



**WEBINAR
SERIES**

Transport Refrigeration Unit Regulatory Update

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Current TRU ATCM

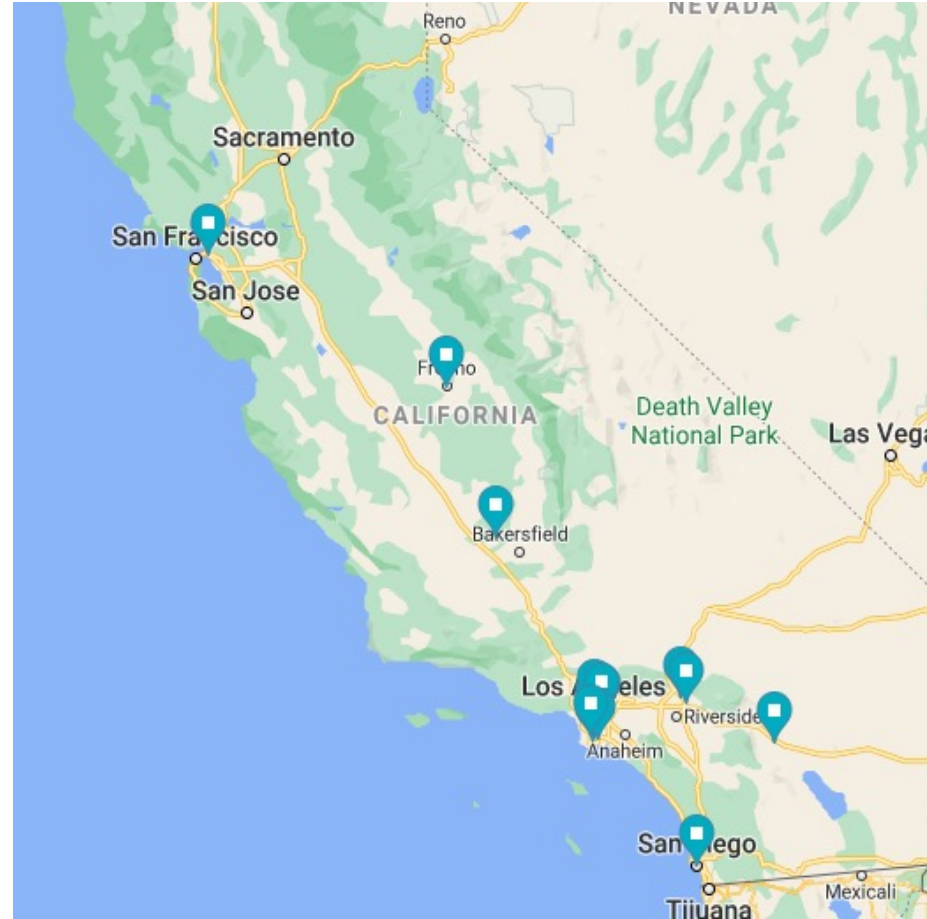
- Adopted in 2004 (amended in 2010 and 2011)
- Requires TRU engines to meet in-use particulate matter (PM) standards by the end of the 7th year after the engine model year
 - All TRUs ultimately required to meet the Ultra-Low-Emission TRU (ULETRU) In-Use Performance Standard (85% diesel PM reduction)
- Requires CARB registration of California-based TRUs

Need for Additional TRU Emission Reductions

- Elevated health risk to nearby communities
- SIP attainment (South Coast, San Joaquin Valley)
- Multiple risk reduction, air quality, and climate goals
- Executive Order N-79-20

Assembly Bill 617 Communities with TRU Concerns

- Boyle Heights
- Carson
- Eastern Coachella Valley
- East Los Angeles
- Muscoy
- San Bernardino
- San Diego Portside Environmental Justice Neighborhoods
- Shafter
- South Central Fresno
- Southeast Los Angeles
- West Commerce
- West Long Beach
- West Oakland
- Wilmington



Near Source Health Risk from TRUs



Staff Propose to Transition TRUs to Zero-Emission in Two Rulemakings



Part 1: Truck TRUs

- California-based
- Local and regional operations
- Return-to-base operations



Part 2: Trailer TRUs, container TRUs, railcar TRUs, TRU generator sets (Board consideration in 2024)

- California and out-of-state-based
- Often used in long-haul operations
- Typically do not return-to-base each day
- Staff also plan to address direct-drive refrigeration units in Part 2

Key Elements of Part 1

- Zero-emission truck TRUs
- PM emission standard for newly-manufactured TRU engines
- Lower-global warming potential refrigerant

Key Elements of Part 1 (continued)

- Additional requirements to support enforcement
 - Expanded TRU reporting
 - TRU compliance labels
 - Facility registration
 - Facility reporting or turn-away of non-compliant TRUs
 - Vehicle owner and driver requirements

Applicable Facility Types and Size Thresholds

Refrigerated
Warehouses or
Distribution
Centers

Building size greater than or equal to 20,000 square feet
with TRU activity

Grocery Stores

Building size greater than or equal to 15,000 square feet
with TRU activity

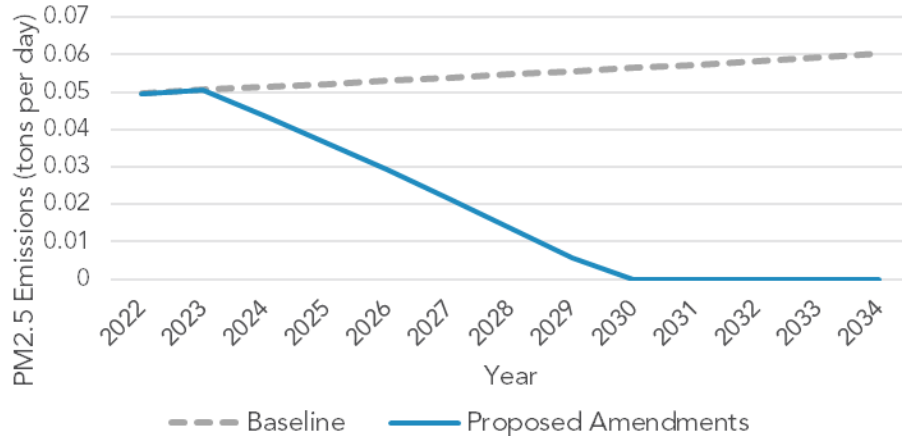
Seaport Facilities
and Intermodal
Railyards

