



SAN PEDRO BAY PORTS CLEAN AIR ACTION PLAN

2019 San Pedro Bay Ports Air Emissions Inventory Results

Christine Batikian
Port of Los Angeles

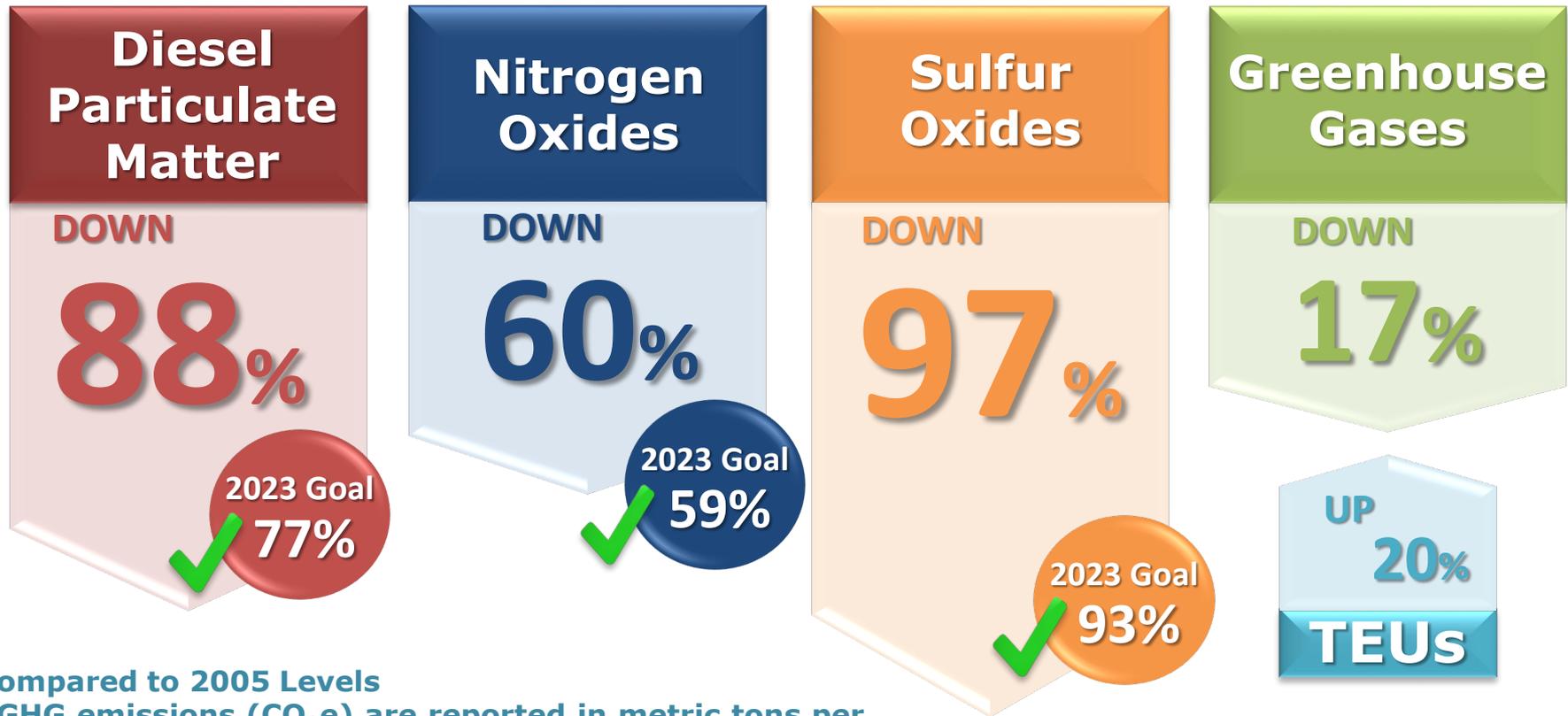


Container Throughput & Vessel Call Comparison

	2005 vs. 2019	2018 vs. 2019
Container Throughput (TEUs)	 20%	 3%
Containers (TEUs) per call	 72%	 1%
Containership Arrivals	 30%	 7%



