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SOUTH COAST AQMD

- Multi-county air pollution control agency
 - ~17 million people
- Governed by a Board of local elected and appointed officials
- Responsible for monitoring air quality and meeting federal and state air quality standards
- ~28,000 permitted sources
 - Refineries, power plants, gas stations, etc.
- 80% of regional smog-forming pollution comes from mobile sources



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REDUCING AIR POLLUTION

Regional:
Air Quality Management Plans



Local:
AB 617 Community Emissions Reduction Plans



Goods Movement & Facility Based Measures

Airports

Warehouses

Marine Ports

Railyards

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WHY IS SOUTH COAST AQMD PURSUING A PROPOSED MOU?

- Substantial emission reductions are needed from railroad operations to meet federal air quality standards and to reduce local air quality impacts
 - No foreseeable federal actions will reduce emissions from railroad operations
 - State rules will continue to reduce emissions, but more is needed
- Burlington Northern Santa Fe (BNSF) and Union Pacific (UP) railroads recently approached South Coast AQMD with an offer to commit to additional actions that would reduce emissions through a Memorandum of Understanding (MOU)
- **An MOU has the potential to provide greater emission reductions faster than a regulation**

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OVERVIEW OF PROPOSED MOU

What is an MOU?

- A contractual agreement between two or more parties
- The proposed MOU will include enforceable actions and commitments
- Will include implementation procedures and enforcement process

What are the guiding principles of the potential MOU?

- Reduce emissions as much as possible as quickly possible to protect public health
- Develop through a public process

Who will be the parties to the potential MOU?

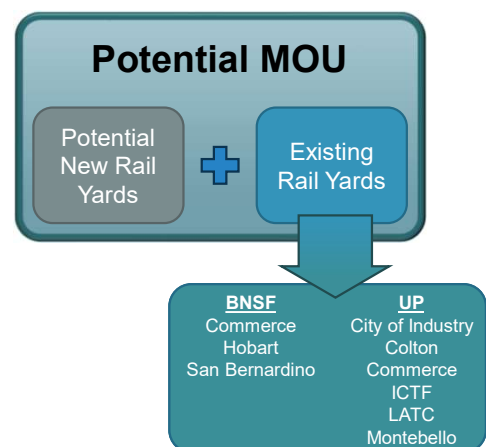
- South Coast AQMD
- Burlington Northern Santa Fe (BNSF)
- Union Pacific (UP)

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SCOPE OF PROPOSED MOU

- The MOU aims to reduce air quality impacts from **existing** and **new** rail yards by reducing emissions from:
 - ❖ In-District Locomotives*
 - ❖ Yard Trucks and Forklifts
 - ❖ Rubber Tired Gantry Cranes (RTG)
 - ❖ All Other Cargo Handling Equipment (CHE)
- Potentially additional community benefits

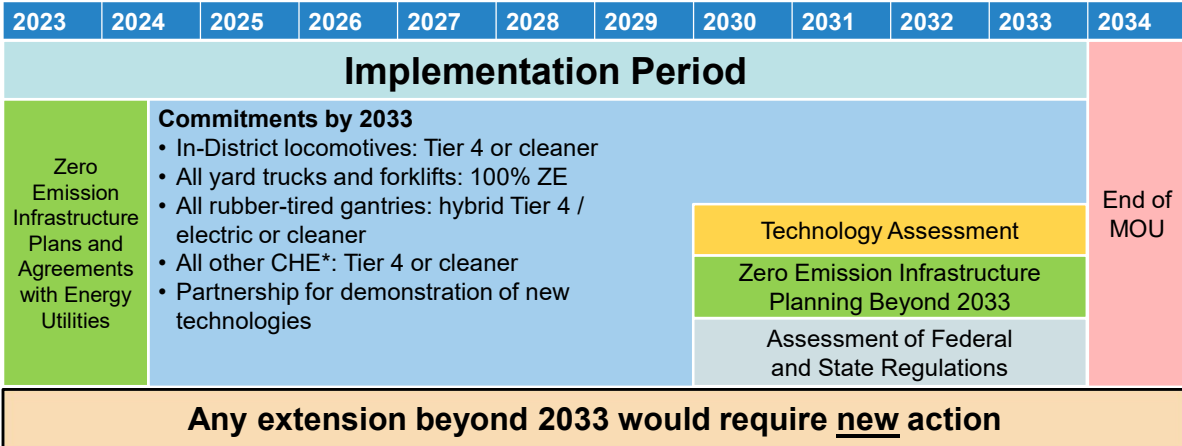


* Locomotives staying within the South Coast AQMD during normal business operations

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PRELIMINARY CONCEPTS ON MOU TIMELINE

