels indicating if the proposed certification pathway was used and would enable these vehicles to be identified in the field.

c. Purchase Guidance

Manufacturers would be required to provide purchasers with a prescribed guidance statement identifying considerations that should be made when choosing a heavy-duty electric or fuel-cell vehicle. The list of considerations would include range, top speed, maximum grade, and impacts of vehicle load and battery degradation on performance.

⁹ The proposal would also apply to medium-duty electric and fuel-cell vehicles (from 8,501 through 14,000 pounds gross vehicle weight rating) certified as incomplete vehicles.

The manufacturer would also be required to provide a detailed description to the purchaser of its vehicle diagnosis and repair process, and the implications of said process on repair timeframes and potential vehicle transportation costs.

While providing a battery-capacity warranty would not be required, manufacturers would be required to ensure that whatever coverage is provided, even if no coverage, it is explicitly disclosed to the purchaser at the time of sale.

Given that zero-emission technologies are still unfamiliar to many of the fleets who will be considering such technologies in the near-term, these proposed provisions would help ensure consumers consider the appropriate parameters when selecting a particular vehicle model. The intent of these provisions is to increase the likelihood that a fleet chooses a heavy-duty electric or fuel-cell vehicle that fits its operational needs.

d. Repairability Provisions

Vehicle manufacturers would be required to make available its internal service manual as well as any required service tools to third-party repair facilities at reasonable cost. The manufacturer could require special training in order to gain access to the service manual and tools.

The intent of these provisions is to help increase the efficiency of the repair network to reduce repair timeframes and potential vehicle transportation costs.

e. On-Board Vehicle Information

Staff's proposal would require that certain vehicle information be accessible on-board to the fleet owner, such as *battery energy used per trip* and *remaining usable battery capacity*. These parameters would help fleet owners determine the efficiency of a particular vehicle or driver as well as provide the ability to assess the condition of a powertrain, which would be useful during a resale transaction, for example.

f. Fuel-Fired Heaters

Specific emission and operational requirements would be established for fuel-fired heaters used on heavy-duty electric and fuel-cell vehicles. Specifically, fuel-fired heaters would be required to meet the Low Emission Vehicle II program's Ultra Low Emission Vehicle standards¹⁰ and demonstrate zero-evaporative emissions under any and all possible operational modes and conditions. The proposal would align fuel-fired heater requirements with those set forth in the LEV II program and add clarity to the existing Phase 2 certification procedures.

¹⁰ Title 13, California Code of Regulations, Section 1961.1, accessed October 2018.

New Emission Standards for Zero-Emission Powertrains

Staff's proposal would establish new zero-emission greenhouse gas and criteria pollutant standards and certification requirements for 2021 model year and subsequent zero-emission powertrains. Certifying to the zero-emission powertrain standards would be voluntary, except for those powertrains installed in heavy-duty electric and fuel-cell vehicles certified in accordance with the alternative certification pathway that would be established by staff's proposal.

The "powertrain" would include components, such as the energy storage system, the electric motor, and on-board charger, which are responsible for the storage, delivery, and conversion of energy within the vehicle to mechanical power.

a. Standardized Battery Test for Battery-Based Powertrains

Currently, there is no one procedure all manufacturers use to determine the usable battery capacity. Therefore, while battery-capacity information is widely cited (e.g., in vehicle marketing materials), the information cannot be reliably used to compare product offerings.

Staff is proposing to establish a standardized battery-capacity test for certification under the alternative certification pathway. Specifically, the proposed regulation would require the use of the constant current battery depletion test set forth in the SAE Standard J1798, "Recommended Practice for Performance Rating of Electric Vehicle Battery Modules," or another test procedure that is substantially similar. While this test would not provide information on actual vehicle range, it would provide a useful reference point by which different battery-based powertrains could be compared.

Fuel-cell powertrains without plug-in capabilities, would not be subject to this requirement.

b. Powertrain Monitoring and Diagnostic Strategy Information

Staff's proposal would require powertrain manufacturers to describe the monitoring and diagnostic strategies they use. The proposal would not however, dictate how a manufacturer *should* monitor a powertrain or diagnoses powertrain problems. The information provided under these provisions would help staff understand potential causes of, and solutions to, problems experienced by heavy-duty electric and fuel-cell vehicles, which could help inform the development of future zero-emission measures. Staff could also use this information to validate the effectiveness of zero-emission powertrain diagnostics systems should in-use problems arise.

c. Repairability Provisions

The powertrain manufacturer would be required to make available its internal service manual as well as any required service tools to third-party repair facilities at reasonable

cost. The manufacturer could require special training in order to gain access to the service manual and tools.

This requirement would help facilitate the expansion of the repair network for such powertrains, thereby reducing repair timeframes and potential vehicle transportation costs.

d. Standardized Connector and Compatibility with Automotive Scan Tools

The proposal would establish the requirement to use a diagnostic connector that meets the requirements set forth in California's On-Board Diagnostics regulations¹¹. The proposal would also require that malfunction codes and certain powertrain parameters to be readable by a generic automotive scan tool.