SPBP 2019 Air Emissions Reductions

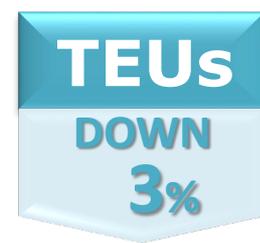
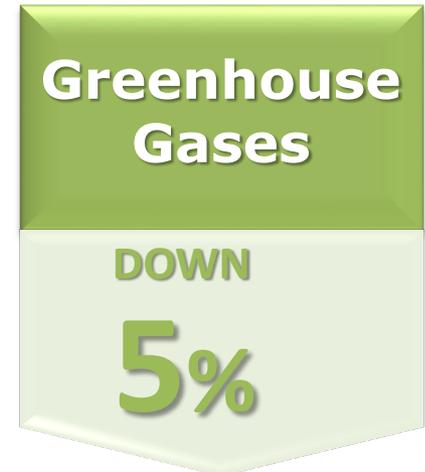
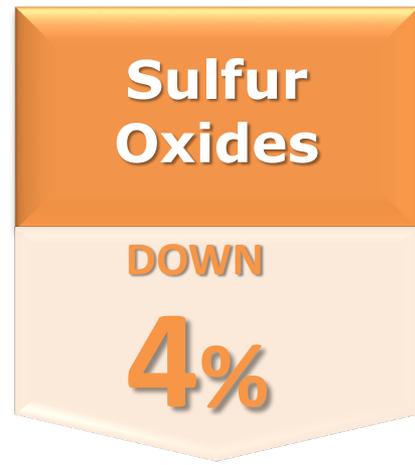
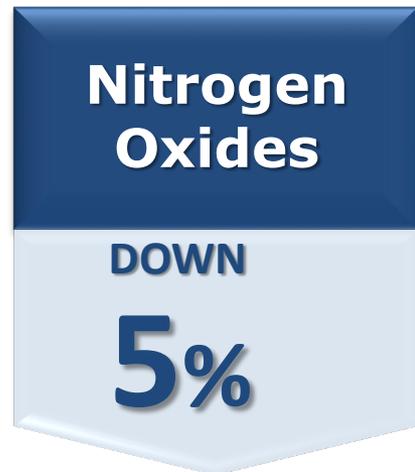
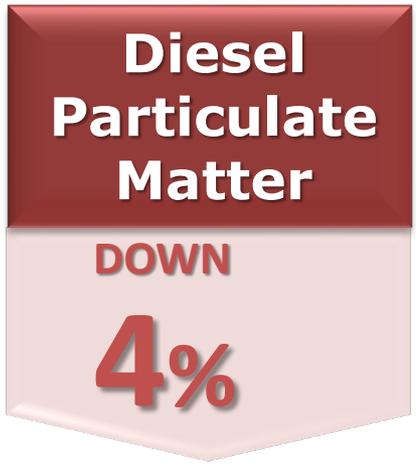


*Compared to 2005 Levels

**GHG emissions (CO₂e) are reported in metric tons per year; all other pollutants are shown in tons per year.



SPBP 2019 Air Emissions Reductions vs. 2018



*Compared to 2018 Levels
**GHG emissions (CO₂e) are reported in metric tons per year; all other pollutants are shown in tons per year.

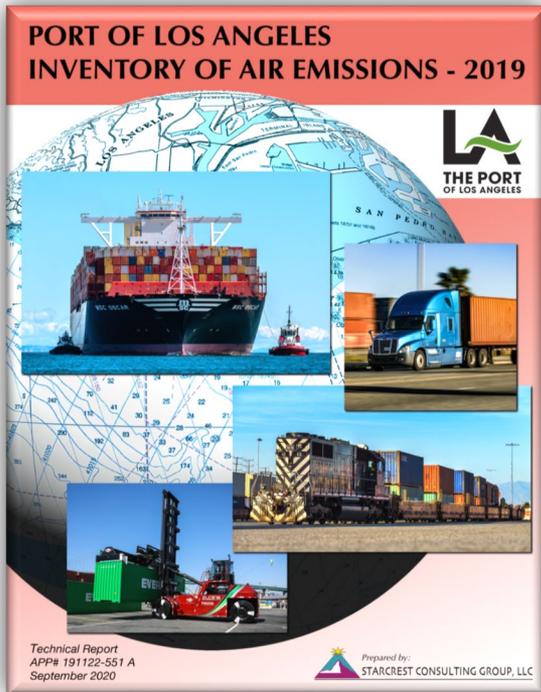


Moving Forward

- State and Federal Regulations
- Feasibility Assessments
- Technology Advancement