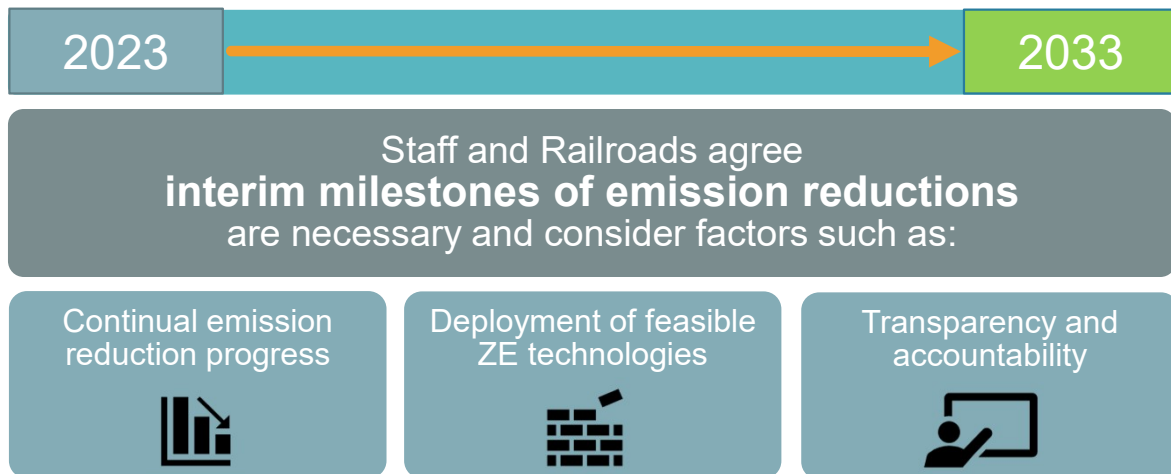


* CHE = cargo-handling equipment

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CONSIDERATIONS FOR INTERIM MILESTONES



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APPLICABILITY FOR PROPOSED RULES, MOU, CARB'S IN-USE LOCOMOTIVE REGULATION

| | Proposed Rule for New Rail Yards (Jan 2023 Concepts) | Proposed Rule for Existing Rail Yards (Nov 2019 Concepts) | Proposed MOU | CARB In-Use Locomotive Regulation |
|---------------------------------------|--|---|---|---|
| New/Existing Rail Yards | New | Existing | New and Existing | New and Existing |
| Locomotives | Yes, consistent with CARB Regulation | No, except locomotive maintenance | Yes, 100% Tier 4 or cleaner by 2033 for in-basin locomotives* | Yes, allows alternative compliance option |
| Cargo Handling Equipment (CHE) | Not yet determined | Not contemplated | Yes, cleaner than currently required** | No |
| Zero-Emission Infrastructure | Plans | Plans | Plans and agreements with electric utilities | May be funded by spending account |

* Including both switching and line-haul locomotives performing only in-basin activities.

**Currently subject to the existing statewide CHE Regulation.

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PRELIMINARY ESTIMATES OF EMISSION REDUCTIONS

Preliminary NOx Reductions Between Now and 2033 (tons per day)

| | Proposed Rule for New Rail Yards* (Jan 2023 Concepts) | Proposed Rule for Existing Rail Yards (Nov 2019 Concepts) | Proposed MOU** | CARB In-Use Locomotive Regulation*** |
|-------------------------------------|---|---|---|---|
| Locomotives | ? | <0.1 <i>Assuming reduced maintenance emissions</i> | About 2.4 <i>Commitment of 100% Tier 4 or cleaner In-District locomotives</i> | Switchers: 0.3 to 2.6 All Locomotives: Up to 8.2 <i>Range depends on compliance option chosen</i> |
| Cargo Handling Equipment**** | ? | 0 | About 0.1 | 0 |

* Emission reductions from PR 2306 concepts are undetermined due to proposed new intermodal rail yards with uncertain futures.

** Preliminary estimates were based on existing rail yards only while the proposed MOU will cover new rail yards as well. Further refinements are underway.

*** 2022 State Implementation Plan emissions inventory for Class 1 switching and line haul activities in South Coast Air Basin: CY 2022 vs. CY 2033.

**** Estimated reductions for Cargo Handling Equipment under the proposed MOU are in excess of the existing CARB CHE regulation.

