State of California
Air Resources Board

Amendments to the Advanced Clean Trucks Regulation and the Zero-Emission Powertrain Certification Test Procedure

Resolution 25-6

July 24, 2025

Agenda Item No.: 25-5-1

Whereas, sections 39600 and 39601 of the Health and Safety Code authorize the California Air Resources Board (CARB or Board) to adopt standards, rules and regulations, and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

Whereas, section 39000 of the Health and Safety Code declares that the people of the State of California have a primary interest in the quality of the physical environment in which they live, and that this physical environment is being degraded by the waste and refuse of civilization polluting the atmosphere, thereby creating a situation which is detrimental to the health, safety, welfare, and sense of well-being of the people of California;

Whereas, section 39003 of the Health and Safety Code charges the Board with the responsibility for systematically attacking the serious air pollution problem caused by motor vehicles;

Whereas, sections 39500 and 40000 of the Health and Safety Code designate CARB as the agency responsible for control of emissions from motor vehicles;

Whereas, in section 39650 of the Health and Safety Code, the Legislature declares that it is the public policy of the state that emissions of toxic air contaminants should be controlled to levels which prevent harm to the public health;

Whereas, sections 39655, 39658, and 39659 of the Health and Safety Code authorizes the Board to establish airborne toxic control measures for toxic air contaminants;

Whereas, section 39667 of the Health and Safety Code authorizes the Board to regulate emissions of toxic air contaminants from vehicular sources;

Whereas, section 43000 of the Health and Safety Code declares that dependence on petroleum based fuels in motor vehicles not only contributes to substantial degradation of air quality and risk to public health, but also impedes the state's progress toward petroleum use reduction, and that the State has a responsibility to establish uniform procedures applicable to all motor vehicles for compliance with vehicle emissions standards which control and eliminate emissions of air pollutants from motor vehicles, which is the primary cause of air pollution in many parts of the state;

Whereas, in section 43000.5 of the Health and Safety Code, the Legislature declares that the burden for achieving needed reductions in vehicle emissions should be distributed equitably

among various classes of vehicles, and the Board should take immediate action to implement both short- and long-range programs of across-the board reductions in vehicle emissions and smoke;

Whereas, sections 43013, 43100, 43101, 43102, and 43104, and 43806 of the Health and Safety Code authorize the Board to adopt emission standards, in-use performance standards, and test procedures to control air pollution caused by motor vehicles;

Whereas, section 43018 of the Health and Safety Code authorizes the Board to achieve the maximum degree of emission reduction possible from vehicular and other mobile sources in order to accomplish the attainment of the state standards for ambient air quality at the earliest practicable date;

Whereas, the Legislature has enacted the California Global Warming Solutions Act of 2006 (Assembly Bill 32 (AB 32); Stats 2006, chapter 488, Health and Safety Code section 38500 et seq.), which declares that global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California, and requires a comprehensive multi-year program to reduce California's greenhouse gas (GHG) emissions to 1990 levels by 2020, and to maintain the emission levels and continue reductions thereafter;

Whereas, AB 32 added section 38501 to the Health and Safety Code, which expresses the Legislature's findings that global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California, and the Legislature's intent that CARB coordinate with State agencies and consult with the environmental justice community, industry sectors, business groups, academic institutions, environmental organizations, and other stakeholders in implementing AB 32, and design emissions reduction measures to meet the statewide emissions limits for GHGs in a manner that minimizes costs and maximizes benefits for California's economy, maximizes additional environmental and economic co-benefits for California, and complements the State's efforts to improve air quality;

Whereas, section 38510 of the Health and Safety Code designates CARB as the State agency charged with monitoring and regulating sources of GHG emissions that cause global warming in order to reduce such emissions, and to monitor compliance with any rules or regulations adopted by CARB pursuant to Division 25.5 of the Health and Safety Code;

Whereas, section 38505 of the Health and Safety Code defines "greenhouse gas" (GHG) or "greenhouse gases" for purposes of Division 25.5 of the Health and Safety Code as including all of the following gases: carbon dioxide (CO_2), methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride;