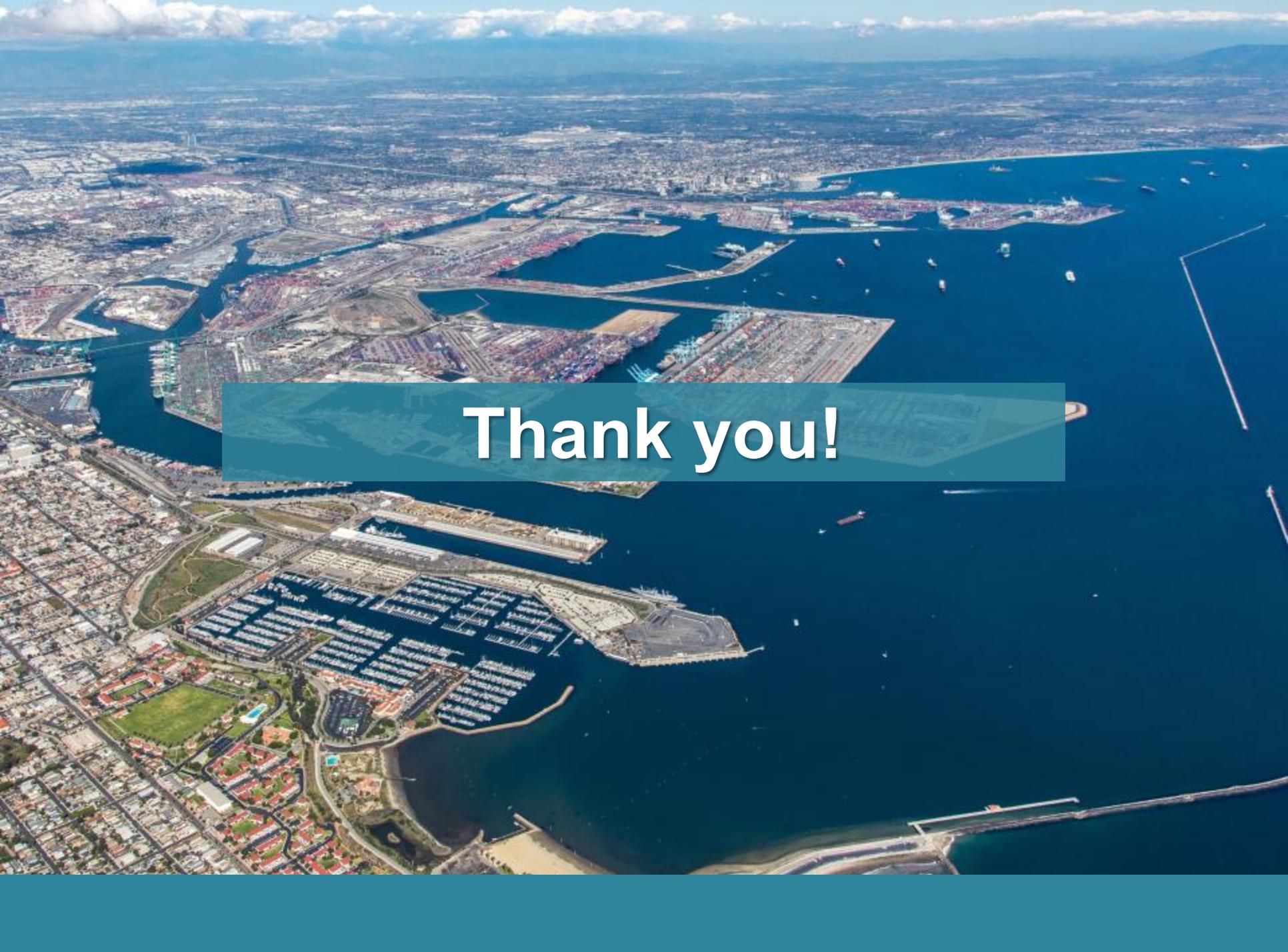
2019 Air Emissions Inventories



<https://www.portoflosangeles.org/environment/air-quality/air-emissions-inventory>



<https://www.polb.com/environment/air/#emissions-inventory>

An aerial photograph of a large harbor area, likely Seattle, showing a dense city grid on the left, a large marina with many boats in the foreground, and a busy port with numerous cargo ships and container stacks in the middle ground. The water is a deep blue, and the sky is clear with some light clouds. A semi-transparent teal banner is overlaid across the center of the image.

