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# **Proposed Rule 2304**

## **Marine Port Indirect Source Rule**

### Working Group Meeting

Join Zoom Webinar Meeting  
- from PC or Laptop  
<https://scaqmd.zoom.us/j/91542075443>  
Zoom Webinar ID: 915 4207 5443  
Teleconference Dial In +1 669 900 6833  
**June 1, 2023, 3:00 PM PST**

# Agenda



PR 2304 Rulemaking Status



PR 2304 Rule Concept Development



Initial Rule Concepts



Next Steps



Discussion



# Status of PR 2304 Rulemaking

## ✓ Recent rulemaking activities

- Held three ISR Community Workshops in March and April
  - One of the two in-person workshops took place in the Ports-adjacent community
- Established preliminary rulemaking emissions inventory
  - Focus on container terminal-specific emissions
  - To be used in scenario analyses to evaluate potential emission reduction pathways
- Developed preliminary rule concept
  - Focus of today's Working Group Meeting – seeking stakeholder input

## ✓ Key activities in progress

- Drafting and releasing the initial version of preliminary rule language
- Conducting research and technical analyses, to be included in the staff report

## ✓ Continuing stakeholder engagement

- Terminal and other site visits
- Individual/group meetings

# Background on Port ISR Rule Concept Development

- **Previous Working Group Meetings and Mobile Source Committee updates**
  - Air quality/public health impacts and sources of emissions from port operations
  - Business model: different roles of ports, terminal operators, cargo owners, emission sources
  - Overview of recently adopted CARB regulations and statewide SIP\* strategies
  - Potential opportunities for early/additional emission reductions, including accelerating transition to ZE\*\*
- **Staff's considerations for initial Ports ISR rule concept approach**
  - Staggered rulemaking, with container terminals addressed first

### COORDINATION OF BUSINESS OPERATIONS

Emission Source	Dispatch Decisions	Role of POLA & POLB
OGVs	<ul style="list-style-type: none"> <li>Shipper chooses the carrier and route; (*some shippers pay a premium for "green transportation")</li> <li>Ocean Carrier dispatches specific vessels</li> </ul>	<ul style="list-style-type: none"> <li>Provides incentives to vessel operators for reducing ship emissions (Vessel Speed Reduction Program, Green Ship Program)</li> <li>Assesses fees to ensure movement of cargo through port complex</li> </ul>
Drayage Trucks	<ul style="list-style-type: none"> <li>Trucking companies dispatch specific trucks or contract with independent owner/operators</li> </ul>	<ul style="list-style-type: none"> <li>Controls truck access (drayage registry)</li> <li>Assesses fees for Clean Truck Fund</li> </ul>

### Port Operations - Industry Business Model

Many entities involved in port operations

- Port authority/landlord
  - POLA & POLB
  - Owens terminal lands and certain infrastructure (e.g., on/near-dock rail tracks and yards, etc.)
- Terminal operator/tenant
  - Independent
  - ...
  - ...
  - ...
- ...
- ...
- ...

### Role of PR 2304 – Ports ISR

Reduce emissions from port sources to help meet federal and state air quality standards throughout the region

Reduce near-p...

### MAXIMIZING ROLES OF PORT AUTHORITY AND TERMINAL OPERATOR IN PORT OPERATIONS

Staff is considering a port-wide emissions cap approach to both provide flexibility and push the port authority and terminal operators to fully utilize their unique tools to reduce port emissions and meet the emissions cap

Port Authority's Tools	Terminal Operator's Tools
<ul style="list-style-type: none"> <li>Facilitation of infrastructure installation</li> <li>Tariffs and Environmental Ordinances                             <ul style="list-style-type: none"> <li>Clean Truck Program</li> <li>Demurrage / Container Dwell Fee</li> </ul> </li> <li>CEQA mitigation measures</li> <li>Lease Agreements                             <ul style="list-style-type: none"> <li>May incorporate CAAP and other environmental measures</li> </ul> </li> <li>Incentives                             <ul style="list-style-type: none"> <li>Vessel speed reduction</li> <li>Green ship incentives</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Direct on-terminal actions                             <ul style="list-style-type: none"> <li>Clean Cargo Handling Equipment</li> <li>On-terminal ZE infrastructure installation</li> <li>Alternative at-berth control facilitation</li> </ul> </li> <li>Coordination with customers and sibling shipping lines to route cleaner ships</li> <li>Contractual agreements with customers                             <ul style="list-style-type: none"> <li>May incorporate applicable environmental regulations and CEQA mitigation measures</li> </ul> </li> </ul>