Whereas, section 38560 of the Health and Safety Code directs the Board to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG emission reductions from sources or categories of sources;

Whereas, Senate Bill 32, statutes of 2016, chapter 249 (SB 32), was signed into law to expand upon the California Global Warming Solutions Act of 2006 to reduce GHG emissions to 40 percent below the 1990 level by 2030;

Whereas, section 38566 of the Health and Safety Code directs the Board to ensure that in adopting rules and regulations to achieve the maximum technologically feasible and cost effective GHG emissions reductions authorized by Division 25.5 of the Health and Safety Code that statewide greenhouse gas emissions are reduced to at least 40 percent below the statewide GHG emissions limit no later than December 31, 2030;

Whereas, in recognition of the devastating impacts of climate change emissions on California, Executive Order S-3-05 established the following GHG emission targets:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and
- By 2050, reduce GHG emission 80 percent below 1990 levels;

Whereas, Executive Order B-16-12 reaffirmed a 2050 GHG emission reduction target for the transportation sector of 80 percent below 1990 levels;

Whereas, Executive Order B-30-15 established a 2030 GHG emission reduction target of 40 percent below 1990 levels, in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050;

Whereas, Executive Order B-48-18, established a goal of at least 5 million zero-emission vehicles on California roads by 2030;

Whereas, Executive Order B-55-15 established a new statewide goal to achieve carbon neutrality as soon as possible, and no later than 2045, and maintain net negative emissions thereafter;

Whereas, Governor Gavin Newsom in Executive Order N-19-19 directed CARB to consider strengthening existing or adopting new regulations to achieve the necessary GHG reductions from within the transportation sector;

Whereas, Executive Order N-79-20 established a goal that, in pertinent part, 100 percent of medium- and heavy-duty vehicles in the State be zero-emission by 2045 for all operations where feasible, and that 100 percent of drayage trucks be zero-emission by 2035;

Whereas, CARB's 2016 Mobile Source Strategy and 2020 Mobile Source Strategy identify several potential technology advancing measures needed to achieve California's air quality and climate goals, including measures to accelerate the deployment of zero-emission vehicles in last-mile delivery applications;

Whereas, the 2016 Sustainable Freight Action Plan directed state agencies' actions to accelerate use of clean vehicle and equipment technologies and fuels for freight through targeted introduction of zero and near-zero emission technologies;

Whereas, in March 2017, the Board adopted the 2016 State Strategy for the State Implementation Plan (2016 State SIP Strategy), which identifies the deployment of zero-emission transportation as a necessary component for California to achieve established near- and long-term air quality targets;

Whereas, in December 2017, the Board adopted California's 2017 Climate Change Scoping Plan, which recommends transition to zero-emission vehicles in the transportation sector as a measure to meet the State's GHG emissions and air quality goals and enable long-term de-carbonization of the transportation sector;

Whereas, in September 2022, the Board adopted the 2022 State Strategy for the State Implementation Plan (2022 State SIP Strategy), which again identifies the deployment of zero-emission transportation as a necessary component for California to achieve established near and long- term air quality targets;

Whereas, Senate Bill 350 (Statutes of 2015, Chapter 547), directed the California Public Utilities Commission to take actions to support widespread transportation electrification;

Whereas, the California Public Utilities Commission unanimously approved three large-scale medium- and heavy-duty transportation electrification programs to install infrastructure needed to support medium and heavy-duty electric vehicles operated by fleets. Pacific Gas and Electric, Southern California Edison, and San Diego Gas and Electric have been authorized to spend $236 million, $343 million, and $107 million, respectively, over a five-year period;

Whereas, the Board adopted in 2009 the Low Carbon Fuel Standard regulation, followed by multiple amendments, which provides an opportunity for commercial fleets to generate credits for dispensing electricity or hydrogen, with a low carbon intensity, into zero-emission vehicles. The credit value can offset some or all of the fuel cost and improves the total cost of ownership for zero-emission vehicles while stimulating the low-carbon fuel market;

Whereas, dozens of truck and bus manufacturers exclusively sell zero-emission trucks and buses, and more than 260 medium- and heavy-duty ZEVs have been certified for sale in California;

