



Proposed In-Use Locomotive Regulation NACAA Mobile Sources and Fuels Committee Meeting

October 3, 2022

CARB's Objectives



Cut community health risk
(support Assembly Bill 617 emission reductions)



Help attain regional air standards
(support State Implementation Plan)

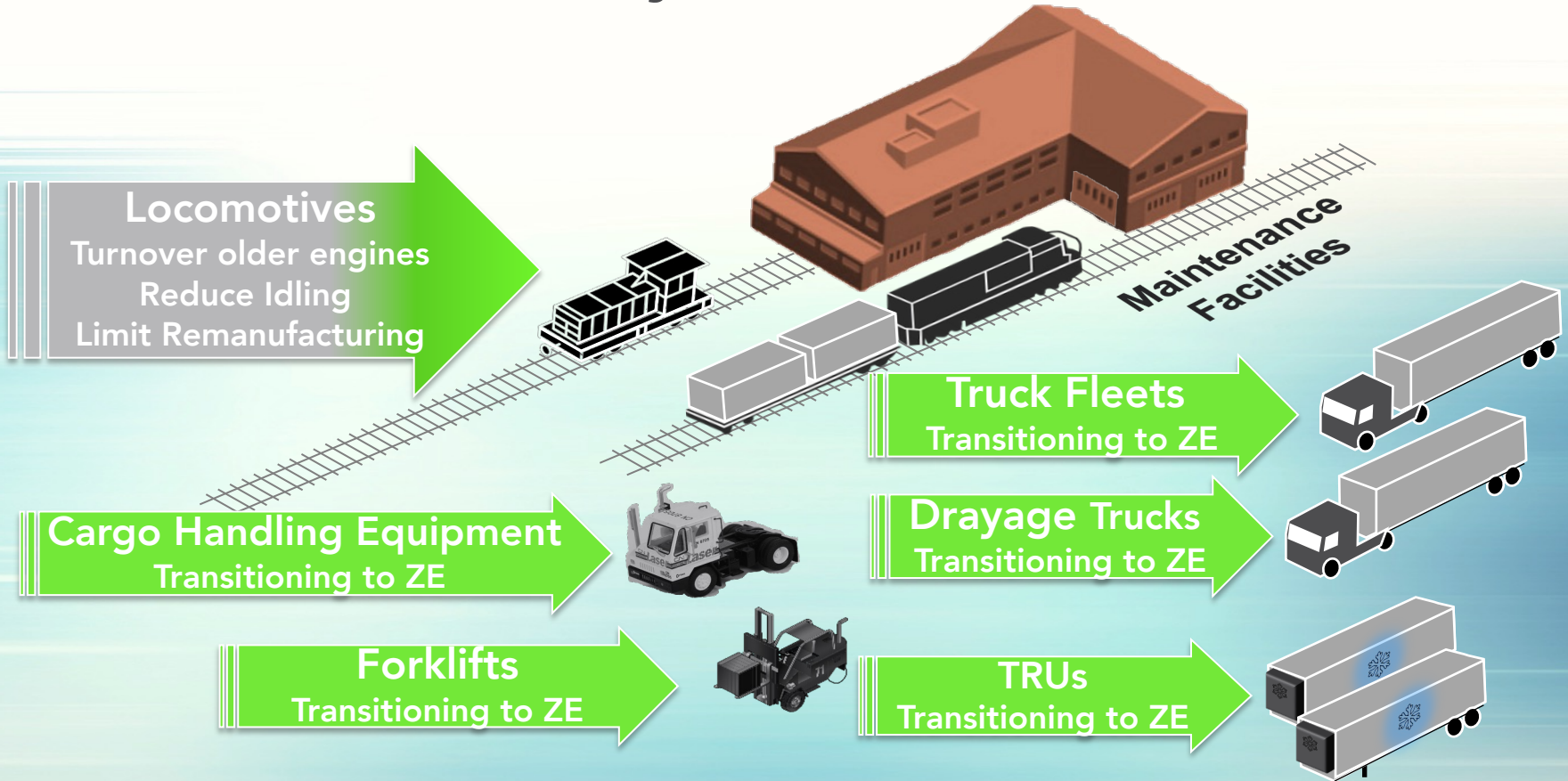


Mitigate climate change (support Scoping Plan and
Short-Lived Climate Pollutant Reduction Strategy)

