



Draft Seaport Air Quality 2020 and Beyond Plan

California Marine Affairs and Navigation
Conference (CMANC)
September 13, 2018



Executive Summary

- Pathway to Zero-Emissions Seaport.
- Reduces criteria pollutants and greenhouse gases.
- Long-term; phased implementation.
- Practical, technology-flexible, subject to feasibility.
- Robust stakeholder engagement.
- Near-Term Action Plan (2018-2023).
- Getting Started.

Plan Development Process

Draft Plan Development
Dec. 2017-July 2018

Board Meeting

2020 and Beyond “Blueprint”: April 12, 2018

Stakeholder Engagement

Task Force Meetings: February 23, May 9, and June 21, 2018

Draft Plan

Posted online: June 29, 2018

Public Review and Comment

June 29, 2018 through Aug. 31, 2018

Board Meeting

Draft Plan: July 12, 2018

Draft to Final
July 2018-Dec. 2018

Draft to Final Plan

Appendices

Workforce Development
Costs and Resources Analysis
Public Engagement Plan
July 2018 through Nov. 2018

Stakeholder Engagement

Wed, Sept. 26, 2018 and
Mid-late Oct./early Nov.

Board Meeting

Final Plan presentation to the
Board and public: Dec. 2018

Implementation

Phases

Near-Term (2018-2023)
Intermediate-Term (2023-2030)
Longer-Term (2030-2050)

Stakeholder Engagement

Task Force Meetings
Interagency Group

Plan Update

Year 2023

Key Policy Issues

1. Near-Zero or Zero Emissions?
2. Diesel Particulate Matter (DPM), Toxic Air Contaminants (TACs), or Greenhouse Gas (GHG) reductions?
3. Technology preference for electrification?

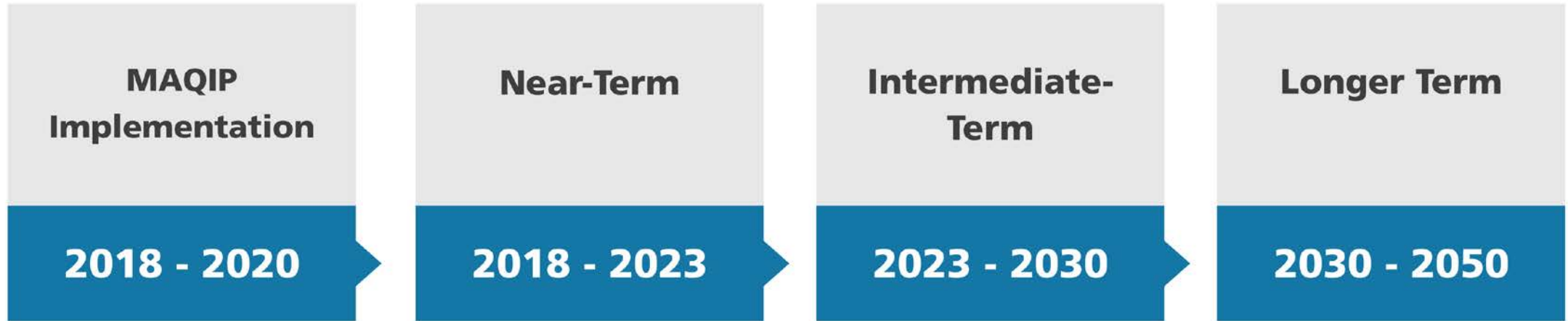
Key Draft Plan Elements

- “Pathway to Zero-Emissions Seaport”: Incremental over time.
- Technology: electrification frontrunner, flexible, subject to feasibility.
- Starts with 5-Year Near-Term Action Plan (2018-2023.)
- On-going stakeholder engagement.

Stakeholder Engagement

- Reconvened Co-chairs (Port, BAAQMD, GSC, and WOEIP) and Task Force meetings: Dec. 2017-June 2018.
 - Posted agendas, summaries, and presentations on Port website.
- Presented updates to Board and public: Dec. 14, 2017, April 12, 2018, and July 12, 2018
- Posted *Draft Plan* on Port website and began inviting public comment and review: June 29, 2018.
- *Seaport Air Quality Plan* Task Force Meetings planned for Sept. 26, 2018 and Oct./Nov. 2018.
- Multiple opportunities for on-going input.

Phasing



- Shore power.
- Emissions inventory.
- Comprehensive Truck Management Plan.
- Task Force Meetings.
- Additional emission reduction measures.

- Renewable diesel.
- Voluntary vessel speed reduction.
- Hybrid rubber tired gantry (RTG) cranes.
- Zero-emission trucks.
- Emissions inventory.
- Task Force meetings.
- Plan Update.

Potential Implementing Actions

- Electrical upgrades.
- Smart technology.
- Hybrid and zero-emissions cargo handling equipment.
- Port fleet conversion.

- Infrastructure build out.
- New implementing actions.
- Cleaner ocean-going vessels.

Near-Term Action Plan (Years 2018-2023)

INFRASTRUCTURE

Example:

- Install electrical chargers at tenant location (Shippers Transport Express [STE]).
- Feasibility studies for drayage truck charging.
- Expanded fiber communications systems (i.e., “smart technology”) for terminal operations efficiencies.

EQUIPMENT

Examples:

- Hybrid RTGs at Oakland International Container Terminal (OICT.)
- 10 zero-emissions Class 8 drayage trucks, 5 zero-emissions yard trucks, 1 zero-emissions top handler

FUELS

Example:

- Renewable diesel for land-based and marine equipment.

OPERATIONS

Example:

- Increase shore power use.

PARTNERSHIPS

Examples:

- Seaport Air Quality Task Force (on-going.)
- Port tenants, regulatory agencies, shipping lines, Port truckers, and community.

Guiding Principles

- Planning based on fact-finding and co-learning.
- Pragmatic and cost-effective solutions.
- Stakeholder collaboration key to Plan development/implementation.
- “Near-term” projects deliver immediate air benefits

Getting Started

Shore Power

- Jan.-July 2018: 77% Successful Vessel Plug-In
- Criteria pollutants reduced in 2017: -600 tons per year (tpy).
- CO₂e (carbon dioxide equivalents) reduced in 2017: -21,800 tpy.

Moyer Grant (June 2018: Contract executed)

- 13 Hybrid RTG Cranes.
- Criteria pollutants: -45 tpy.
- CO₂e: -1,200 tpy.

(ZANZEFF) Grant (Sept. 2018: Preliminarily Awarded)

- 10 zero-emissions Class 8 drayage trucks and 10 chargers.
- 5 zero-emissions yard trucks
- 1 zero-emissions top handler.
- Related electrical infrastructure.
- Criteria pollutants: -8 tpy.
- CO₂e: -940 tpy.

Port Fleet (Sept. 2018)

- Received first zero-emissions electric van (9-12 passengers.)

Key Milestones

Actions	Date
Preparing Cost Assessment, Resources Assessment, Workforce Development, and Public Engagement Plan.	July 1, 2018- Nov. 30, 2018
Hold <i>Seaport Air Quality Plan</i> Task Force Meeting #4.	Wed., Sept. 26, 2018
Hold <i>Seaport Air Quality Plan</i> Task Force Meeting #5.	Mid-late Oct./early Nov.
Present <i>Final Seaport Air Quality 2020 and Beyond Plan</i> to Board and public at Board Meeting.	Dec. 2018

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