









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

2019 San Pedro Bay Ports Air Emissions Inventory Results

Christine Batikian
Port of Los Angeles

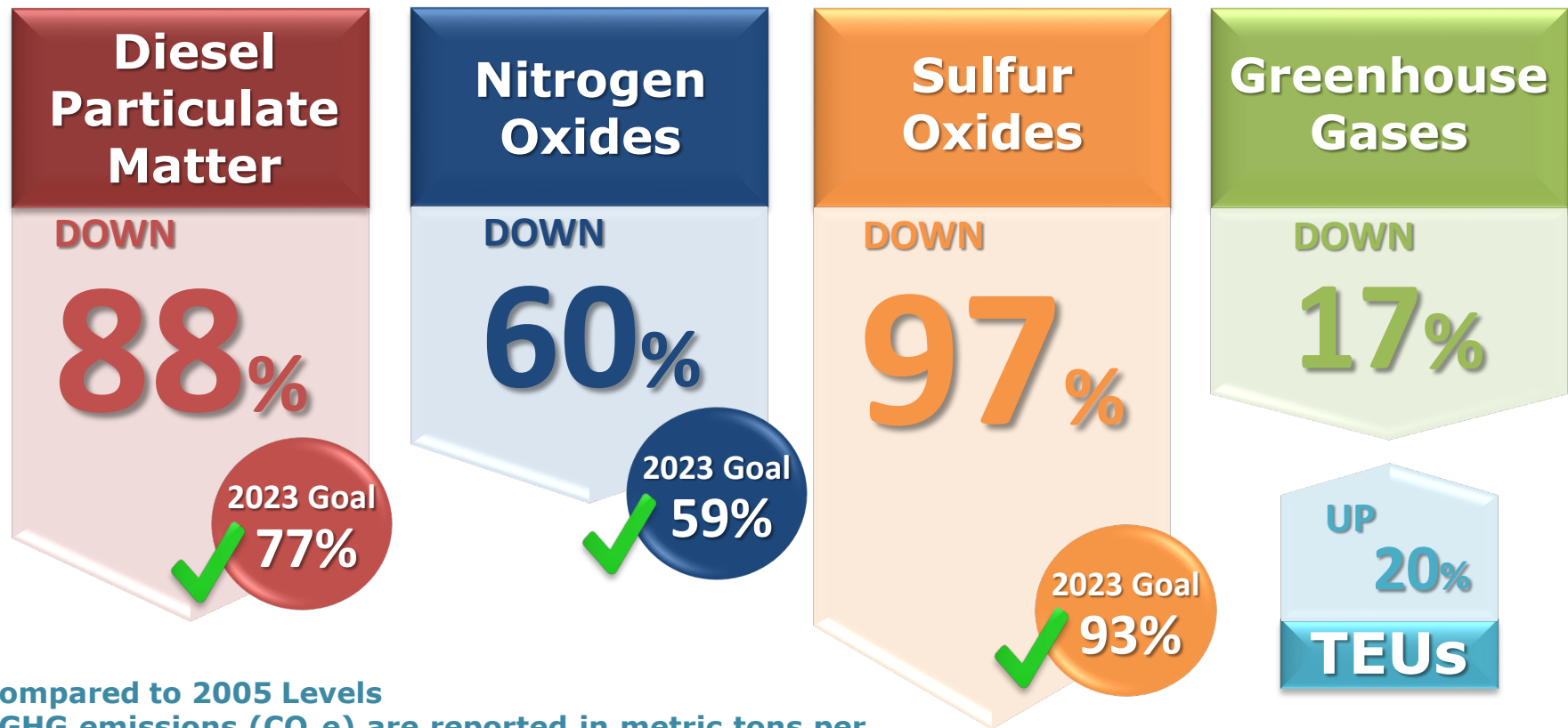


Container Throughput & Vessel Call Comparison

	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

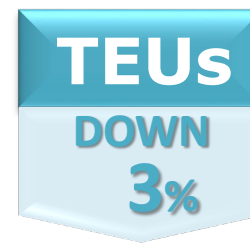
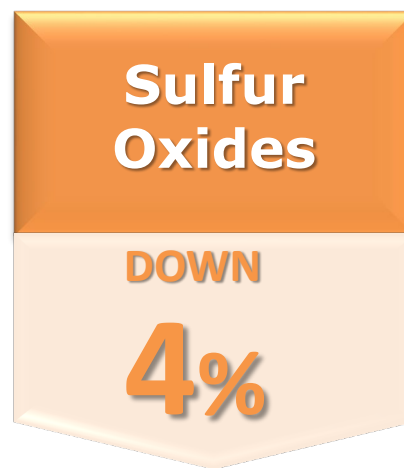
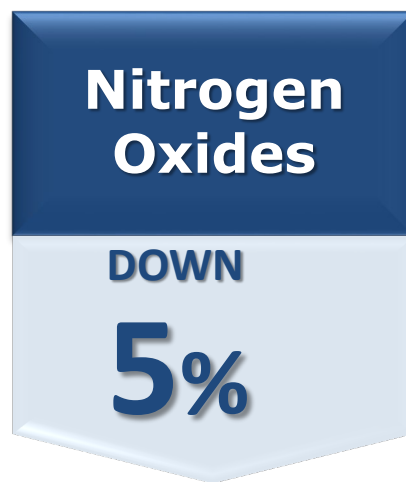
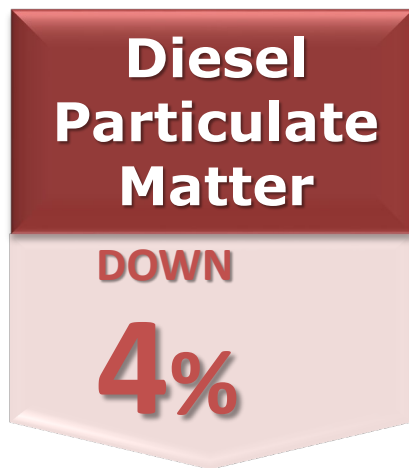


*Compared to 2005 Levels

