

Proposed Amendments to the Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets, and Facilities Where TRUs Operate

Resolution 22-5

February 24, 2022

Agenda Item No.: 22-3-3

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 39618 of the Health and Safety Code classifies refrigerated trailers as off-road mobile sources to be regulated by CARB on a statewide basis;

Whereas, sections 39658, 39659, 39666, and 39667 of the Health and Safety Code authorize the Board to establish airborne toxic control measures for substances identified as toxic air contaminants;

Whereas, sections 43013 and 43018 of the Health and Safety Code authorize the Board to adopt standards and regulations for the control of air contaminants and sources of air pollution from off-road or nonvehicle engine categories, including TRUs, to the extent permitted by federal law, to attain State air quality standards by the earliest practicable date;

Whereas, section 43019.1 of the Health and Safety Code authorizes CARB to adopt a schedule of fees to cover its reasonable costs associated with the certification, audit, and compliance of off-road or nonvehicular engines and equipment, aftermarket parts, and emissions control components sold in the State;

Whereas, on February 26, 2004, CARB adopted the Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets, and Facilities Where TRUs Operate (TRU ATCM; title 13, California Code of Regulations, section 2477);

Whereas, the California and federal off-road particle matter (PM) emission standard for engines less than 25 horsepower is 15 times higher (i.e., less stringent) than the standard for engines greater than 25 horsepower while sales of trailer TRUs, domestic shipping container TRUs, railcar TRUs, and TRU generator sets equipped with less than 25 horsepower engines have substantially increased since 2004;

Whereas, the Legislature enacted Assembly Bill (AB) 32 (Nuñez, Chapter 488, Statutes of 2006), 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, the Legislature enacted Senate Bill (SB) 32 (Pavley, Chapter 249, Statutes of 2016), to expand upon AB 32 to reduce GHG emissions to 40 percent below the 1990 level by 2030;

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

Whereas, the Legislature enacted SB 350 (De León, Chapter 547, Statutes of 2015), directing the California Public Utilities Commission to take actions to support widespread transportation electrification;

Whereas, the California Public Utilities Commission unanimously approved three transportation electrification programs to support the electrification of the medium-and heavy-duty sectors, including TRUs. Pacific Gas and Electric, Southern California Edison, and San Diego Gas and Electric have been authorized to spend \$266 million, \$360 million, and \$155 million, respectively over a five-year period;

Whereas, the 2016 Sustainable Freight Action Plan establishes clear targets to improve freight efficiency, transition to zero-emission technologies, and increase competitiveness of California's freight system;

Whereas, the Legislature enacted SB 1383 (Lara, Chapter 395, Statutes of 2016), requiring California to reduce emissions of hydrofluorocarbons (HFC) to 40 percent below 2013 levels by 2030, and requiring and further authorizing CARB to approve and implement the Short-Lived Climate Pollutant Strategy (SLCP Strategy);

Whereas, CARB adopted the SLCP Strategy in March 2017, which identified reducing HFCs as an important part of SLCP reduction efforts and calls for a reduction in HFCs by 2030;

Whereas, TRUs produce HFC emissions when refrigerant leaks from the unit due to normal wear and fatigue of refrigerant fittings;

Whereas, there are currently no restrictions on high-global warming potential refrigerants in transport refrigeration applications in California, but alternative refrigerants with lower-global warming potential values are technically feasible and commercially-available;

Whereas, in March 2017, the Board adopted the State Strategy for the State Implementation Plan, which includes a measure to require the use of cleaner near-zero and zero-emission technologies for TRUs to achieve established near and long-term air quality and climate mitigation targets;

Whereas, challenges remain in meeting the federal ambient air quality standards for ozone and fine particulate matter (PM2.5) in several areas of the State, including the South Coast Air Basin and San Joaquin Valley;

Whereas, the near-term targets for these areas are a 2023 deadline for attainment of the 80 parts per billion (ppb) 8-hour ozone standard, 2024 for the 35 microgram per cubic meter ($\mu\text{g}/\text{m}^3$) 24-hour PM_{2.5} standard, and 2025 for the 12 $\mu\text{g}/\text{m}^3$ annual PM_{2.5} standard. There are also mid-term attainment years of 2031 and 2037 for the more recent 8-hour ozone standards of 75 ppb and 70 ppb, respectively;

Whereas, the Legislature enacted AB 617 (C. Garcia, Chapter 136, Statutes of 2017), which highlights the need for further emission reductions in communities with high exposure burdens, such as those located near facilities where TRUs operate;