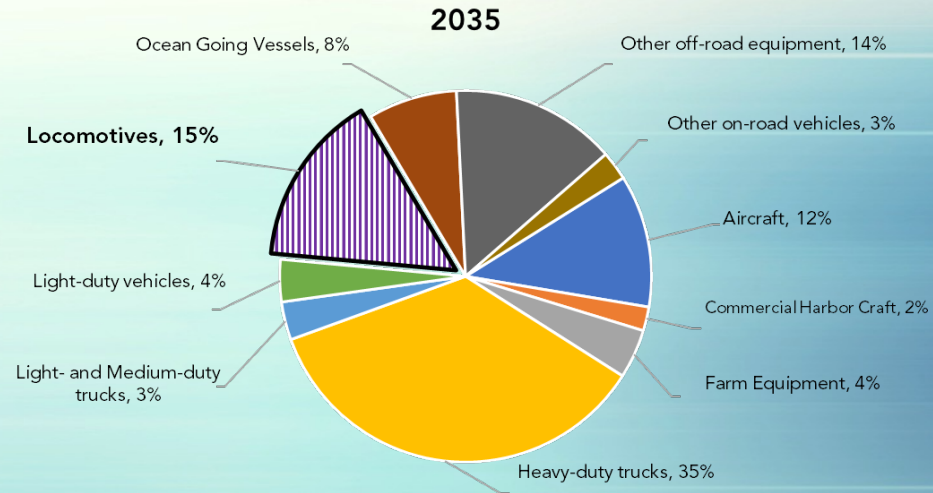
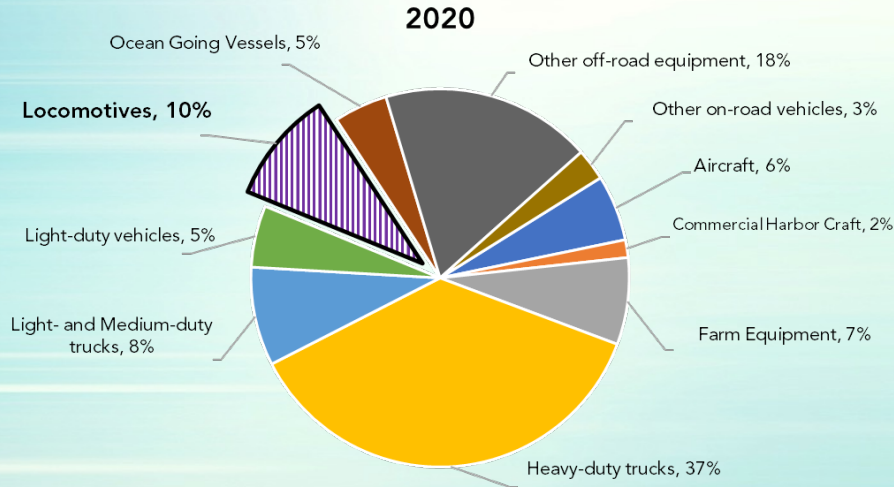