**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

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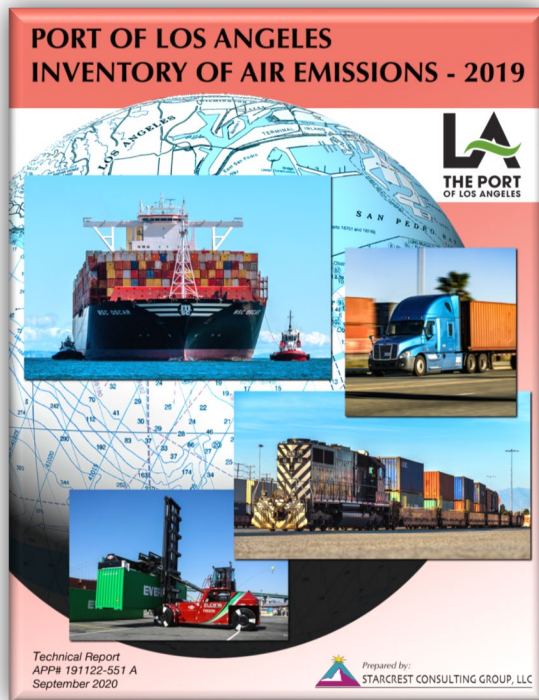


Moving Forward

- 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 port and city. The port features numerous piers, docks, and a large area filled with shipping containers. Several large cargo ships are docked at the piers. The city is visible in the background, with a dense urban area and a large body of water. The sky is blue with some clouds.