Whereas, the October 2018 Community Air Protection Blueprint (Blueprint) adopted by the Board to implement AB 617 (C. Garcia, Stats. 2017) identifies the transition of diesel-powered TRUs to zero-emission operation as a near-term action to reduce emissions and exposure in disproportionately burdened communities throughout the State;

Whereas, pursuant to AB 617 and consistent with the Blueprint, multiple community emissions reduction programs adopted by air districts and approved by the Board for high emissions exposure burdened communities selected by the Board to develop such programs, include specific measures to reduce emissions and exposures from TRU's and warehouse operations;

Whereas, many of the communities near facilities where TRUs operate bear a disproportionate health burden due to their close proximity to emissions from the diesel engines that power TRUs. Cumulative health effects occur when multiple facilities are within a short distance of one another;

Whereas, Executive Order N-79-20 set a goal for 100 percent zero-emission from off-road vehicles and equipment by 2035 where feasible to put the State on the path to carbon neutrality;

Whereas, CARB's Revised Draft 2020 Mobile Source Strategy identifies the level of cleaner technologies needed for the State to meet its various clean air goals and includes a rapid electrification scenario for TRUs, increasing 10 percent each year beginning in 2024, and highlighting the need to transition diesel-powered TRUs to zero-emission technology;

Whereas, truck TRUs are generally used for local and regional delivery and return to a home base facility each night, and are well-suited for zero-emission technology because, based on the operating range of currently available zero-emission truck TRU technology, they would not require additional refueling or recharging infrastructure outside their home terminals or distribution centers before dispatch;

Whereas, staff proposed amendments to the TRU ATCM (Proposed Amendments), as set forth in Appendix A to the Initial Statement of Reasons (ISOR) released to the public on July 27, 2021;

Whereas, the ISOR presents, among other things, the rationale and basis for the Proposed Amendments, as set forth in Appendix A to the ISOR released to the public on July 27, 2021, and identifies the data, reports, and information relied upon for the Proposed Amendments;

Whereas, the Proposed Amendments would achieve additional emission and health risk reductions by requiring the transition of diesel-powered truck TRUs to zero-emission; a PM standard for newly-manufactured trailer TRUs, domestic shipping container TRUs, railcar

TRUs, and TRU generator set engines; and the use of lower-global warming potential refrigerant;

Whereas, the Proposed Amendments aim to improve compliance and enforceability of the TRU ATCM by adding new requirements for owners and operators of applicable facilities where TRUs operate, expanded TRU reporting for all TRUs that operate in California (including out-of-state based TRUs), vehicle owners and drivers, and compliance labels;

Whereas, the Proposed Amendments include TRU operating fees and applicable facility registration fees to cover CARB's reasonable costs associated with the certification, audit, and compliance of TRUs, as allowed by section 43019.1 of the Health and Safety Code;

Whereas, staff estimate that, between 2022 to 2034, the Proposed Amendments would reduce statewide TRU emissions by approximately 1,258 tons of PM2.5, 3,515 tons of oxides of nitrogen (NOx), and 1.42 million metric tons of GHG;

Whereas, staff estimate that the PM2.5 and NOx emission reductions as a result of the Proposed Amendments would provide a benefit of \$1.75 billion in avoided premature death and health costs from 2022 to 2034;

Whereas, staff performed a health risk assessment to evaluate the benefits of the Proposed Amendments regarding potential cancer risk resulting from direct exposure to diesel PM from TRUs operating at cold storage warehouses and grocery stores;

Whereas, staff estimate that the Proposed Amendments would reduce potential individual residential cancer risk from TRU operations at cold storage warehouses by approximately 12 percent in 2024 and 58 percent after full implementation in 2030;

Whereas, staff estimate that the Proposed Amendments would reduce potential individual residential cancer risk from TRU operations at grocery stores (with 7 daily trucks, 2 daily trailers, and 1 seasonal trailer) by approximately 13 percent in 2024 and 72 percent after full implementation in 2030;

Whereas, staff estimate that the total benefits in avoided damages caused by GHG emissions as a result of the Proposed Amendments range from \$29 million to \$134 million from 2022 to 2034, using the Social Cost of Carbon developed by the United States Government (Interagency Working Group on the Social Cost of Carbon);

Whereas, the Board has considered the analysis of economic impact of the Proposed Amendments, which is estimated to be \$850.2 million from 2022 to 2034;

Whereas, staff met and worked with members of impacted communities, environmental justice advocates, local air districts, TRU owners and operators, trade associations, TRU manufacturers, TRU dealers and service centers, truck and trailer dealers, truck and trailer leasing companies, freight brokers, forwarders, shippers, receivers, freight facility owners and operators, and the public in developing the Proposed Amendments;