Governor's Executive Order N-79-20

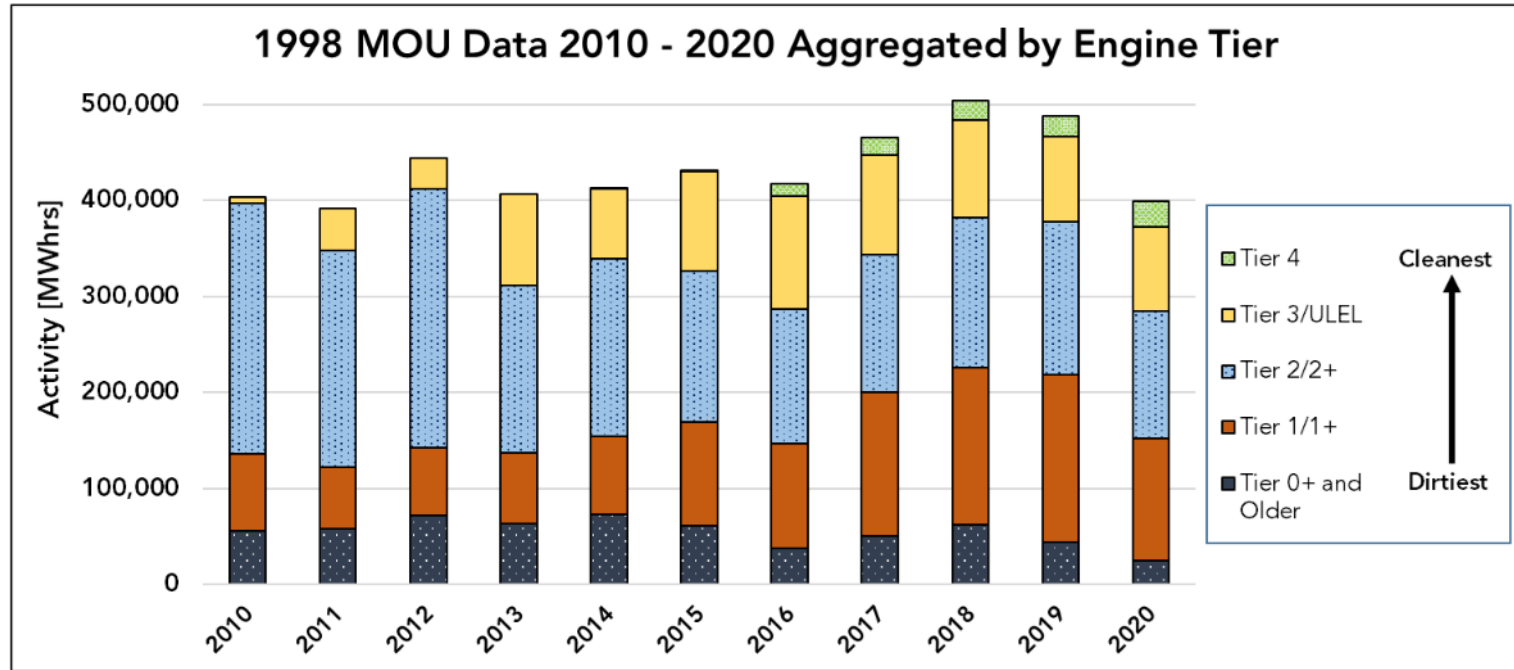
Railyard Sources



Statewide Freight NOx Emissions

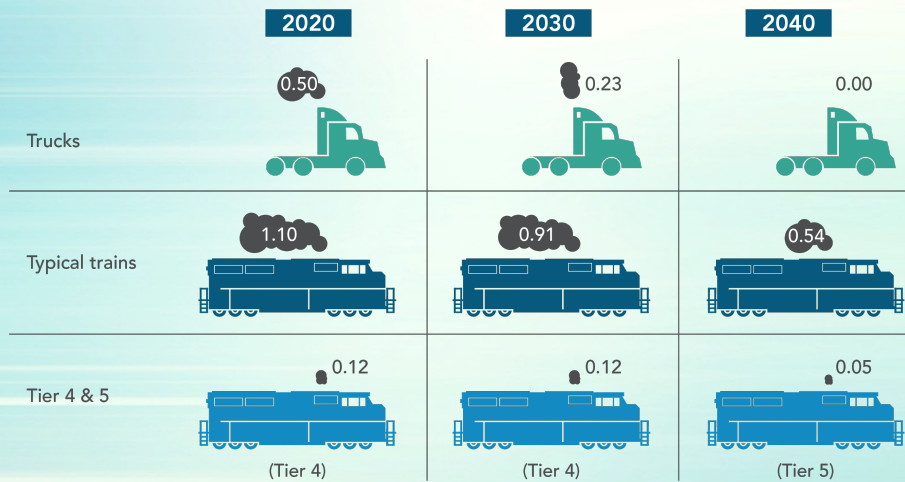


Locomotive Activity and NOx Emissions in the South Coast



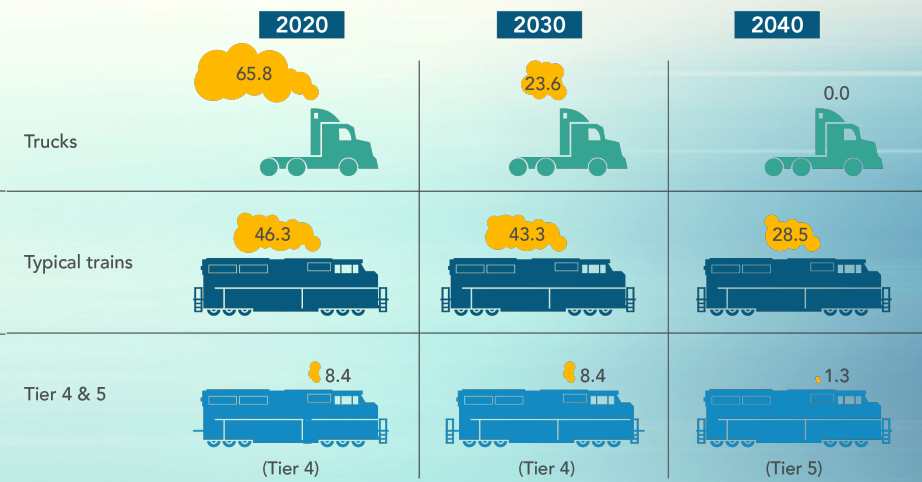
Draft Truck vs Train Emissions Analysis

Total PM_{2.5} Emissions in Communities within 20 Miles of the Ports



All emissions are in pounds

Total NO_x Emissions in Communities within 20 Miles of the Ports



All emissions are in pounds

In-Use Locomotive Regulation

New Regulation for Board Consideration November 2022

- Main Regulatory Concepts:
 - Spending Account
 - In-Use Operational Requirements
 - Idling Requirements
 - Registration and Reporting Requirements

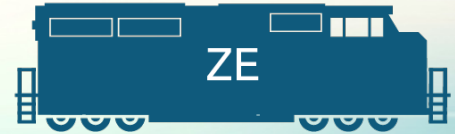


Spending Account (2023+)



- Funding Requirement = PM & NO_x Emission Factor x Usage (MWh)
- Funds are held in internal account

In-Use Operational Requirements (2030+)



- Only locomotives less than 23 years old can operate in CA
- Switch, industrial and passenger locomotives operating in CA built in 2030+ must be ZE.
- Line haul locomotives operating in CA built in 2035+ must be ZE.

Locomotive Idling and Reporting Requirements (2023+)

- Implement U.S. EPA 30 minute Idling limit
 - Makes the rule CARB enforceable
 - Enforcement by Air Districts possible through enforcement MOU
- Annual Reporting and Recordkeeping
 - Per locomotive reporting
 - Greater picture of true CA locomotive emissions