Whereas, CARB has transmitted the 2016 and 2022 State SIP Strategies to U.S. Environmental Protection Agency (U.S. EPA) for inclusion in the California SIP;

Whereas, the 2016 and 2022 State SIP Strategies were developed to provide the emission reductions necessary to meet the national air quality standards throughout the State;

Whereas, the 2016 State SIP Strategy includes a commitment to develop and bring to the Board for consideration a measure entitled, "Last Mile Delivery" to achieve oxides of nitrogen (NOx) emission reductions throughout the State;

Whereas, the Advanced Clean Trucks (ACT) regulation fulfills the State commitment to propose the Last Mile Delivery measure for Board consideration and provides emission reductions toward the State's aggregate emission reduction commitment;

Whereas, CARB adopted the ACT regulation on January 26, 2021, which became effective under State law on March 15, 2021, and which requires manufacturers that sell Class 2b–8 complete or incomplete vehicles to sell medium- and heavy-duty zero emission vehicles (ZEVs) as an increasing percentage of their annual California sales from 2024 to 2035. By 2035, ZEV sales need to be 55 percent of Class 2b–3 truck sales, 75 percent of Class 4–8 straight truck sales, and 40 percent of truck tractor sales;

Whereas, CARB reached an agreement (the Clean Truck Partnership) with the nation’s leading truck manufacturers and the Truck and Engine Manufacturers Association in July 2023, in which CARB committed to, in collaboration with the regulated manufacturers and the Section 177 states, develop and propose to the Board a pooling concept that permits manufacturers to transfer surplus ZEV and near-zero emission vehicle (NZEV) credits generated in one state that has adopted the ACT regulation to assist in meeting compliance obligations in another state;

Whereas, CARB adopted Alternative Certification Requirements and Test Procedures for Heavy-Duty Electric and Fuel-Cell Vehicles and Standards and Test Procedures for Zero-Emission Powertrains (ZEP Certification test procedures) on June 27, 2019, which became effective under State law on April 1, 2020;

Whereas, U.S. EPA granted a Clean Air Act waiver of preemption for the ACT regulation and ZEP Certification test procedures on April 6, 2023;

Whereas, CARB adopted amendments to the ACT regulation and ZEP Certification test procedures on October 24, 2024, which became effective under State law on March 19, 2025;

Whereas, the ZEP Certification test procedures establish certification requirements for 2021 and subsequent model year battery-electric and hydrogen fuel-cell powertrains intended for use in heavy-duty vehicles and incomplete medium-duty vehicles;

Whereas, manufacturers certifying heavy-duty and incomplete medium-duty vehicles have requested that CARB staff allow them to use a communication protocol allowed for light-duty vehicles under the ZEP Certification test procedures;

Whereas, on May 27, 2025, CARB released to the public the Initial Statement of Reasons (ISOR) for the Proposed Amendments to the ACT regulation set forth in Appendix A-1 of the ISOR;

Whereas, the ISOR presents, among other things, the rationale and basis for the Proposed Amendments, identifying the data, reports, and information relied upon for these Proposed Amendments;

Whereas, the ISOR and proposed regulatory language and other required documents were made available to the public for comment for at least 45 days before the public hearing to consider the proposed regulatory action;

Whereas, the notice released to the public on May 27, 2025, stated that, if adopted by CARB, CARB plans to submit the proposed regulatory action to the U.S. EPA for approval as a revision to the SIP required by the federal Clean Air Act;

Whereas, CARB's regulatory program that involves the adoption, approval, amendment, or repeal of standards, rules, regulations, or plans has been certified by the Secretary for Natural Resources under Public Resources Code section 21080.5 of the California Environmental Quality Act (CEQA; California Code of Regulations, title 14, section 15251(d)), and CARB conducts its CEQA review according to this certified program (California Code of Regulations, title 17, sections 60000-60007);

Whereas, in accordance with CARB's certified regulatory program, and the policy and substantive requirements of CEQA, CARB prepared an environmental analysis as part of Chapter VI of the ISOR that serves as an addendum-equivalent to the Final Environmental Analysis prepared for the Advanced Clean Trucks Regulation (2020 EA) certified by the Board in Resolution 20-19;

