



**PORT OF OAKLAND
SEAPORT**

AIR QUALITY 2020 & BEYOND PLAN

Task Force Meeting 11.18.20

The Agenda



**Welcome &
Introductions**



**Progress Update &
Feedback on Port Studies**



Topics of Interest



**Questions &
Discussion**



**Future Public Engagement &
Next Steps**

Progress Report on NTAP (1 of 4)

#	Implementing Action	Status as of July 2020
1	13 Hybrid Rubber-Tired Gantry (“RTG”) Cranes at SSAT	<u>Completed:</u> All 13 RTG cranes at OICT have been converted to hybrid and are operating successfully today. The hybrid RTGs achieve a 93% reduction in fuel consumption (from 10-12 gallons/hour down to 0.5 gallons/hour), a 95% reduction in diesel particulate matter (“DPM”), and a 99% reduction in NOx.
2	90% Shore Power Use	<u>Ongoing:</u> Port staff track shore power usage in real time and produce monthly snapshots (posted on Port’s website) to monitor progress towards the goal of a 90% plug-in rate. Port staff correspond monthly with each terminal operator and the nine biggest shipping lines to report on shore power usage and provide details for any calls that did not plug in. The Port-wide plug in rate for 2019 was 84% for the regulated fleet. The Port is considering installing additional shore power outlets (“SPOs”) at up to four berths to improve flexibility and increase plug-in rates.
3-5	Zero and Near Zero Emission Freight Facilities (“ZANZEFF”) Grant	<u>Ongoing:</u> Shippers Transport Express (STE) is deploying ten Transpower electric drayage trucks in 2021. Construction of electric charging infrastructure by the Port is currently underway with expected completion in early 2021. Additionally, SSA will test one electric top-pick and five electric yard tractors at the Matson Terminal in 2020/2021. These demonstrations will help determine operational feasibility.
6-8	Port Fleet Electrification	<u>Ongoing:</u> The Port has purchased one electric passenger van, four electric forklifts, and one electric work truck and has installed appropriate charging infrastructure for each. The Port has postponed new vehicle purchases during part of FY 2020 and all of FY 2021 as a cost-cutting measure which has delayed previously planned electric purchases. The Port will continue to purchase electric vehicles for the Port fleet as opportunities arise.

Progress Report on NTAP (2 of 4)

#	Implementing Action	Status as of July 2020
10	Infrastructure: Capacity and Reliability	<p><u>Ongoing</u>: At the Task Force meeting on July 10, 2020, Port staff presented an update on current projects underway, including:</p> <ul style="list-style-type: none"> • 65% carbon free energy in 2019 including 39% renewable and 16% large hydroelectric energy (well above 30% state requirement) • Study of solar + storage + electric vehicle chargers for construction • EV load module installed and collecting data • Predictive EV charging installed and collecting data
11,12	Infrastructure: Install charging equipment	<u>Completed</u> : Charging infrastructure has been installed at the Port's Harbor Facilities and at Port tenant Impact Transportation and is currently being installed at STE, see 3-5 above.
13,14	Phase I & II BYD Electric Drayage Truck Demonstrations	<p><u>Completed</u>: Port tenant GSC Logistics is currently operating three BYD electric drayage trucks and one electric yard tractor.</p> <p>Port tenant Sea Logix is currently operating four BYD electric road trucks.</p>
15	Maritime Power Capacity Study for Terminal Electrification	<u>Completed</u> : Pursuant to Port Resolution No. 19-41, Port staff presented an update to infrastructure planning and projects at the December 12, 2019, Board meeting.