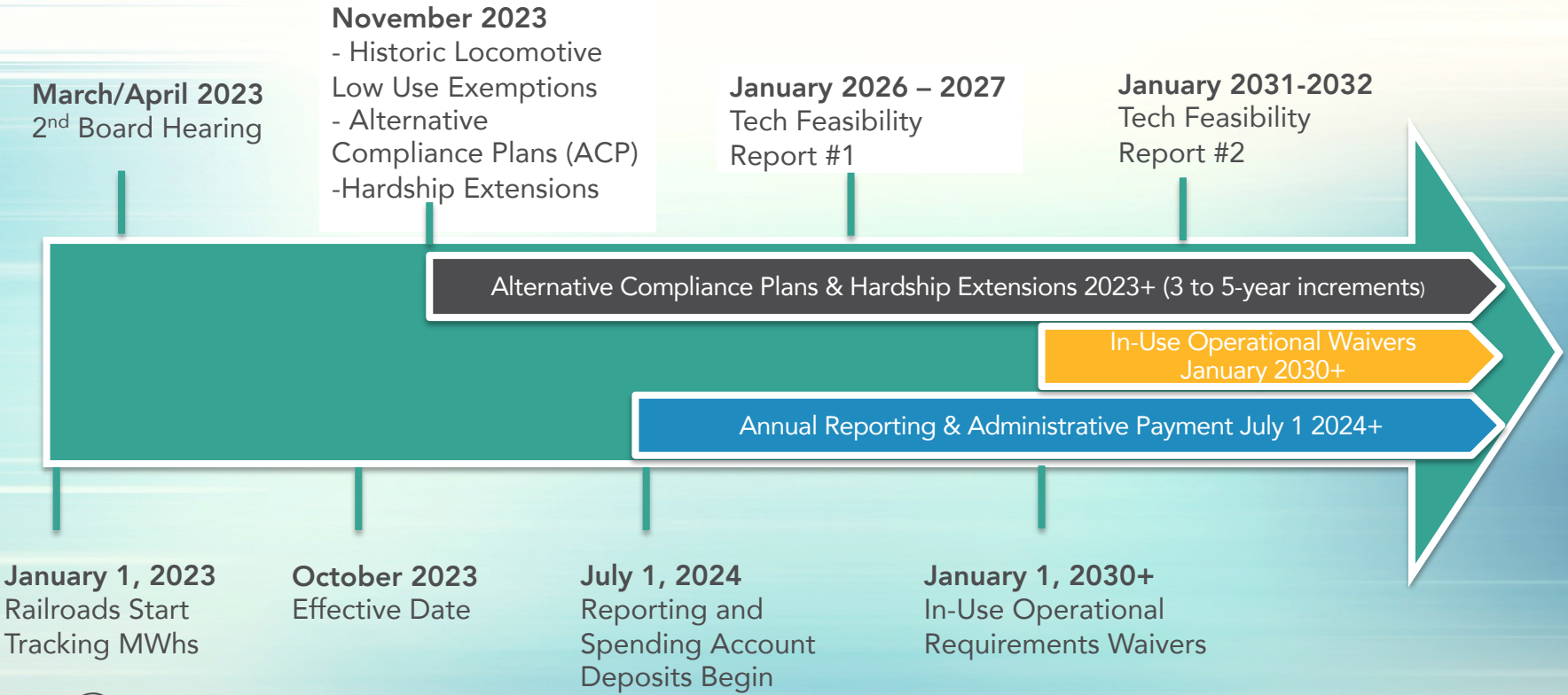


Regulatory Flexibility

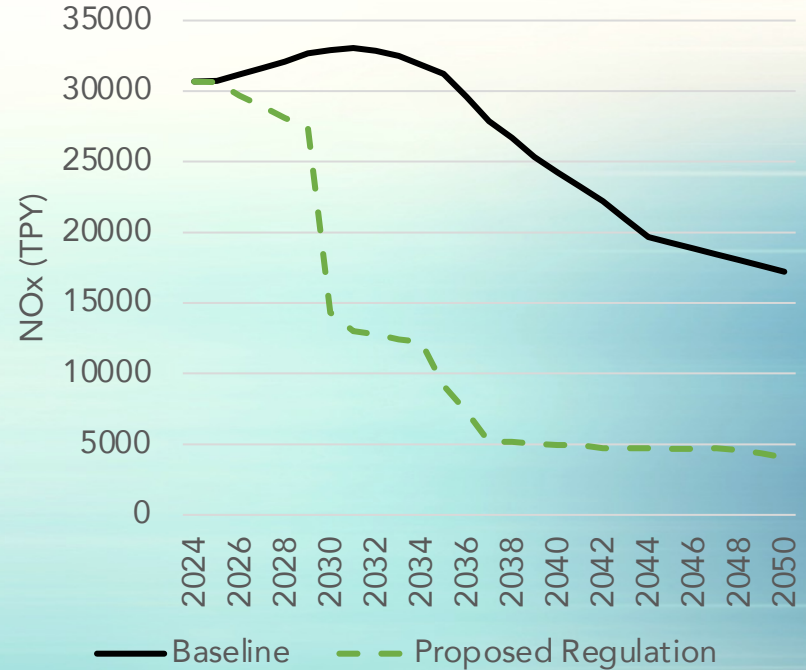
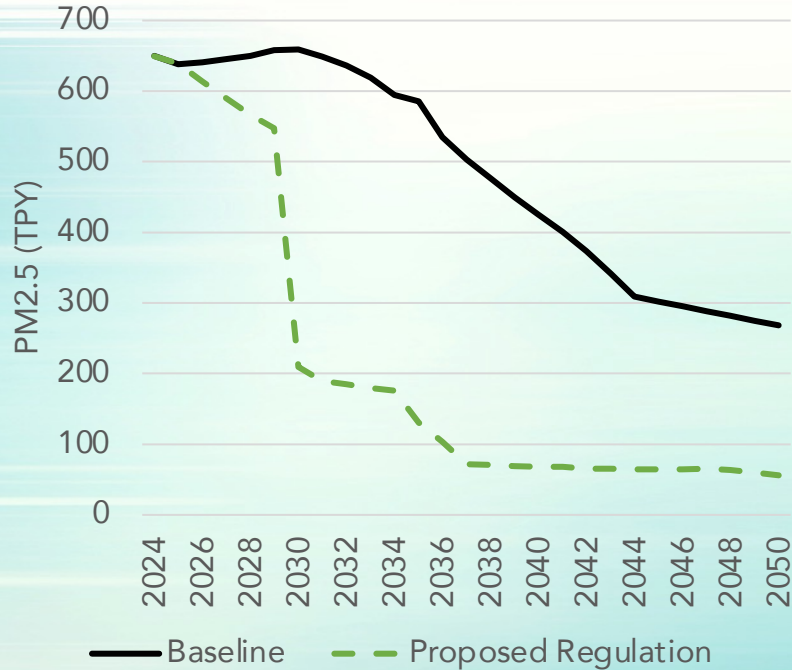
- Alternative Compliance Plan (ACP)
- Temporary Operating Waiver
- Historic Railroad Low-Use Exemption
- Small Business Hardship Extension