Whereas, as explained in the addendum-equivalent, no additional environmental review is required because the record evidence shows that the Proposed Amendments will not result in new significant adverse environmental impacts or a substantial increase in severity of previously identified significant adverse impacts, as described in the ISOR;

Whereas, the Board has considered the 2020 EA and the addendum-equivalent prepared thereto;

Whereas, a public hearing and other administrative proceedings have been held according to the provisions of Chapter 3.5 (commencing with section 11340), part 1, division 3, title 2 of the Government Code; and

Whereas, in consideration of the ISOR, written comments, and public testimony, the Board finds that:

Additional flexibility is needed to support manufacturers in the distribution of ZEVs and subsequently meeting the requirements of the ACT regulation.

Technical administrative changes are necessary for the implementation and enforcement of the ACT regulation.

Decreasing the minimum all-electric range threshold from 75 miles to 45 miles for NZEVs starting with the 2030 model year necessarily considers challenges in larger NZEVs meeting a higher threshold.

The reporting requirements applicable to manufacturers in the Proposed Amendments are necessary for the health, safety, and welfare of the people of the State.

Permitting the use of a communication protocol explicitly allowed for light-duty vehicles under the ZEP Certification test procedures is necessary to increase flexibility to manufacturers certifying heavy-duty and incomplete medium-duty vehicles.

The Proposed Amendments are necessary, appropriate, technologically feasible, and cost-effective.

The Proposed Amendments are not projected to adversely impact the emissions benefits of the initially adopted ACT regulation.

The Proposed Amendments are covered by the addendum-equivalent, as described in Chapter VI of the Staff Report, prepared to comply with CEQA, and no additional environmental review, or revisions to the prior EA, are required because substantial evidence in the record shows there are no changes that will result in new significant adverse environmental impacts or a substantial increase in severity of previously identified significant adverse impacts.

The Proposed Amendments are necessary for meeting the State's air quality goals and requirements to reduce NOx and particulate matter emissions from on-road heavy-duty vehicles as prescribed by the 2016 and 2022 State SIP Strategies.

The Proposed Amendments are necessary for meeting the State's climate goals by reducing GHG emissions as prescribed by legislation and several California Climate Executive Orders.

The Proposed Amendments will not have a significant statewide adverse economic impact that would directly affect businesses, including the ability of California businesses to compete with businesses in other states, or on represented private persons.

No alternative considered to date, 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 amendments have been proposed, would be as effective and less burdensome to affected private persons than Proposed Amendments, or would be more cost-effective to affected private persons and equally effective in implementing the statutory policy or other provision of law of the Proposed Amendments.

The Proposed Amendments are within the scope of CARB's authority and legislative direction to address the serious problem of air pollution in California, and in particular meet CARB's statutory obligations identified in the following sections of the Health and Safety Code as explained below:

Sections 39500, 39600, 39601, and 40000, because the Proposed Amendments are consistent with the Legislature's intent that CARB is assigned the responsibility to control motor vehicle emissions, and are being promulgated under CARB's duty to perform actions needed to properly execute the powers and duties granted to it, including adopting standards, rules and regulations needed to properly execute such powers and duties, including regulations adopted pursuant to section 43013 that are necessary, technologically feasible, and cost effective that will, in conjunction with other measures, help California attain federal ambient air quality standards;

Sections 38501, 38510, 38560, 38566, and 38580, because the Proposed Amendments are being promulgated under CARB's authority to regulate sources of GHGs, and they will not affect the existing regulation's ability to achieve the maximum technologically feasible and cost-effective reductions of GHGs needed to ensure California's emissions of GHGs are reduced to at least 40 percent below the State's GHG emissions limit by December 31, 2030;

Sections 39650, 39658, 39659, 39666, and 39667, because the Proposed Amendments are being promulgated under CARB's authority to establish airborne toxic measures to control diesel PM, an identified toxic air contaminant, and the Proposed Amendments will not cause the existing ACT regulation to no longer be based on the most advanced technology feasible for the model year needed to achieve the maximum possible reduction in public exposure to diesel PM;