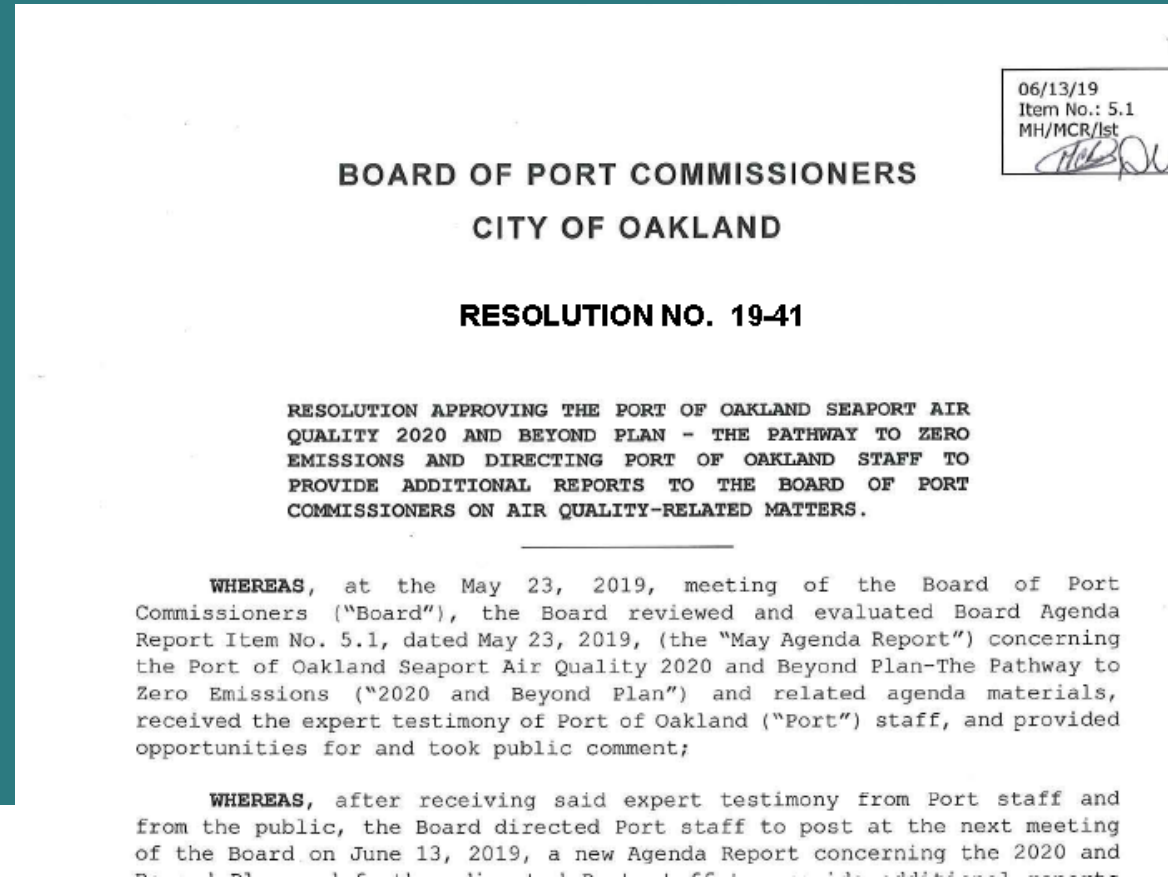
Progress Report on NTAP (3 of 4)

#	Implementing Action	Status as of July 2020
16,17	Infrastructure: Future Needs	<u>Ongoing</u> : Port staff are tracking future tenant and Port needs for new charging infrastructure. Port will continue communicating with tenants.
18	Electric Infrastructure Guide for Port Tenants	<u>Completed</u> : The Port's "EV Charging Station Permit Application" is available on the Port website, with instructions.
19	Renewable Diesel for Marine Equipment	Not yet started. Port staff are evaluating start date for study in Calendar Year 2021. Staff will start discussions with local tug companies.
20	Renewable Diesel in Port Fleet	<u>Completed</u> : The Port switched to renewable diesel for the Port's fleet in June 2020.
21	Evaluate Vessel Speed Reduction Program	Port staff completed initial technical analysis in 2018-2019 as part of Plan development.
22-31	Monitoring and Tracking	<u>Ongoing</u> : Port staff have been actively tracking the hybrid RTG project progress, monitoring shore power usage, and tracking the San Pedro Bay Ports' Clean Air Action Plan, Clean Truck Fund, and Zero Emission Truck Feasibility Studies as well as participating in California Air Resources Board ("CARB") rule-making for the proposed control measure for the At-Berth Rule, Advanced Clean Truck Rule, Commercial Harbor Craft Rule, and Transportation Refrigeration Unit Rule.