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

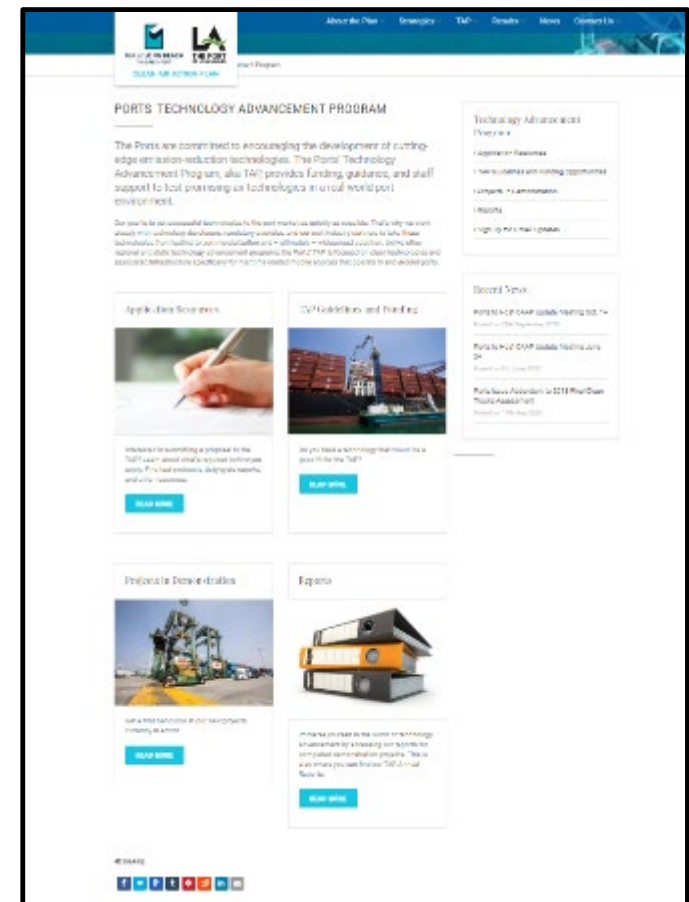


Overview

- 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





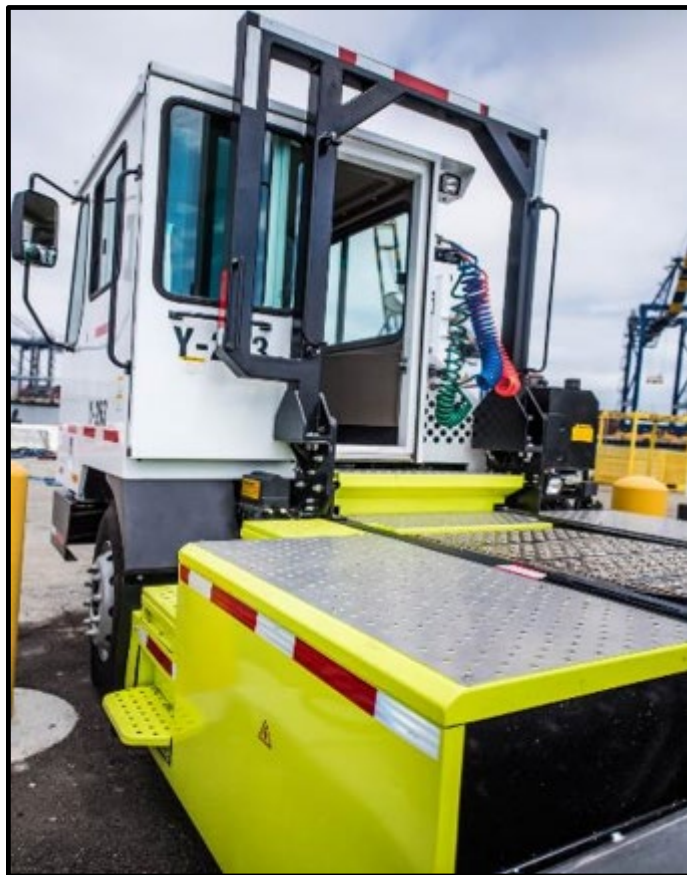
Ports Grant-Funded Demonstrations and Deployments