\* SIP = State Implementation Plan

\*\* ZE = zero emission

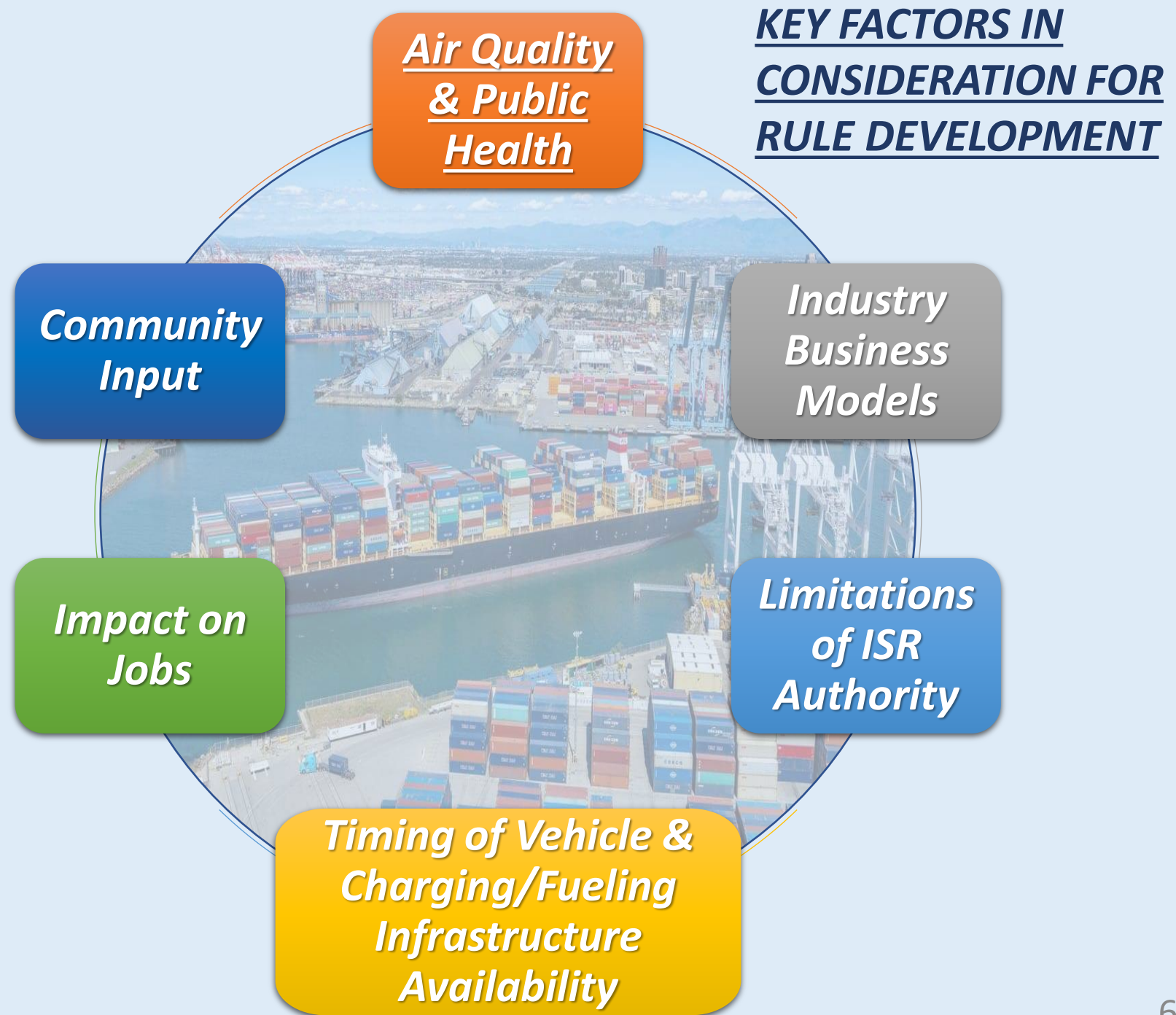


# PR 2304 Rule Concept Development



# Initial Draft Rule Concept

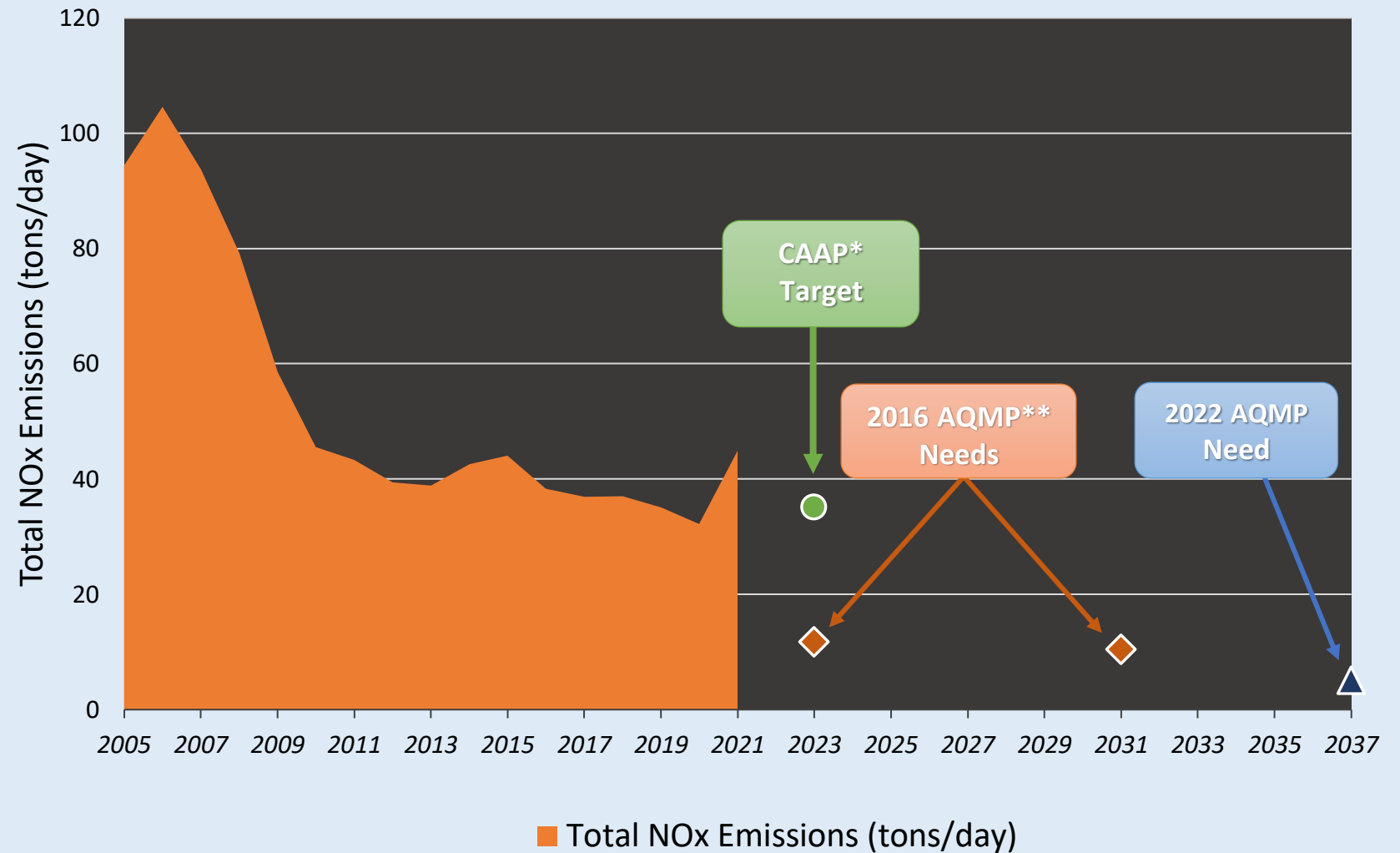
- Rule concept presented here is staff's initial approach
- Additional details will need to be developed with this concept during the rule development process
- Stakeholder feedback is critical to shape this initial draft into a fully developed proposed rule