Progress Report on NTAP (4 of 4)

#	Implementing Action	Status as of July 2020
32	Encourage Railroads to Use Cleanest Possible Equipment	Not yet started. Scheduled for Winter 2020/2021. Port staff will write a letter and initiate meeting with Port rail tenants.
33-35	Outreach to Truckers	<p><u>Ongoing</u>: Port staff actively participate in Trucker Work Group, Harbor Trucking Association meetings, as well as hosting weekly Office Hours at the Port. (Office Hours have been suspended since March 2020 due to COVID-19.)</p> <p>Additionally, the Port coordinated and participated in a meeting in April 2020 between BAAQMD grant support staff and GSC Logistics to help raise truck driver awareness of truck replacement grant opportunities (Carl Moyer grant).</p>
36	Implement Workforce Development Plan	<u>Ongoing by Department of Social Responsibility.</u>
37	pursue Low Carbon Fuel Standard (“LCFS”) Credits	<p><u>Ongoing</u>: The Port registered its shore power equipment and electric car charging stations in the LCFS program (run by CARB) and has been earning LCFS credits since January 2019.</p> <p>Port staff will monetize the credits periodically by selling them directly to regulated entities in the program. The LCFS funds will be used to further the Port’s electrification goals.</p>

Port Studies, per Board Resolution 19-41



Performance Incentive Programs

- Completed a review of existing programs:
 - How they work
 - Cost of Program
 - Participation
 - Benefits
- Drew on previous work from Group 1 Evaluation (Spring 2020)
 - Port-related strategies in the WOCAP
- Applied the Feasibility criteria
- Presented to Co-Chairs and Air District review
- Final Study is on Port's website: <https://bit.ly/34h9wqL>

Performance Incentive Programs for Ocean-Going Vessels and Locomotives Study

Per Board Resolution No. 19-41 (June 13, 2019)

Port of Oakland
November 2020

AECOM



Ship Incentive Programs

Clean Engine



Clean Ship



Clean Fuels



Vessel Speed Reduction



Locomotive Incentive Programs



Financial Aspects of Air Quality 2020 & Beyond Plan

Pathway to Zero Emissions

- Plan Implementation requires participation, coordination, collaboration, and financial commitment from all stakeholders

- Potential areas for equipment and infrastructure investments:



CHE
386+



Port
Vehicles
228+



Drayage
Trucks
6,000+



Electric
Charging
Stations



Hydrogen
Fueling
Stations



Retrofit
Vessels
for Shore
Power



Shore
Power
Outlets



Electric
Infrastructure

- Financial costs are significant, will be borne by different entities, and depend on availability of funds

Financial Aspects of Air Quality 2020 & Beyond Plan

Topics Covered in the Report

- Use of annual budgeting process to incorporate funding for Plan-specific expenditures at the Seaport
- Role of grants and other incentive programs at the Seaport
- Potential funding sources for future Port capital expenditures
- Summary of NTAP expenditures to date including funding sources
- Other funding considerations (FY2024+)

Hybrid RTG Implementation Plan



Hybrid RTG Implementation Plan

On July 23, 2020, the Board directed staff “to submit a recommendation to the Board, within six months following the date of this Resolution, for a plan to implement the proposed Intermediate-Term (2023-2030) Equipment and Infrastructure Goals for all new rubber tire gantry (RTG) cranes purchases to be hybrid or cleaner”

- **Feasibility Assessment and Key Planning Assumptions**
- **Survey Results from Port Terminals**
- **Recommended Implementation**

ZE Off-Dock Yard Tractor Implementation Plan



ZE Off-Dock Yard Tractor Implementation Plan

On July 23, 2020, the Board directed staff “to submit a recommendation to the Board, within six months following the date of this Resolution, for a plan to implement the proposed Intermediate-Term (2023-2030) Equipment and Infrastructure Goals for all new off-dock yard tractor purchases to be zero-emissions provided that incentive funding is available.”

- **Feasibility Assessment and Key Planning Assumptions**
- **Survey Results from Port Off-Dock Tenants**
- **Recommended Implementation**

Questions & Discussion





Questions & Discussion



Task Force 2021 Engagement



Task Force Engagement

- Convene 2x per year
- Gather feedback:
 - Goal status
 - Emerging issues
 - Screen implementing actions
- Participate in Workshop Sessions



Website

- Check website for meeting notes and updates:
<https://bit.ly/34h9wqL>



Meetings

- Port Board of Commission Meeting
 - December 17, 2020
 - Share reports/feedback on 4 reports
- **2021 Task Force Dates:**
 - April, 2021
 - September, 2021

Contacts



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**PORT OF OAKLAND
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AIR QUALITY 2020 & BEYOND PLAN

Meeting Has Concluded

Thank you!