Thank you!



SAN PEDRO BAY PORTS CLEAN AIR ACTION PLAN

Status Update on Current Technology
Demonstrations
October 14, 2020

Questions or comments? Chat us or
submit via caap@cleanairactionplan.org

Rose Szoke, Port of Long Beach
Jacob Goldberg, Port of Los Angeles



Overview

- Update on the Ports' Technology Advancement Program, or TAP
- Update on the Ports' Grant-Funded Technology Demonstrations
- COVID-19 Impacts



Ports' Technology Advancement Program Update

- TAP Updates
- TAP Concept Paper/Proposal Update
- TAP Continued Engagement
- TAP Website

The screenshot shows the website for the Ports' Technology Advancement Program. The header includes the logos for the Port of Long Beach and The Port of Los Angeles, along with navigation links for 'About the Plan', 'Strategies', 'TAP', 'Details', 'News', and 'Contact Us'. The main content area is titled 'PORTS' TECHNOLOGY ADVANCEMENT PROGRAM' and features a brief description of the program's goals. Below this, there are four main sections: 'Application Services', 'TAP Guidelines and Funding', 'Projects in Development', and 'Funding'. Each section includes a representative image and a 'Learn More' button. On the right side, there are two additional sections: 'Technology Advancement Program' and 'Recent News', both with 'Learn More' buttons. The footer contains social media icons and the website's URL.



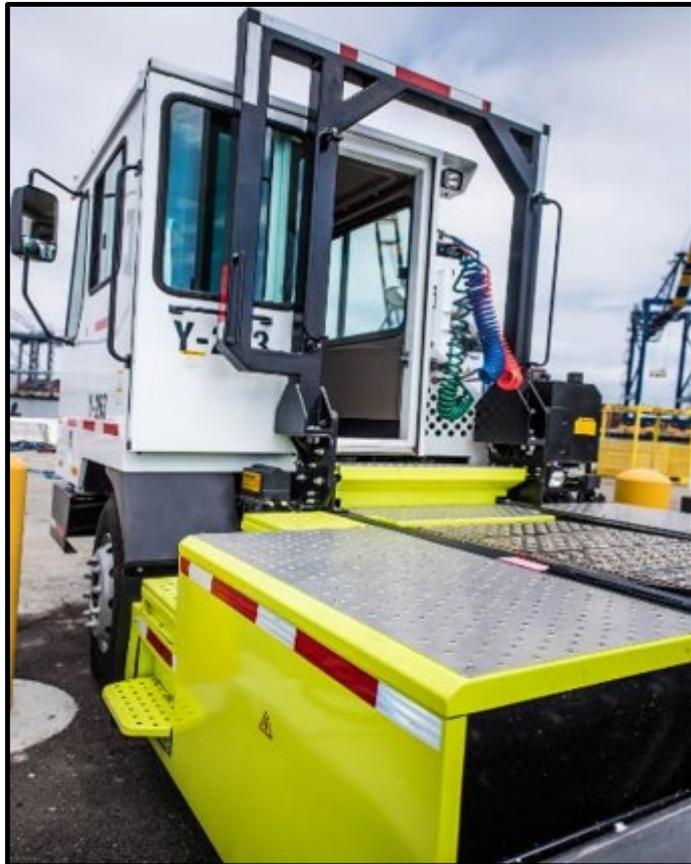
Ports Grant-Funded Demonstrations and Deployments

- Ports have been awarded a combined **\$152 M** to support the advancement of technology.
- Ports are currently demonstrating a combined total of **27 near-ZE** and **107 ZE** equipment, heavy-duty trucks, ships and harbor craft.