This requirement would help facilitate the expansion of the repair network for such vehicles and powertrains, thereby reducing repair timeframes and potential vehicle transportation costs.

e. Labeling

The proposed labeling provisions would require powertrain manufacturers to affix a label on each powertrain assembly that includes the following information:

- Manufacturer Name;
- Compliance Statement, indicating that the zero-emission powertrain has been certified to the proposed requirements;
- Certification Family Name;
- Model Code, identifying the specific configuration; and
- Build Date.

The proposed labeling requirements would allow consumers to identify powertrains certified to the proposed alternative pathway requirements. In addition, the proposed labeling requirements would also enable these powertrains to be identified in the field, either for compliance or research purposes.

Warranty and Recall

Each powertrain certified in accordance with the proposed alternative pathway would be required to be covered, at a minimum, by a 3-year, 50,000 mile warranty against workmanship and defects. In addition, other provisions currently applicable to the warranty of emission-control components, such as recall provisions, would apply.

These provisions would help ensure heavy-duty electric and fuel-cell vehicles are well supported once deployed. By ensuring such vehicles are adequately repaired, or removed from commerce, if and when problems arise, potential "poisoning" of the market could be prevented.

¹¹ Title 13, California Code of Regulations, Section 1971.1, accessed October 2018.

Other Changes

CARB may also consider other changes to the sections affected, as listed on page 2 of this notice, during the course of this rulemaking process.

Objectives and Benefits of the Proposed Regulatory Action:

In its continuing effort to combat poor air quality and climate change, California has set aggressive near- and long-term zero-emission goals. To help achieve those goals, staff has identified several mobile source measures to help accelerate the transition to zero-emission technology. Among those measures are ones that specifically target heavy-duty trucks and buses. While the applications targeted by these measures have been determined to be well-suited for zero-emission technology today, both technically and economically, the success of those measures will depend on whether the actual heavy-duty electric and fuel-cell vehicles deployed are as effective as the internal combustion vehicles they replace. The proposed regulation is expected to increase the likelihood that such vehicles are successful in their intended applications through certification requirements that help ensure heavy-duty electric and fuel-cell vehicles are well supported once deployed and fleet purchasers are provided with consistent and reliable information when making purchase decisions.

While the certification pathway that would be established by the proposed regulation would be optional, staff expects it to be incorporated as a requirement for other future zero-emission measures, such as the Zero-Emission Airport Shuttle Regulation being considered concurrently at the same February 2019 hearing. In addition, manufacturers could, at their discretion, choose to certify to the certification pathway even if not required, in order to gain a potential market advantage by “proving” their technology over a more-stringent certification process. Therefore, the proposed regulation could encourage the development of more-robust heavy-duty electric and fuel cell vehicles, and to the extent that certified products experience greater utilization (due either to increased vehicle deployments or more-optimal vehicle performance), the proposed regulation could indirectly benefit California, in terms of both the advancement of the zero-emission market as well as the potential displacement of emission-producing internal combustion engines.

Furthermore, disadvantaged communities are expected to benefit from the transition of the heavy-duty sector to zero-emission technologies. Most, if not all, of CARB’s planned heavy-duty zero emission measures are expected to have the greatest emission impact in disadvantaged communities because these communities are disproportionately impacted by heavy-duty truck traffic. While benefits would not be directly attributable, the proposed regulation is expected to benefit disadvantaged communities to the extent that it would help ensure the success of CARB’s other zero-emission efforts.

There are no expected benefits to public safety or worker safety as a result of this rulemaking.

Comparable Federal Regulations:

Staff's proposal would amend California's Phase 2 regulations, which largely aligns with U.S. EPA and the National Highway Traffic Safety Administration's Phase 2 regulations (Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles – Phase 2, 81 Federal Register 73478-74274, (October 25, 2016)). Specifically, staff's proposal would establish an optional certification pathway for heavy-duty electric and fuel-cell vehicles that would contain enhanced (i.e., more-stringent) requirements.

In addition, the proposed regulation would establish new standards and certification procedures for zero-emission powertrains. There are currently no federal emission regulations that apply to zero-emission powertrains.

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.

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).

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

None. The Executive Officer has made the determination that the proposed regulatory proposal would create costs to local agencies and school districts but only if manufacturers choose to certify their vehicles through the alternative certification pathway and pass on costs to consumers, and local government agencies or school districts choose to purchase such certified vehicles. However, those voluntarily incurred costs would not require reimbursement from the State.

Cost or Savings for State Agencies:

Staff estimates three CARB staff would be needed starting in fiscal year 2020/2021 to handle the additional administrative workload: one Air Resources Engineer, one Air

Pollution Specialist, and one Air Resources Technician. These additional personnel would be responsible for reviewing technical documents and determining vehicle or powertrain compliance. Further details are provided in the Staff Report: Initial Statement of Reasons (ISOR).

The Executive Officer has made the determination that the proposed regulatory actions would not create cost or savings to state agencies other than the additional CARB staffing costs described above.