- 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

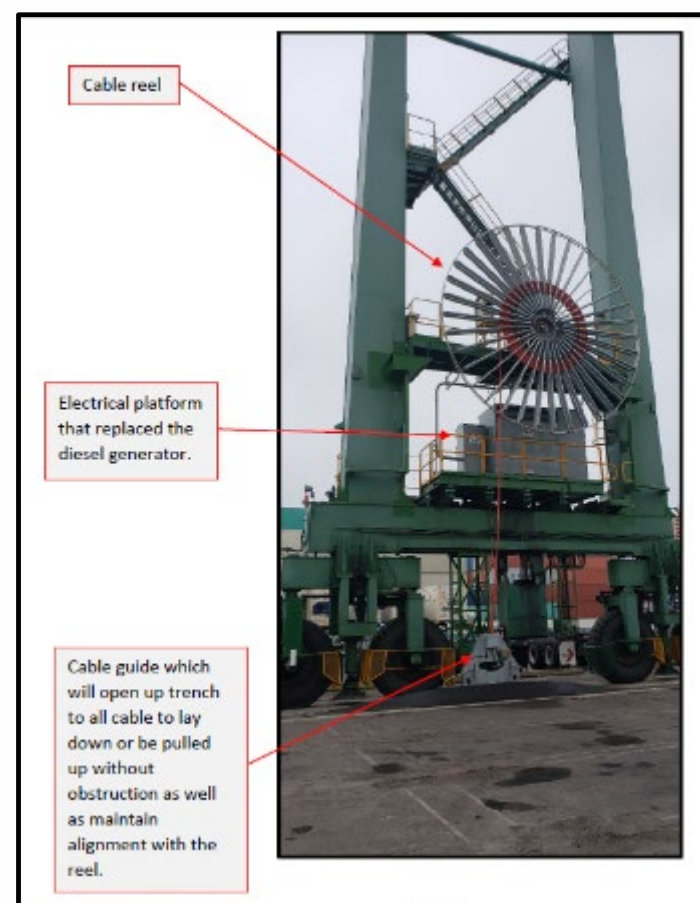
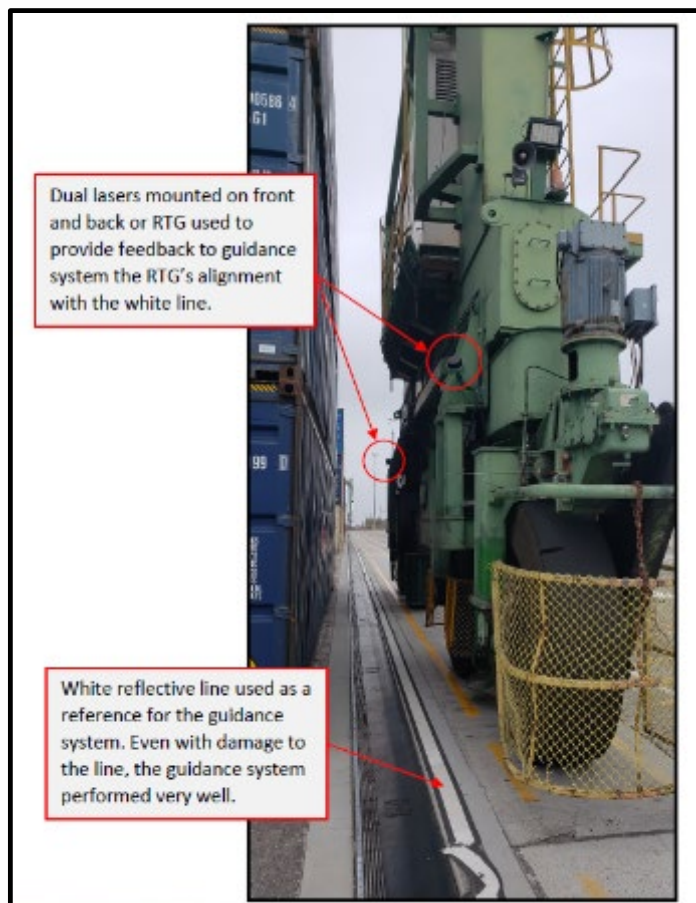




Electric Top Handler Updates



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>

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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 NOx manufacturing requirements of trucks in California
 - The new regulation reduces the current heavy-truck NOx 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

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