Sections 43013 and 43018, because CARB has determined that the Proposed Amendments are necessary, cost effective, and technologically feasible, and the Proposed Amendments will not undermine the emissions benefits of the ACT regulation, which reduces emissions of NOx from medium- and heavy-duty vehicles that significantly contribute to air pollution, and emissions of other pollutants as expeditiously as feasible; and

Sections 43100, 43101, 43102, 43104, and 43106, because the Proposed Amendments modify procedures needed to determine whether new motor vehicles and new motor vehicle engines are compliant with the emission standards established pursuant to section 43101;

The Proposed Amendments were developed in an open public process, in consultation with affected parties, through public workshops, individual meetings, and other outreach efforts, and these efforts are expected to continue; and

The Proposed Amendments are consistent with CARB's environmental justice policies and do not disproportionately impact people of any race, culture, income, or national origin.

Now, therefore, be it resolved that the Board hereby approves for adoption section 1963.7 and amendments to sections 1956.8, 1963, 1963.2, 1963.3, and 1963.4, Title 13 California Code of Regulations, as set forth in Appendices A-1 and B-1 of the ISOR released to the public on May 27, 2025.

Be it further resolved that the adopted regulatory text may be further revised with grammatical or other non-substantial changes, which will be added to the rulemaking record and indicated as such.

Be it further resolved that the Board directs the Executive Officer to determine if additional conforming modifications to the regulation are appropriate. If no additional modifications are appropriate, the Executive Officer shall take final action to adopt the regulation, as set forth in Appendix A-1 of the ISOR released to the public on May 27, 2025. If the Executive Officer determines that additional conforming modifications are appropriate, the modified regulatory language shall be made available for public comment, with any additional supporting documents and information. The Executive Officer shall consider written comments submitted during the public review period and make any further modifications that are appropriate available for public comment for at least 15 days. The Executive Officer may present the regulation to the Board for further consideration if warranted, and if not, the Executive Officer shall take final action to adopt the regulation after addressing all appropriate conforming modifications.

Be it further resolved that if there is a possibility that any modifications to the regulation made available for one or more 15-day public comment periods may affect the conclusion of the environmental analysis, the Executive Officer shall prepare and circulate any additional environmental analysis needed, to the extent required by CARB's regulations at section 60004,Title 17, California Code of Regulations.

Be it further resolved that the Board hereby determines, pursuant to section 209 of the federal Clean Air Act, that the addition of the Proposed Amendments to California's program to reduce new motor vehicle and engine emissions will not cause California's new motor vehicle and engine emission standards, in the aggregate, to be less protective of public health and welfare than applicable federal standards.

Be it further resolved that the Executive Officer shall, upon adoption, forward the Proposed Amendments to the U.S. EPA with a request for a waiver or confirmation that the amendments are within the scope of an existing waiver of federal preemption pursuant to section 209(b) of the federal Clean Air Act, as appropriate.

Be it further resolved that the Board hereby adopts the Proposed Amendments as revisions to the California SIP.

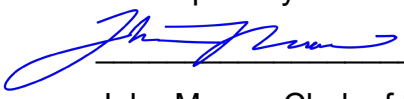
Be it further resolved that the Board hereby directs the Executive Officer to submit the Proposed Amendments, together with the appropriate supporting documentation, to the U.S. EPA for approval as a revision to the California SIP, to be effective, for purposes of federal law, upon approval by U.S. EPA.

Be it further resolved that the Board directs the Executive Officer to work with the U.S. EPA and take appropriate action to resolve any completeness or approvability issues that may arise regarding the SIP submission.

Be it further resolved that the Board authorizes the Executive Officer to include in the SIP submittal any technical corrections, clarifications, or additions that may be necessary to secure U.S. EPA approval.

Be it further resolved that the Board certifies pursuant to 40 C.F.R. section 51.102 that the proposed SIP revision was adopted after notice and public hearing as required by 40 C.F.R. section 51.102.

I hereby certify that the above is a true
and correct copy of Resolution 25-6,
as adopted by the Air Resources Board.



08/12/2025

John Moore, Clerk of the Board