

Proposed

State of California
Air Resources Board

**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 21-18

September 23, 2021

Agenda Item No.: 21-9-5

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 transport refrigeration units (TRU), 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 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 (PM_{2.5}) 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 Assembly Bill (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 ten 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 have proposed amendments to the TRU ATCM, 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 PM_{2.5} and NO_x 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 as identified in the Standardized Regulatory Impact Assessment (SRIA), which is estimated to be \$1.04 billion 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 supplemental environmental analysis under its certified regulatory program for the Proposed Amendments, and circulated it as Appendix D to the Staff Report for public comment more than 45 days from July 30, 2021 through September 19, 2021;

Whereas, the draft supplemental environmental analysis concluded that implementation of the Proposed Amendments has the potential to result in: beneficial impacts to air quality, energy demand, GHG emissions, and climate change; less than significant impacts, or no impacts, to energy demand, hazards and hazardous materials, land use and planning, mineral resources, population and housing, public services, recreation, and wildfire; and potentially significant impacts to aesthetics, agriculture and forest resources, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, mineral resources, noise, transportation, and utilities and service systems. Many of the identified potentially significant adverse impacts are primarily related to short-term, construction-related activities;

Now, therefore, be it resolved that the Board hereby directs the Executive Officer to take the following actions:

1. Consider any additional conforming modifications that are appropriate, and make them available for public comment, with any additional supporting documents and information, for a period of at least 15 days. 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.
2. Evaluate all comments received during the public comment periods, including comments raising significant environmental issues, and prepare written responses to such 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);
3. If appropriate, prepare and circulate any further environmental analysis to the extent required by CARB's regulations at California Code of Regulations, title 17, sections 60000-60007, and as necessary, consider all feasible mitigation or alternatives that could eliminate or substantially lessen any significant adverse environmental impacts identified;
4. Present to the Board, at a subsequently scheduled public hearing, staff's written responses to any comments raising significant environmental issues, along with the final environmental analysis, for consideration for approval.

5. Present to the Board, at a subsequently scheduled public hearing, the amendments for consideration for adoption.

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 2024, 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 upcoming regulation recognizes early adopters of advanced TRU technologies and emphasizes emission reductions within disadvantaged communities to the maximum extent feasible.