No square foot size threshold – All seaport facilities and
intermodal railyards with TRU activity

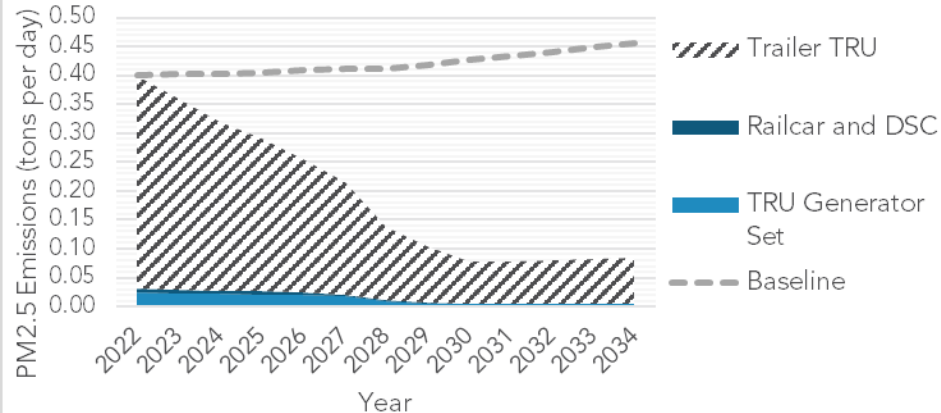
Estimated Emission Reductions from 2022 to 2034

- 1,258 tons of PM2.5
- 3,515 tons of NOx
- 1.42 million metric tons of carbon dioxide equivalents

Statewide PM2.5 Emissions from **Truck TRUs**
under the Proposed Amendments

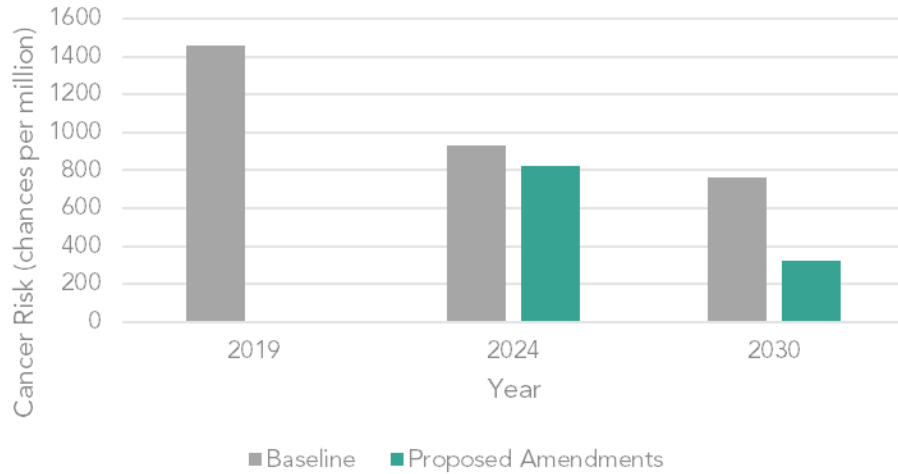


Statewide PM2.5 Emissions from **Non-Truck TRUs**
under the Proposed Amendments

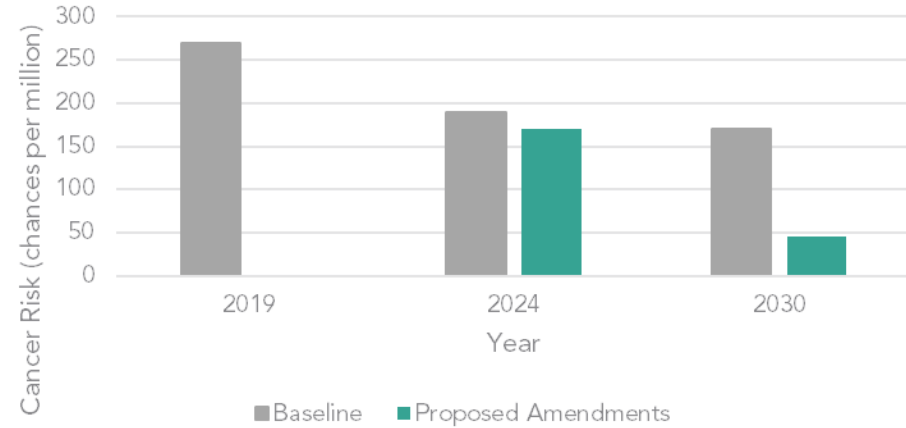


Estimated Individual Resident Cancer Risk and Risk Reduction

Cold Storage Warehouse



Grocery Store (7 Trucks, 2 Trailers,
1 Seasonal Scenario)



Next Steps

- Part 1
 - Public comments received during September 2021 Board Hearing:
<https://www.arb.ca.gov/lispub/comm/bccommlog.php?listname=true>
2021
 - September 23, 2021 – First Board Hearing
 - Early 2022 – Second Board Hearing
- Part 2 technology assessment

Additional Information

- TRU webpage: <https://www.arb.ca.gov/TRU>
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