Locomotive Regulation Timeline



Estimated Emission Reductions



Standardized Regulatory Impact Assessment (2023 – 2050)

- Estimated cost to locomotive operators = \$15.9 billion
- Statewide valuation of avoided adverse health outcomes from the Proposed Regulation (2019\$)

Outcome	Valuation
Avoided Premature Deaths	\$32,243,896,000
Avoided Hospitalizations	\$60,033,000
Avoided Emergency Room Visits	\$1,253,000
Total	\$32,305,183,000

Current Status

- Factsheets released in August
 - <https://ww2.arb.ca.gov/resources/fact-sheets/carb-fact-sheet-locomotives>
- Regulatory documents released on 9/20
 - <https://ww2.arb.ca.gov/rulemaking/2022/locomotive>
- Public Comment period (9/23- 11/7)
- November Board meeting (11/17-11/18)
- 2nd Board hearing Spring 2023

More Information

The screenshot shows the CARB website interface. At the top, there is a navigation bar with social media icons (CA.gov, YouTube, LinkedIn, Facebook), utility links (Calendar, Help & FAQs, Contact, Careers), language options (English, Español), and a search bar. Below the navigation bar is the CARB logo and a secondary menu (ABOUT, OUR WORK, RESOURCES, SERVICES, RULEMAKING, NEWS, EQUITY). The main content area is titled "Reducing Rail Emissions in California" with a link to "BACK TO ALL PROGRAMS".

Reducing Rail Emissions in California

CARB has developed and implemented measures to understand and reduce locomotive and railyard emissions in California, including studies, regulations, enforceable agreements, and funding of clean technology.
MORE ABOUT THIS PROGRAM >

PRIMARY CONTACT
Freight Transport Branch
Email freight@arb.ca.gov
Phone (916) 322-8382

CATEGORIES

Topics Freight & Goods Movement, Trains & Railyards
Division Transportation and Toxics Division

Now Available: CARB Fact Sheets on Locomotives and the Proposed In-Use Locomotive Regulation

CARB has posted fact sheets that describe different kinds of locomotive operations, as well as the effects of locomotive emissions on communities near locomotive operations and on the state. The fact sheets also contain information about the Proposed In-Use Locomotive Regulation and its applicability to each locomotive operator.

MORE INFORMATION

Draft Truck vs. Train Emissions Analysis
Comparison of Truck and Train Emissions

Beyond Tier 4 Locomotives
CARB Locomotive Petition to U.S. EPA

Enforceable Agreements
CARB Agreements with Class 1 Railroads

- Website: <https://ww2.arb.ca.gov/our-work/programs/reducing-rail-emissions-california>

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