Advanced Yard Tractor Updates



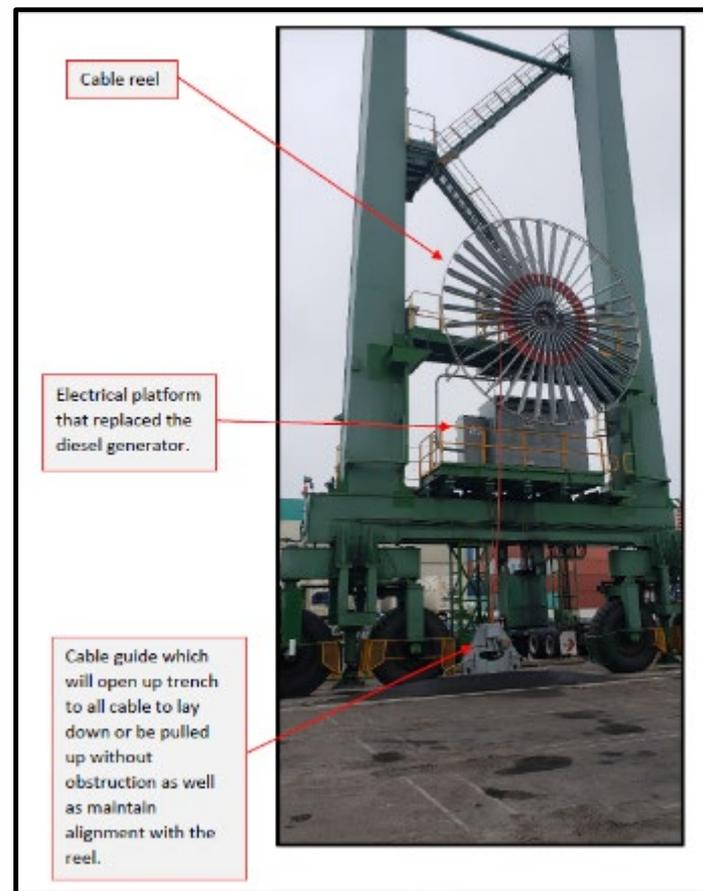


Electric Top Handler Updates





Electric RTG Cranes Update





Kenworth Toyota Zero Emissions Trucks





Shell Hydrogen Station – Ontario





Shell Hydrogen Station – Long Beach





Ports' Technology Demonstrations – COVID Impacts

- Technology manufacturers operating at reduced capacity, which have contributed to a slow-down in equipment production.
- Technology manufacturers working reduced hours due to mandatory furloughs.
- Limited access to terminals for equipment and emissions testing.
- COVID travel restrictions.



Contacts/Information

- Rose Szoke, Port of Long Beach: rose.szoke@polb.com
- Jacob Goldberg, Port of Los Angeles: jgoldberg@portla.org
- www.cleanairactionplan.org
- www.polb.com/zeroemissions
- <https://www.portoflosangeles.org/environment/air-quality/zero-emissions-technologies>

An aerial photograph of a large city harbor, likely Seattle, showing a dense urban area, a large marina filled with boats, and a deep blue body of water. A semi-transparent teal rectangular box is centered over the image, containing the text "Thank you!" in a white, bold, sans-serif font. The background shows a sprawling cityscape extending to the horizon under a blue sky with light clouds.

Thank you!



SAN PEDRO BAY PORTS **CLEAN AIR ACTION PLAN**

Clean Truck Program Update
October 14, 2020

Christopher Cannon
Port of Los Angeles



Clean Truck Program Update

- CTP Implementation Status
- Regulatory Update
- CTP Long Term Strategy Plan
- Financing Forum, OEM Workshops and Summit
- 50 to 100 Truck Demonstration Update



2017 CAAP Update – Clean Truck Program

- Beginning in 2018, new trucks entering the Ports Drayage Truck Registry (PDTR) must be 2014 engine model year or newer [completed]
 - 4,438 MY 2014+ trucks registered in the PDTR since October 1, 2018
 - 62% trucks in the PDTR are 2010 EPA Compliant
 - 38% trucks in the PDTR are 2007 EPA Compliant
 - There are 83 Low NOx trucks that use the .02 Cummins natural gas engines in the PDTR
 - There are approximately 20 Zero Emission Trucks in the PDTR