# Ports' Emissions and Regional Attainment Needs

## San Pedro Bay Ports Emissions



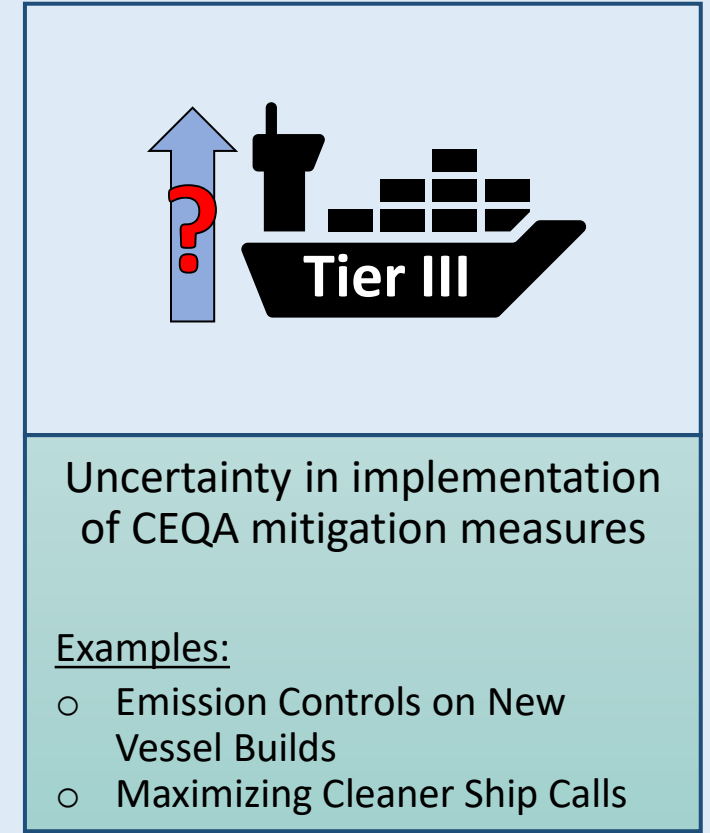
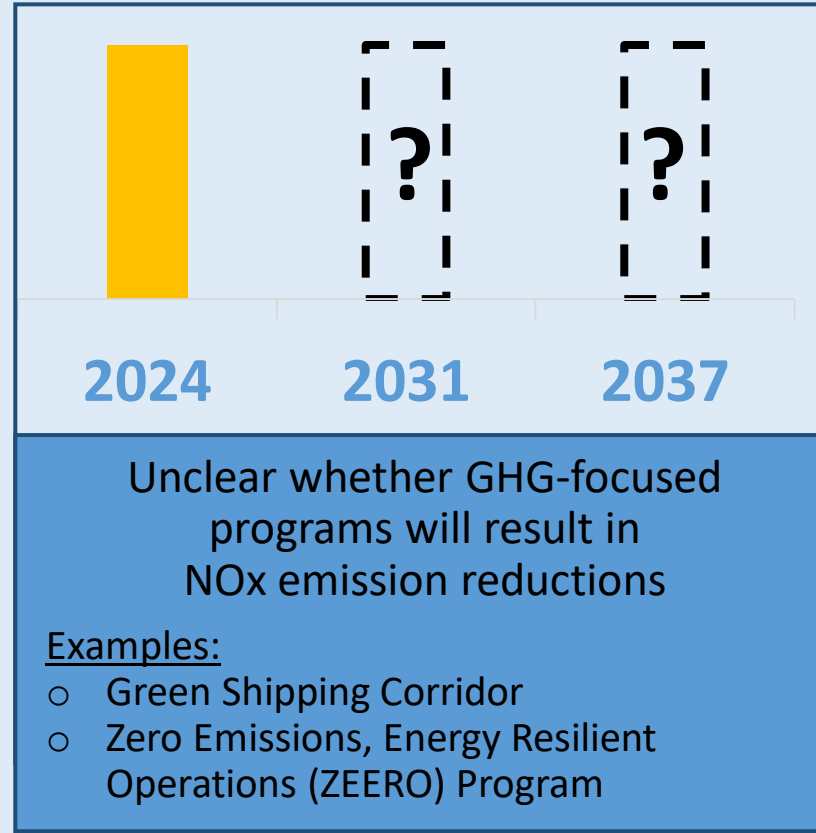
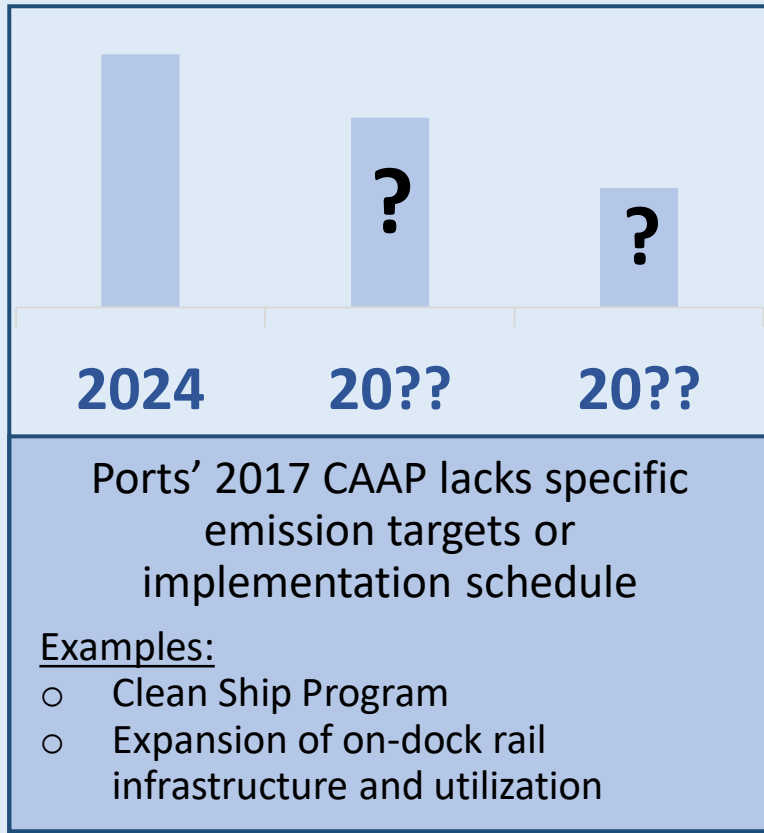
\* CAAP = San Pedro Bay Ports Clean Air Action Plan

\*\* AQMP = South Coast AQMD Air Quality Management Plan

Note: The AQMP needs were estimated for milestone years 2023, 2031, and 2037, which are the regional air quality attainment deadlines for the 1997, 2008, and 2015 federal 8-hour ozone standards, respectively.