Other Non-Discretionary Costs or Savings on Local Agencies:

The Executive Officer has made the determination that the proposed regulatory actions would not create non-discretionary costs or savings to local agencies.

Cost or Savings in Federal Funding to the State:

The Executive Officer has made the determination that the proposed regulatory actions would not create costs or savings 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.

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.

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

A detailed assessment of the economic impacts of the proposed regulatory action can be found in Section IX of the ISOR.

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

Although the certification pathway that would be established by the proposed regulatory action would be optional, an Economic Impact Assessment was prepared.

Effect on Jobs/Businesses:

The Executive Officer has determined that the proposed regulatory action would not directly affect the creation or elimination of jobs 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 economic impacts of the proposed regulatory action can be found in the Economic Impact Analysis in the ISOR.

Benefits of the Proposed Regulation:

The objective of the proposed regulatory action is to support future zero-emission measures by helping ensure heavy-duty electric and fuel-cell vehicles certified to the proposed requirements are well supported once deployed and fleets are better informed when making purchase decisions.

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 on page 8.

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. No manufacturer would be required to participate and only those who have determined it would be in the best financial interest of the company would be expected to do so. If no manufacturers participate, the proposed regulatory action would have no cost; if all manufacturers (from 16 in 2021 to 24 in 2025) choose to participate, then incurred costs would average approximately \$86,360 annually from 2021 through 2025. Staff estimates that approximately 600 vehicles would be produced by these manufacturers within that timeframe at an average incremental cost of \$720 per vehicle, which would likely be passed on to the purchaser. However, if a purchaser (whether a private person or business) chooses to purchase such a vehicle, it would likely be because it has been determined it would be in the best financial interest of the purchaser.

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

The Executive Officer has also determined under California Code of Regulations, title 1, section 4, that the proposed regulatory action would affect small businesses. While there would be costs associated with participation, participation would be optional. Therefore, if a small business chooses to participate, it would be because the business has determined it would be in its best financial interest. The same could be stated for small business fleets that choose to purchase vehicles certified in accordance with the proposed provisions.

Alternatives Statement (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.

ENVIRONMENTAL ANALYSIS

CARB, as the lead agency for the proposed regulation, prepared a Draft Environmental Analysis (EA) 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 provides a single coordinated programmatic environmental analysis of an illustrative, reasonably foreseeable compliance scenario that could result from implementation of the proposed ZEP Cert as well as the proposed Zero-Emission Airport Shuttle Regulation. The proposed ZEP Cert and Zero-Emission Airport Shuttle Regulations have two separate notices and staff reports and will be considered by the Board in separate proceedings, but are connected actions. This approach is consistent with California Environmental Quality Act (CEQA's) requirement that an agency consider the whole of an action when it assesses a project's environmental effects, even if the project consists of separate approvals (Cal. Code Regs., tit. 14, § 15378(a)).

The resource areas from the 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 amendments to the Cap-and-Trade 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 proposed amendments.

Because the proposed warranty and service requirements in ZEP Cert would not result in an increase in construction of new facilities and because the testing requirements are functionally similar to tests that are common industry practice and would not require modifications to existing test facilities, the Draft EA determined that the reasonably foreseeable compliance responses associated with the proposed ZEP Cert would not result in adverse impacts to any of the environmental resource areas.

However, the Draft EA concluded, under a conservative approach, that implementation of the proposed Zero-Emission Airport Shuttle Regulation could result in the following beneficial and adverse impacts: beneficial impacts to: air quality (long term), energy demand, and greenhouse gases; less than significant, or no impacts, to: air quality (odors), energy, hazards and hazardous materials, hydrology and water quality, land use planning, mineral resources, noise, population employment, housing, public service, recreation, and transportation and traffic; and potentially significant and unavoidable adverse impacts to aesthetics, agricultural and forest resources, air quality (short term), biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use planning, noise, transportation and traffic, and utilities and service systems.

The Draft EA is included as Appendix B to the ISOR and can be obtained from CARB's website at:

<https://ww2.arb.ca.gov/rulemaking/2019/zero-emission-powertrain-certification>

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 David Eiges, Air Resources Engineer, Advanced Emission Control Strategies Section, (626) 575-6602 or (designated back-up contact) David Chen, Manager, Advanced Emission Control Strategies Section, at (626) 350-6579.

AVAILABILITY OF DOCUMENTS

CARB staff has prepared an ISOR for the proposed regulatory action, which includes a summary of the economic and environmental impacts of the proposal. The report is entitled: "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."

Copies of the ISOR and the full text of the proposed regulatory language, in underline and strikeout format to allow for comparison with the existing regulations (if applicable), 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 December 31, 2018.

Further, the agency representative to whom nonsubstantive inquiries concerning the proposed administrative action may be directed is Chris Hopkins, Regulations Coordinator, at (916) 445-9564. 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.

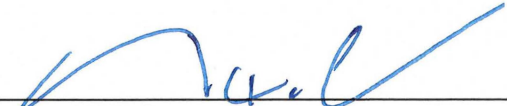
FINAL STATEMENT OF REASONS AVAILABILITY

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/zero-emission-powertrain-certification>

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.