Whereas, staff held eight public workshops, three work group meetings, and over 160 meetings and calls with stakeholders during the regulatory development process; and mailed over 40,000 postcards to facilities with refrigerated operations potentially affected by the Proposed Amendments;

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

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, CARB prepared a draft environmental analysis under its certified regulatory program for the Proposed Amendments entitled *Draft Supplemental Environmental Analysis Prepared for the Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets, and Facilities Where TRUs Operate* (Draft Supplemental EA), and circulated it as Appendix D to the Staff Report for more than 45 days from July 27, 2021 through September 19, 2021;

Whereas, the Draft Supplemental EA concluded that implementation of the Proposed Amendments has the potential to result in: beneficial impacts to air quality (long-term or operational related), energy demand (long-term or operational related), GHG emissions and climate change; less than significant impacts, or no impacts, to energy demand (short-term or construction related), hazards and hazardous materials (long-term or operational related), land use and planning, mineral resources (short-term or construction related), population and housing, public services, recreation, and wildfire; and potentially significant impacts to aesthetics, agriculture and forest resources, air quality (long-term or operational related), biological resources, cultural and tribal resources, geology and soils, hazards and hazardous materials (short-term or construction related), hydrology and water quality, mineral resources (long-term or operational related), noise, transportation, and utilities and service systems;

Whereas, on September 23, 2021, the Board conducted a public hearing on the Proposed Amendments and the Draft Supplemental EA prepared for the proposal;

Whereas, following the public hearing, the Board adopted Resolution 21-18 directing the Executive Officer to make any additional appropriate conforming modifications, available for public comment, with any additional supporting documents and information, for a period of at least 15 days. The Executive Officer was further directed to consider written comments submitted during the public review period and make any additional appropriate conforming modifications available for public comment for at least 15 days, evaluate all comments received during the public comment periods, including comments on the Draft Supplemental EA, and prepare written responses to EA comments as required by CARB's certified regulations at California Code of Regulations, title 17, sections 60000-60007 and Government Code section 11346.9(a). The Executive Officer was directed to present to the Board, at a subsequently scheduled public hearing, staff's written responses to any comments on the Draft Supplemental EA, along with the Final Supplemental EA, for consideration for approval, and the finalized amendments for consideration for adoption;

Whereas, following the Board hearing, the modified regulatory language and supporting documentation were circulated for a 15-day public comment period, with the changes to the originally proposed text clearly indicated, according to provisions of California Code of Regulations, title 1, section 44 and Government Code section 11340.85, from December 22, 2021 through January 6, 2022;

Whereas, staff reviewed written comments received on the Draft Supplemental EA and prepared written responses to those comments in a document entitled *Response to Comments on the Draft Supplemental Environmental Analysis Prepared for the Proposed Amendments to the Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets, and Facilities Where TRUs Operate* (Response to EA Comments);

Whereas, on February 18, 2022, staff posted on the rulemaking page the Final Supplemental EA and the Response to EA Comments;

Whereas, prior to the duly noticed public hearing held on February 24, 2022, staff presented the Final Supplemental EA and the Response to EA Comments, as released to the public on February 18, 2022, to the Board for consideration;

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:

The Proposed Amendments meet the statutory requirements to establish airborne toxic control measures for substances identified as toxic air contaminants as identified in sections 39658, 39659, 39666, and 39667 of the Health and Safety Code;

The Proposed Amendments meet the statutory requirements to adopt standards and regulations for the control of air contaminants and sources of air pollution from off-road or nonvehicle engine categories, including TRUs, to the extent permitted by federal law, to attain State air quality standards by the earliest practicable date, as identified in sections 43013 and 43018 of the Health and Safety Code;

The Proposed Amendments are expected to reduce statewide TRU emissions by approximately 1,258 tons of PM2.5, 3,515 tons of oxides of nitrogen, and 1.42 million metric tons of GHGs from 2022 to 2034;

The Proposed Amendments are estimated to result in a total net cost of \$850.2 million compared to an estimated benefit of \$1.75 billion in avoided premature death and health costs from 2022 to 2034;

The Proposed Amendments are expected to reduce potential individual residential cancer risk from TRU operations at cold storage warehouses by approximately 12 percent in 2024 and 58 percent after full implementation in 2030;

The Proposed Amendments are expected to reduce potential individual residential cancer risk from TRU operations at grocery stores (with 7 daily trucks, 2 daily trailers, and 1 seasonal trailer) by approximately 13 percent in 2024 and 72 percent after full implementation in 2030;

The Proposed Amendments are expected to provide an estimated benefit in avoided damages caused by GHG emissions of between \$29 million and \$134 million from 2022 to 2034, using the Social Cost of Carbon;

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

No reasonable alternatives to the Proposed Amendments considered to date, or that have otherwise been identified and brought to the attention of CARB, would be more effective at carrying out the purpose for which the regulation is proposed or would be as effective and less burdensome to affected entities than the Proposed Amendments; and

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

Now, therefore, be it resolved that the Board hereby certifies that the Final Supplemental EA, as released to the public February 18, 2022, was completed in compliance with CARB's certified regulatory program to meet the requirements of CEQA, reflects the agency's independent judgment and analysis, and was presented to the Board whose members reviewed and considered the information therein before taking action to approve the Proposed Amendments.