# Quantifiable Emission Reductions are Needed to Meet Federal/State Air Quality Standards

## Ports' Clean Air Action Plan (CAAP) does not guarantee emission reductions



**No NOx or PM emission targets beyond 2023**



# Decisions Made over the Deployment and Use of Mobile Sources Embedded in the Ports Business Model

- Many entities involved in port operations
- Myriad of business decisions made by various entities jointly influence the deployment and use of mobile source equipment, vehicles, and vessels



Source of underlying chart: Theo Notteboom, Athanasios Pallis and Jean-Paul Rodrigue (2022) *Port Economics, Management and Policy*.

# Port Authority (*PA*) Tools to Reduce Emissions

Port Authority (*PA*) = A City department governed by the Harbor Commission to manage Port Lands granted by the State

## Examples of PA Tools

### Facilitating Actions

- Charging infrastructure installation
- Applies for grants
- Develops/implements incentive programs (e.g., Vessel Speed Reduction)

### Lease/Operating Permits (Agreements)

- Incorporates CAAP measures
- Incorporates CEQA mitigation
- Incorporates engine standard requirement for permit holder's assets
- Determines duration of port/container terminal agreement, and any re-openers

### Tariffs and Environmental Ordinances

- Clean Truck Program
- Demurrage/Container Dwell Fee

# Container Terminal Operator (*CTO*) Tools to Reduce Emissions

Container Terminal Operator (*CTO*) = Terminal permit holder (and its contracted operator, if applicable)

## Examples of CTO Tools

### On-Terminal Actions

- Uses clean cargo handling equipment
- On-terminal ZE infrastructure installation
- Alternative at-berth control facilitation

### Terminal Fees

- Container dwell fees
- PierPASS

### Contract Agreements with Customers

- Incorporates corporate sustainability goals
- Incorporates CAAP and CEQA mitigation
- Incorporates environmental regulations

### Coordination with Sibling or Customer Carrier

- Route cleaner ships
- New, cleaner vessel designs
- Early deployment of ZE drayage trucks (if applicable)