2017 CAAP Update – Clean Truck Program

- Following promulgation by the State of a near zero emission standard, all heavy-duty trucks will be charged a rate to enter the ports' terminals, with exemptions for trucks that are certified to meet this near-zero standard. Contingent upon:
 - Truck feasibility study [completed and available on Ports/CAAP website]
 - Joint Boards approved rate [\$10/TEU rate resolution approved March 2020]
 - State manufacturing standard [Approved by ARB August 2020]
 - Rate collection mechanism [Underway]
 - Ports are monitoring economic impacts of COVID closely [Underway]
 - Tariff amendment will be required for final implementation

Note: Near-Zero emission truck exemption continues to be evaluated; exemptions will be submitted as part of Tariff amendment



2017 CAAP Update – Clean Truck Program

- Starting in 2023, or when State’s near-zero engine standard is required for truck manufacturers, new trucks entering the DTR must meeting the State’s new manufacturing standard [Under development]
- Modify the truck rate so that by 2035 only trucks that are certified to meet zero-emissions will be exempt from the rate [Under development]



Key Regulatory Activities

- June 2020: State approved Advanced Clean Truck Rule requiring manufacturers to sell increasing percentages of zero emission trucks
 - Rule would require 40% of OEM sales to be Zero Emission by 2035
- August 2020: State approved Omnibus Rule establishing low NO_x manufacturing requirements of trucks in California
 - The new regulation reduces the current heavy-truck NO_x standard from 0.20 grams per brake horsepower hour to 0.05 g/bhp-hr from 2024 to 2026, and to 0.020 g/bhp-hr in 2027



Key Regulatory Activities

- Governor issues Executive Order directing all drayage trucks to be zero emissions by 2035
 - ARB staff is working on a zero emissions “in-use” rule, expected to be presented to ARB in the next 12 – 18 months
 - “In use” Rule will line up with CAAP goal



Ports' CTP Long Term Strategy Plan

CAAP Goal of 100% Zero Emission Trucks by 2035

- Boards requested Ports to provide a long term strategy plan on how the Ports would meet the 2035 CAAP goal
- Initial work has started on the plan
- Discussion at Financing Forum and Truck OEM Summit Workshops will inform this effort
- Draft for public review and comment to be released in the coming weeks



City of Los Angeles Private Financing Forum

- Occurred on September 29, 2020
- Attendees included the City of Los Angeles Mayor's Office, Ports, Regulatory Agencies, Trucking Associations, Private Financiers
- Objective:
 - Consider opportunities/models for private investment to support the CTF rate to help finance Zero Emission trucks leading to the 2035 goal/regulation
 - Discuss a forthcoming Request For Information (RFI) to get industry feedback on this topic
- Will be reported on at OEM Summit along with the results of workshops



Truck OEM Summit

- Objective – Identify the actions of key stakeholders and policymakers needed to build and transition to a market for Zero Emission Heavy Duty Trucks; and, obtain commitments from stakeholders to take coordinated action.
- Workshops :
 - Workshop 1 – Production and Financing
 - Workshop 2 – Infrastructure and Policy
- Culminates in a OEM/Public Stakeholder Summit
- Dates being finalized – Anticipated to occur in the next 4 – 6 weeks



50 to 100 Truck Demonstration Update

- The Ports have completed and posted the Concept Paper for ZE Large-Scale Drayage Truck Pilot Program at:
<https://cleanairactionplan.org/documents/zero-emissions-large-scale-drayage-truck-pilot-program-concept-paper.pdf/>
- The Ports plan to partner with SCAQMD and other regional partners to prepare a comprehensive proposal
- CARB and CEC Grant Funding Opportunity
 - Solicitation to be released in October 2020
 - CARB will provide up to \$20M for ZE Trucks
 - CEC will provide up to \$20M for charging Infrastructure
 - 50% Cost Share



Next Steps

- Hold Workshops and Truck Summit with Agencies, OEMs and Community
- Release Draft comprehensive long-term strategy plan
- Approve a rate collection mechanism
- Continue to monitor economic impacts due to COVID-19
- Update the tariff to implement the CTF Rate
- Begin collection of the CTF

An aerial photograph of a large city harbor, likely Seattle, showing a dense urban area, a large marina filled with boats, and a deep blue body of water. A semi-transparent teal banner is overlaid across the center of the image, containing the text "Thank you!".

Thank you!