Be it further resolved that the Board approves the Response to EA Comments as released to the public on February 18, 2022.

Be it further resolved that in consideration of the Final Supplemental EA, the Response to EA Comments, and the entirety of the record, the Board adopts the Findings and Statement of Overriding Considerations set forth in Attachment A to this resolution.

Be it further resolved that the Board hereby adopts amendments to sections 2477, 2477.1, 2477.2, 2477.3, 2477.4, 2477.5, 2477.6, 2477.7, 2477.8, 2477.9, 2477.10, 2477.11, 2477.12, 2477.13, 2477.14, 2477.15, 2477.16, 2477.17, 2477.18, 2477.19, 2477.20, and 2477.21, Title 13, California Code of Regulations, and new sections 2477.22, 2477.23, and 2477.24, Title 13, California Code of Regulations, as released to the public on December 22, 2021.

Be it further resolved that the Board directs the Executive Officer to make any additional conforming modifications that are appropriate available for public comment, with any additional supporting documents and information, for a period of at least 15 days. 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 he determines it is warranted, and if not, the Executive Officer shall take final action to adopt the regulation after addressing all appropriate modifications.

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

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

Be it further resolved that CARB staff shall continue outreach efforts to ensure that affected industry are aware of the requirements of the Proposed Amendments, with a focus on owner-operators and available incentive funding opportunities.

Be it further resolved that the Board recognizes the current logistics issues that have affected availability of parts and equipment and directs staff, in implementing this regulation, to

continue to monitor and consider whether ongoing issues are causing delays in procuring compliant equipment.

Be it further resolved that CARB staff shall continue to assess zero-emission technologies for trailer TRUs, domestic shipping container TRUs, railcar TRUs, TRU generator sets, and direct-drive refrigeration units (in which the compressor is powered from the vehicle's diesel engine). The technology assessment will inform the development of a subsequent regulation, with a goal for Board consideration in 2025, to transition trailer TRUs, domestic shipping container TRUs, railcar TRUs, TRU generator sets, and direct-drive units to zero-emission technology by 2035 where feasible, as directed by Executive Order N-79-20. CARB shall ensure the public process for the upcoming regulation includes CARB's new comprehensive community engagement model and training curriculum. CARB shall also ensure the regulation recognizes early adopters of advanced TRU technologies and emphasizes emission reductions within disadvantaged communities to the maximum extent feasible.

Be it further resolved that the Board recognizes the importance of identifying and committing additional resources to addressing the need for infrastructure and supporting actions to make a full transition to a zero-emission transportation system. CARB is committed to continue working with the California Energy Commission, the California Public Utilities Commission, the Governor's Office of Business Development, local and regional government, TRU manufacturers, facilities, and fleets to accelerate the adoption of zero-emission TRU technologies and expansion of zero-emission fueling infrastructure. CARB shall continue working on Agency Zero-Emission Vehicle Action Plans that complement California's zero-emission vehicle market development and with our sister agencies in helping them complete their respective action plans.

Be it further resolved that the Board recognizes the importance of identifying and committing additional resources in addressing the need for compatibility between TRU equipment and charging connectors. For that reason, CARB is committed to working with TRU manufacturers, fleets, charger and connector manufacturers, local permitting agencies, and electric utilities. CARB shall also work with the California Energy Commission and the California Public Utilities on equipment to grid operations that have the potential to support consistent load and increase the overall return on infrastructure investment.

Be it further resolved that the Board directs the Executive Officer to finalize the Final Statement of Reasons, submit the completed rulemaking package to the Office of Administrative Law, and transmit the Notice of Decision with the Response to EA Comments to the Secretary of the Natural Resources Agency for posting.

I hereby certify that the above is a true and correct copy of Resolution 22-5 as adopted by the California Air Resources Board.



Katie Estabrook, Board Clerk

Resolution 22-5

February 24, 2022

Identification of Attachments to the Board Resolution

Attachment A: Findings and Statement of Overriding Considerations