# Initial Draft Rule Concept



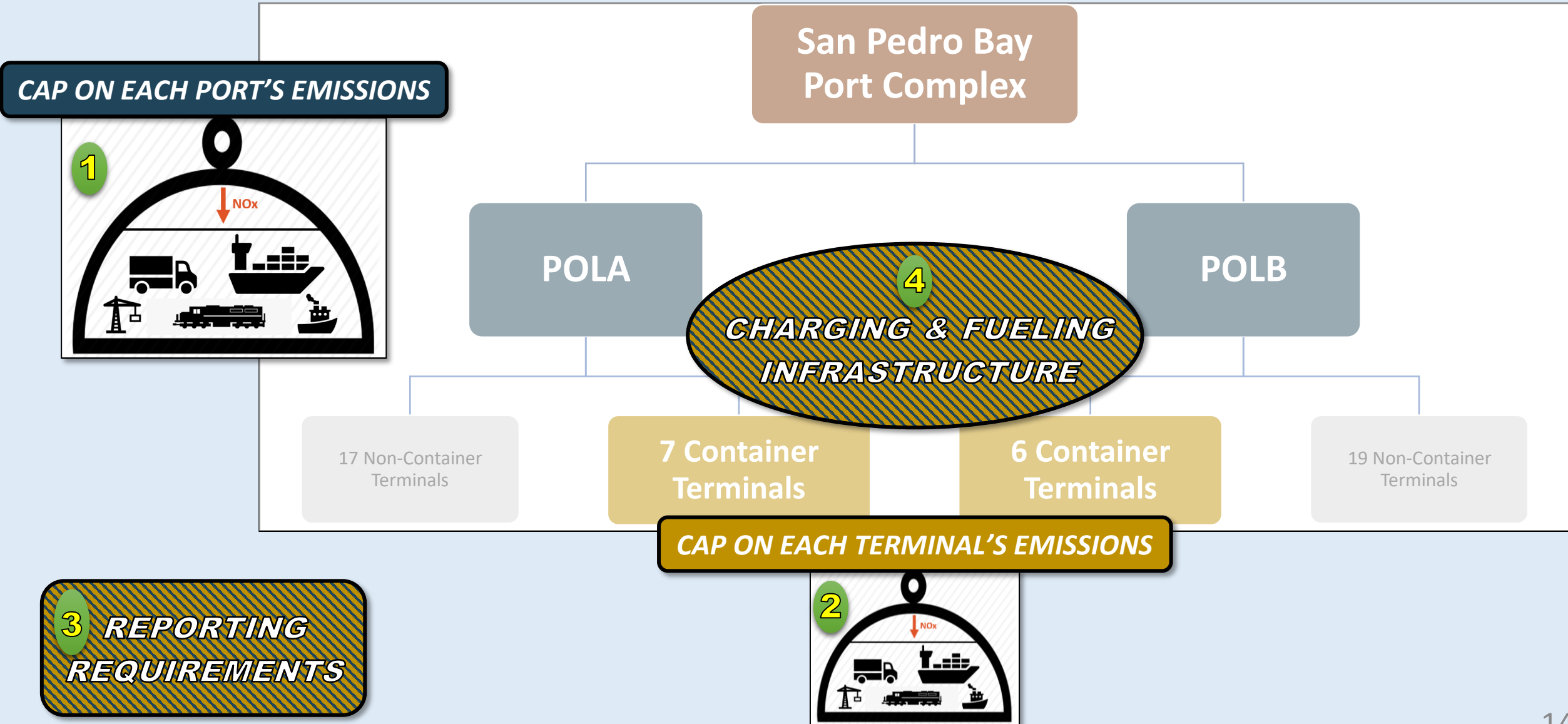
# Key Goals of PR 2304

Drive additional emission reductions from port sources to meet quantifiable targets by regional attainment deadlines

Maximize co-benefit of diesel particulate matter (DPM) reductions to lower local health risk

Facilitate ZE implementation at scale for on-terminal operations

# Overview of Initial Draft Rule Concept





# Layered Requirements on Port Authority and Container Terminal Operators

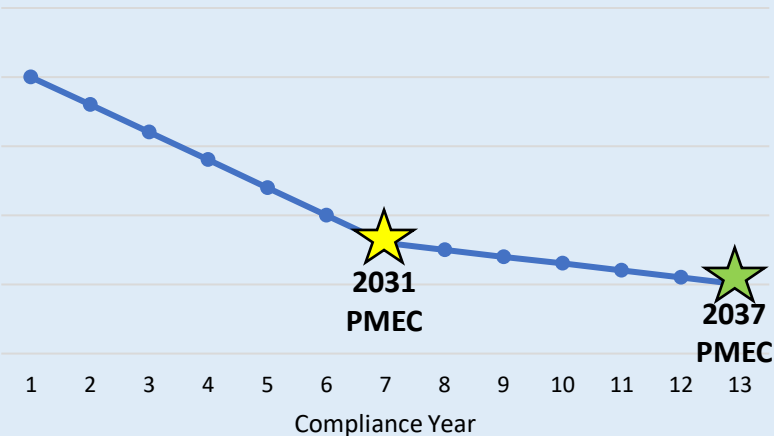
- Enforceability
  - Ensure emission reduction actions are taken by all entities in charge of facilities
    - Addresses multiple levels in the business model
  - Allow full utilization of PA's and CTO's respective toolkits to implement Ports ISR requirements
- Facilitate concurrent and coordinated actions between PA and CTO to meet port-wide emission targets
- Encourage cross-collaboration in preventing future port emission surges (e.g., due to business cycles)

# Initial Draft Port Authority Requirements

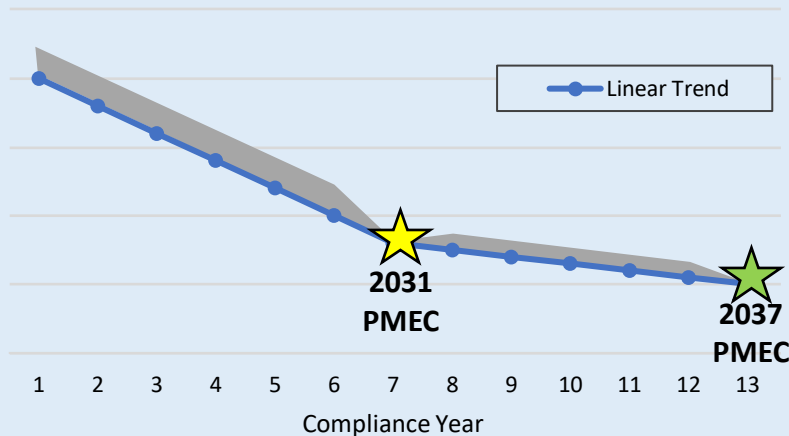
- Each port authority required to meet its own port-wide mass emissions caps (PMECs) for container terminal-specific emissions (NOx tons per year)
  - Initial NOx emission cap in 2031 milestone year
  - Lower NOx emission cap in 2037 milestone year, and thereafter
- In the interim of these two cap deadlines, port authorities must incrementally reduce NOx emissions annually
  - Potential approaches for interim NOx/year reduction:

Potential PMEC level to be discussed in future Working Group meetings

Linear Trend

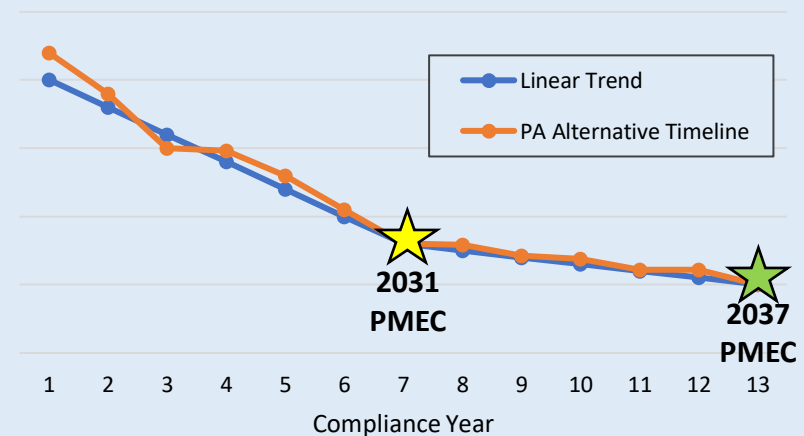


Linear Trend with Pre-Set Compliance Margin\*



\*Compliance Margin would be established in rule

Port Authority Submits Forecast Analysis with Alternative Timeline\*\*

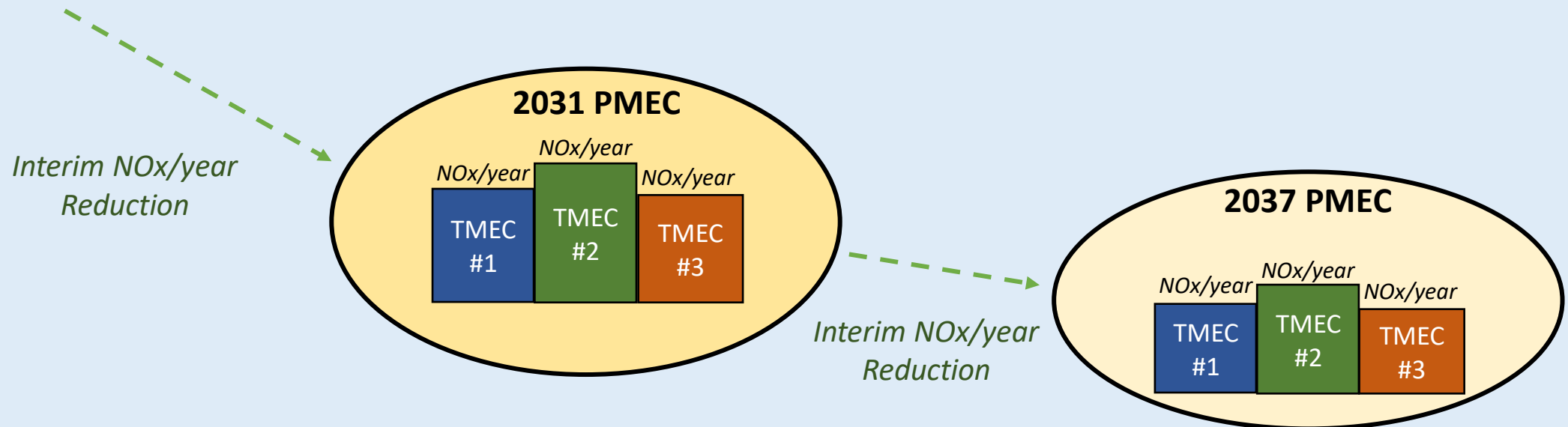


\*\*Alternative Timeline (within limits) to be approved by Harbor Commission/City, and enforced by South Coast AQMD

# Initial Draft Container Terminal Operator (CTO) Requirements

- Each CTO required to meet individual terminal-wide mass emission caps (TMECs) for 2031 and 2037 milestone years, in conjunction with PMECs
- CTO must also incrementally reduce NOx emissions during interim years
  - Same interim NOx reduction approaches as PA
    - For Alternative Timeline approach, port authority must approve terminal-specific Alternative Timeline
      - This approach could allow multiple same-port CTOs to meet respective individual TMECs as an aggregate

