

**State of California
Air Resources Board**

Board Item Summary

Item # 22-3-3: Public Hearing to Consider 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

Staff Recommendation:

Staff recommend that the California Air Resources Board (CARB or Board) approve the proposed resolution, which adopts 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 (Proposed Amendments). This is the second of two public hearings on this item. The first public hearing was held on September 23, 2021, when staff first presented the Proposed Amendments.

Discussion:

CARB adopted the Airborne Toxic Control Measure (ATCM) for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets, and Facilities Where TRUs Operate (TRU ATCM) in 2004 and amended it in 2010 and 2011 to reduce diesel particulate matter (PM) emissions and resulting health risk from diesel-powered TRUs used to control the environment of temperature-sensitive products transported in insulated trucks, trailers, shipping containers, or railcars, as well as diesel-powered TRU generator sets that provide electric power to electrically-powered refrigeration units of any kind. The TRU ATCM requires TRU engines that operate in California to meet specific in-use performance standards that require diesel PM emissions to be reduced in accordance with a phased compliance schedule. The phased compliance schedule is based on the model year of the TRU engine, in which compliance with the in-use performance standard is required seven years after the engine model year. The TRU ATCM includes two levels of stringency that were phased in over time. The first phase, beginning in 2008, is the low emission TRU performance standard. The second phase, beginning in 2010, is the ultra-low emission TRU performance standard. Ultimately, all TRU engines are required to meet the ultra-low emission TRU performance standard and have 85 percent PM control (compared to an uncontrolled Tier 0 engine) to be fully compliant with the TRU ATCM.

Staff are proposing amendments to the TRU ATCM to achieve additional emission reductions by requiring the transition of diesel-powered truck TRUs to zero-emission, a diesel PM emission standard for newly manufactured non-truck TRU engines, the use of lower global warming potential (GWP) refrigerant, facility registration and reporting, expanded TRU

reporting and labeling, and fees. The Proposed Amendments will help meet the State's multiple risk reduction, air quality, and climate goals, as well as the directive of Executive Order N-79-20, which set a goal for 100 percent zero-emission off-road vehicles and equipment in the State by 2035. The Proposed Amendments are also needed to address the emergence and growth in the number of trailer TRUs, domestic shipping container TRUs, railcar TRUs, and TRU generator sets equipped with engines less than 25 horsepower, which have less stringent emission standards; strengthen the regulation by including requirements for owners and operators of facilities where TRUs operate and vehicle owners, expanded TRU reporting and labeling to monitor compliance; and collect fees from TRU and applicable facility owners to cover CARB's reasonable costs associated with the certification, audit, and compliance of TRUs.

The Proposed Amendments are the result of an extensive public process. Staff conducted eight public workshops and three work group meetings to discuss regulatory concepts, methodology and data used to develop the emission inventory and conduct a health risk assessment, infrastructure considerations, compliance, and enforcement mechanisms, as well as solicit stakeholder feedback. As of February 2022, staff have conducted more than 160 informal meetings, phone calls, and site visits with a broad group of stakeholders to discuss the Proposed Amendments and gather input and information. This includes members of impacted communities, environmental justice advocates, 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 other interested parties.

Summary and Impacts:

The primary benefits of the Proposed Amendments are fine particulate matter (PM_{2.5}), oxides of nitrogen (NO_x), and greenhouse gas (GHG) emission reductions from diesel-powered TRUs that operate in California. Staff estimate that cumulatively, from 2022 to 2034, the Proposed Amendments will reduce statewide TRU emissions by approximately 1,258 tons of PM_{2.5}, 3,515 tons of NO_x, and 1.42 million metric tons of GHGs, compared to the baseline. These emission reductions will benefit California residents by:

- Reducing cancer risk to individual residents and off-site workers near facilities where TRUs operate, including those located in and near disadvantaged communities.
- Improving air quality and resulting ozone exposure from reductions in NO_x.
- Providing GHG emission reductions (including the powerful short-lived climate pollutants hydrofluorocarbons and black carbon) needed to combat climate change.
- Reducing non-cancer health impacts such as premature deaths, hospital visits for cardiovascular and respiratory illnesses, and emergency room visits for asthma, especially in sensitive receptors including children, the elderly, and people with chronic heart or lung disease.

The total statewide valuation of avoided adverse health impacts as a result of the Proposed Amendments from 2022 to 2034 is approximately \$1.75 billion. Emission reductions will also reduce occupational exposure and benefit on-site workers, including, but not limited to TRU

operators, drivers, and other individuals who work at facilities where TRUs operate. The total net cost of the Proposed Amendments from 2022 to 2034 is estimated to be \$850.2 million.

CARB is the lead agency for the Proposed Amendments and has prepared a final supplemental environmental analysis (Final Supplemental EA) pursuant to its certified regulatory program (title 17, CCR, sections 60000 through 60008) to comply with the requirements of the California Environmental Quality Act (CEQA). The Final Supplemental EA provides a programmatic environmental analysis of an illustrative, reasonably foreseeable compliance scenario that could result from implementation of the Proposed Amendments. CARB also prepared the Response to Comments on the Draft Supplemental Environmental Analysis, which includes responses to CEQA related comments received during the 45-day comment period.

Implementation of the Proposed Amendments could result in the construction and operation of new or expanded manufacturing facilities for zero-emission TRU technologies (e.g., lithium-ion batteries, cryogenic fuels, cold plates, solar photovoltaics); the construction of supporting infrastructure, such as electric chargers and fueling stations; increased demand for electricity, requiring more electricity generation; the displacement of fossil fuel extraction, refinement, manufacture, distribution, and combustion; new or modified recycling or refurbishment facilities to accommodate battery disposal; and increased demand for the extraction of raw minerals used in the production of batteries, such as lithium from source countries and states.

The Final Supplemental EA concluded that implementation of the Proposed Amendments could 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 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 adverse impacts to aesthetics, agriculture and forest resources, air quality (short-term or construction 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. It is expected that many of the potentially significant impacts can be feasibly avoided or mitigated to a less-than-significant level, due to project-specific environmental review processes associated with compliance responses and compliance with local and State laws and regulations. However, the Final Supplemental EA takes the conservative approach in its post-mitigation significance conclusions (i.e., tending to overstate the risk that feasible mitigation may not be sufficient to mitigate an impact to less than significant or may not be implemented by other parties) and discloses, for CEQA compliance purposes, that potentially significant environmental impacts may be unavoidable.