## Container Throughput & Vessel Call Comparison

<table>
<thead>
<tr>
<th></th>
<th>2005 vs. 2019</th>
<th>2018 vs. 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Container Throughput (TEUs)</td>
<td>↑ 20%</td>
<td>↓ 3%</td>
</tr>
<tr>
<td>Containers (TEUs) per call</td>
<td>↑ 72%</td>
<td>↑ 1%</td>
</tr>
<tr>
<td>Containership Arrivals</td>
<td>↓ 30%</td>
<td>↓ 7%</td>
</tr>
</tbody>
</table>
SPBP 2019 Air Emissions Reductions

- Diesel Particulate Matter: DOWN 88%
  - 2023 Goal: 77%

- Nitrogen Oxides: DOWN 60%
  - 2023 Goal: 59%

- Sulfur Oxides: DOWN 97%
  - 2023 Goal: 93%

- Greenhouse Gases: DOWN 17%
  - UP 20% TEUs

*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

- Diesel Particulate Matter: DOWN 4%
- Nitrogen Oxides: DOWN 5%
- Sulfur Oxides: DOWN 4%
- Greenhouse Gases: DOWN 5%
- TEUs: DOWN 3%

*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
Thank you!
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

www.cleanairactionplan.org
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

Dual lasers mounted on front and back or RTG used to provide feedback to guidance system the RTG’s alignment with the white line.

White reflective line used as a reference for the guidance system. Even with damage to the line, the guidance system performed very well.

Cable reel

Electrical platform that replaced the diesel generator.

Cable guide which will open up trench to all cable to lay down or be pulled up without obstruction as well as maintain alignment with the reel.
Kenworth Toyota Zero Emissions Trucks
Shell Hydrogen Station – Ontario
Shell Hydrogen Station – Long Beach
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
Thank you!
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
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
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
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:

• 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
Thank you!