## Compliance Year 1





1 & 2

# Emission Caps Alternative Compliance Options

## Additional Compliance Options Available To PAs and CTOs Only During Interim Years

- Alternative compliance for interim NOx reduction targets only:
  - Pay mitigation fee to South Coast AQMD; or
  - Pay into an escrow account controlled by PA or CTO (as applicable) for future funding of clean air projects
- Staff is conducting analyses to determine:
  - Payment amount for mitigation fee and/or escrow account
  - Types of projects that escrow account(s) would fund

*Alternative Compliance Options not available to PAs or CTOs  
for milestone years in 2031 and 2037*

# Compliance Pathways to Meet Emissions Requirements

## Examples for PA to Meet PMEC

- Ensure container terminals' compliance with individual terminal requirements
- Enhance existing or establish new clean air programs
- Facilitate emission reductions that go beyond regulatory requirements from non-container terminals and other port permit holders
- Others

## Examples for CTO to Meet TMEC

- Direct on-terminal actions
- Route cleaner ships through coordination with customers and ocean carrier under parent corporate control
- Require clean air actions from customers that have contractual agreements with terminal
- Conducting and/or (co-)funding technology demonstrations and deployments
- Others

# Considerations for Proposed PMEC and TMEC Emission Inventories

## Setting PMECs

Establish PR 2304 baseline rulemaking emissions inventory

- Estimated business-as-usual emissions from 2020 to 2037
- Using San Pedro Bay Ports Emissions Inventory Methodology with SIP inventory growth factors

Apply emissions reductions to baseline emissions inventory

- Conducting scenario analyses to evaluate potential emission reduction pathways
- Considering recently adopted CARB regulations and SIP strategies

## Setting TMECs

Align TMECs with each Port's PMEC

- Evaluating Ports- and terminal-specific parameters:
  - SIP emissions inventory projections and underlying assumptions
  - Terminal-specific max TEU throughput
  - Terminal-specific actual TEU throughput
  - Others?

Potential PMEC level to be discussed in future Working Group meetings

# Annual Reporting for Mass Emissions Caps

- PA and CTO submit two types of reports:
  - Annual compliance reports to demonstrate progress during interim years before PMEC milestone years; and
  - Final compliance reports for PMEC milestone years
- PA and CTO submit separate reports, but joint reports could be submitted by PA on behalf of its CTO tenants
- Each Port should include in report:

Vehicle inventory and fleet composition of container terminal emission sources operating within San Pedro Bay Ports emissions inventory domain

Activity metrics by source/tier/fuel type/operating mode (e.g., operating hours, VMT, energy consumption, Port calls, etc.)

Total NOx and PM emissions by source and emission factors used

Any non-default emissions factors used and/or other supporting documentation

# 3 & 4 Charging and Fueling Infrastructure Requirement

PA submits infrastructure Plan (that includes CTO-specific plans) to support ZE on-terminal activities

- Covers ZE On-Terminal Activities include cargo handling equipment, OGV at-berth/hoteling facilitation, and locomotive switching operations
- Must also include zero-emissions on-site energy storage/generation for redundancy/reliability/peak shaving, etc.

PA and CTOs submit annual reports demonstrating ZE infrastructure progress

- Report key metrics like number of charging / fueling dispensers installed, electrical / fueling load capacity added, etc.
  - Charging/fueling components reliant on the electrical grid only require progress reporting (as installation is depending on utilities not covered by rule)
- Report actual installation of onsite energy storage/generation consistent with Plan

Additional infrastructure requirement considerations

- Offset reporting timeline for Charging and Fueling Infrastructure plans / annual report submittals compared to emissions cap annual reports
- Role of OGV alternative fueling infrastructure, near-port charging / fueling infrastructure, and opportunity charging under consideration for potential inclusion in rule



# Updated PR 2304 Timeline



## Next Steps



Complete analyses for setting proposed mass emissions caps and charging / fueling infrastructure requirements



Continue drafting initial draft rule language for Summer 2023 release



Continue research and technical analyses to support rulemaking



Continue stakeholder engagement including terminal site visits, individual meetings, and community consultation

# Staff Contacts

## Proposed Rule 2304

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Sign up for the mailing list at: <https://www.aqmd.gov/sign-up> (select “Proposed Rule 2304”)

Email us at: [PortsISR@aqmd.gov](mailto:PortsISR@aqmd.gov)

For more information and for materials from previous meetings,  
visit: [www.aqmd.gov/fbmsm](http://www.aqmd.gov/fbmsm) (click into “Commercial Marine Ports”)