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TECHNOLOGY DEMONSTRATION

- South Coast AQMD and Railroads would cooperate with ZE technology partners on technology demonstration and deployment projects
- Cooperation may include applying for funding, conducting projects, and reporting results of demonstrations and/or deployment projects



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ROLE OF MOU WITH OTHER REGULATIONS



MOU would be in harmony with local, state, or federal rules or regulations for applicable equipment

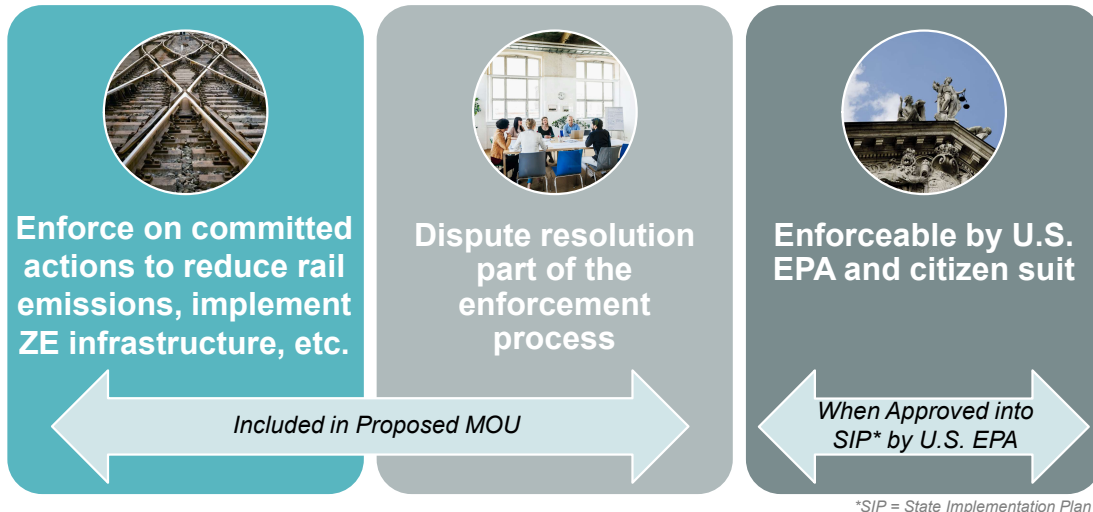


Any future local, state, or federal regulation that imposes stricter requirements will take priority over MOU

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PRELIMINARY ENFORCEABILITY CONCEPTS



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COMPARISON OF POTENTIAL ENFORCEMENT IN PROPOSED MOU AND SOUTH COAST AQMD RULES

| Proposed Enforcement Mechanism | Proposed Railroad MOU | South Coast AQMD Rules |
|--|----------------------------|----------------------------|
| Notification of Non-Compliance | ✓ | ✓ |
| Dispute Resolution Process | ✓ | ✓ |
| Financial Consequences | ✓ | ✓ |
| Court-Ordered Specific Performance | ✓ | ✓ |
| Inclusion in State Implementation Plan | ✓ | (If Applicable) |
| 3 rd Party Enforceability | (Through inclusion in SIP) | (Through inclusion in SIP) |

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SEEKING INPUT REGARDING COMMUNITY BENEFITS

EXAMPLES



Data Transparency

What kind of data is beneficial to the community?



Reduce Community Exposure

What specific exposure reduction measures should be considered?



Workforce Development

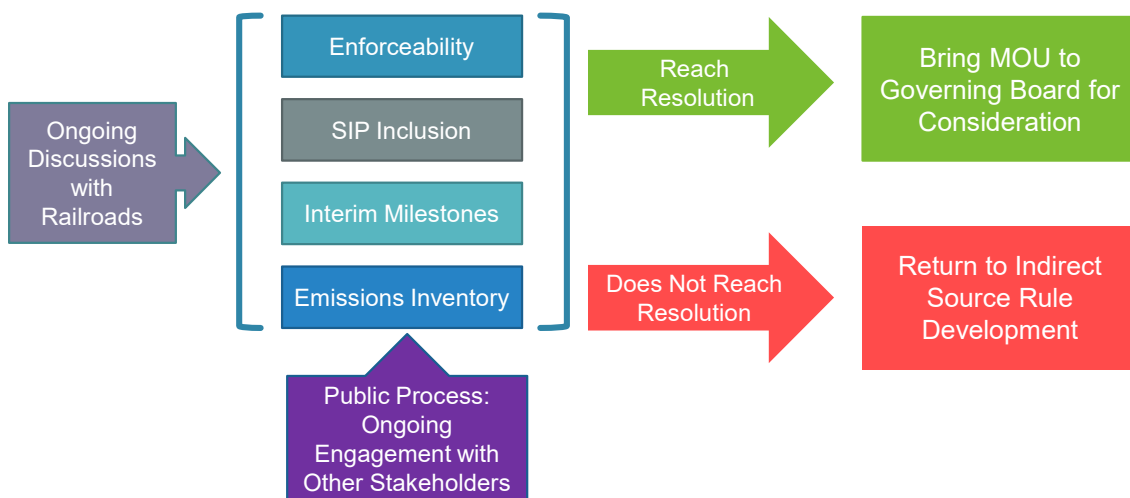
Are there effective workforce development models in this community?

Other Measures?

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DECISION PATHWAY FOR MOU DEVELOPMENT



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UPCOMING ACTIVITIES



Continue working with all stakeholders



Release Draft MOU and Staff Report for public comment in mid-November



Board consideration of MOU in January

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