

UPDATE ON FACILITY BASED MOBILE SOURCE MEASURE DEVELOPMENT FOR MARINE PORTS

BOARD MEETING

AUGUST 6, 2021

BACKGROUND

- Board directed staff to pursue an MOU with both ports in May 2018 and in March 2020
 - MOU process developed from 2012 and 2016 AQMP control measures
 - 2012 AQMP IND-01- Backstop Measure
 - 2016 AQMP MOB-01-Facility-Based Mobile Source Measure
 - Build off of ports Clean Air Action Plan
- Ports' 2010 Clean Air Action Plan set a 2023 NOx target of 59% reduction below 2005 levels
 - Original target consistent with 'defined measures' from 2007 AQMP, but did not include additional reductions needed from 'black box' measures

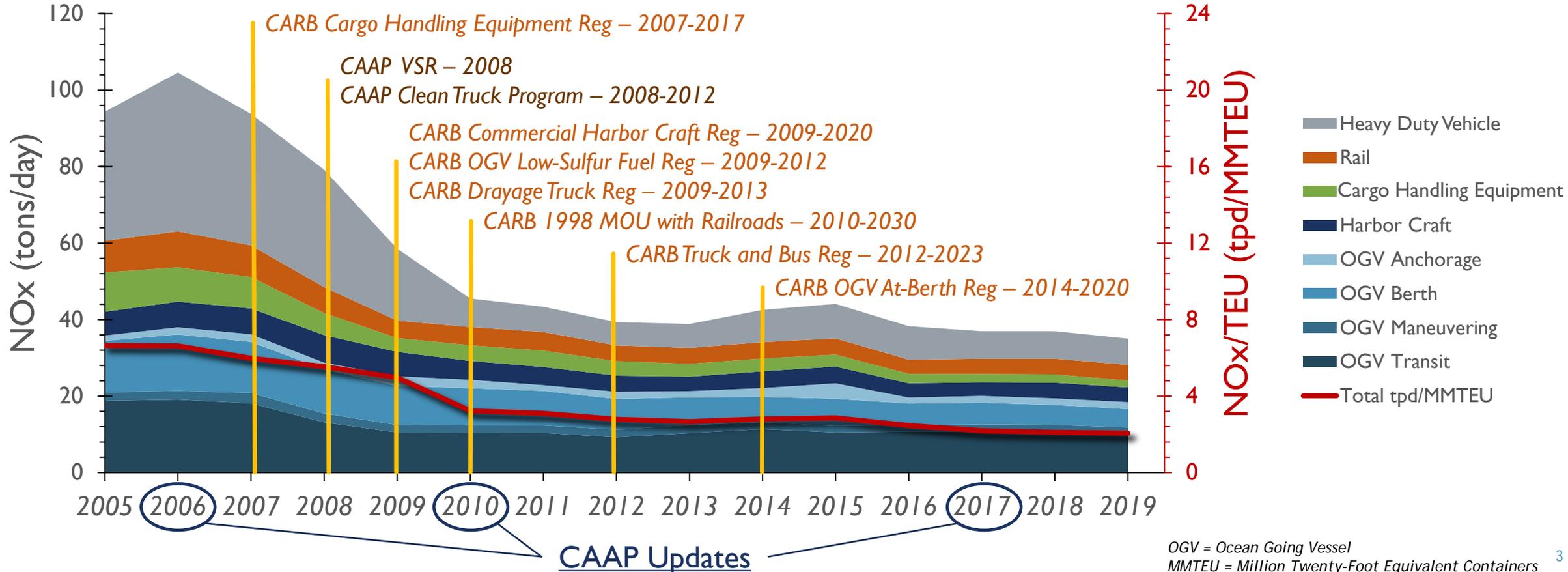
NOx Emissions from Ports of LA & LB



Source: POLA, POLB

MARINE PORTS - EMISSIONS

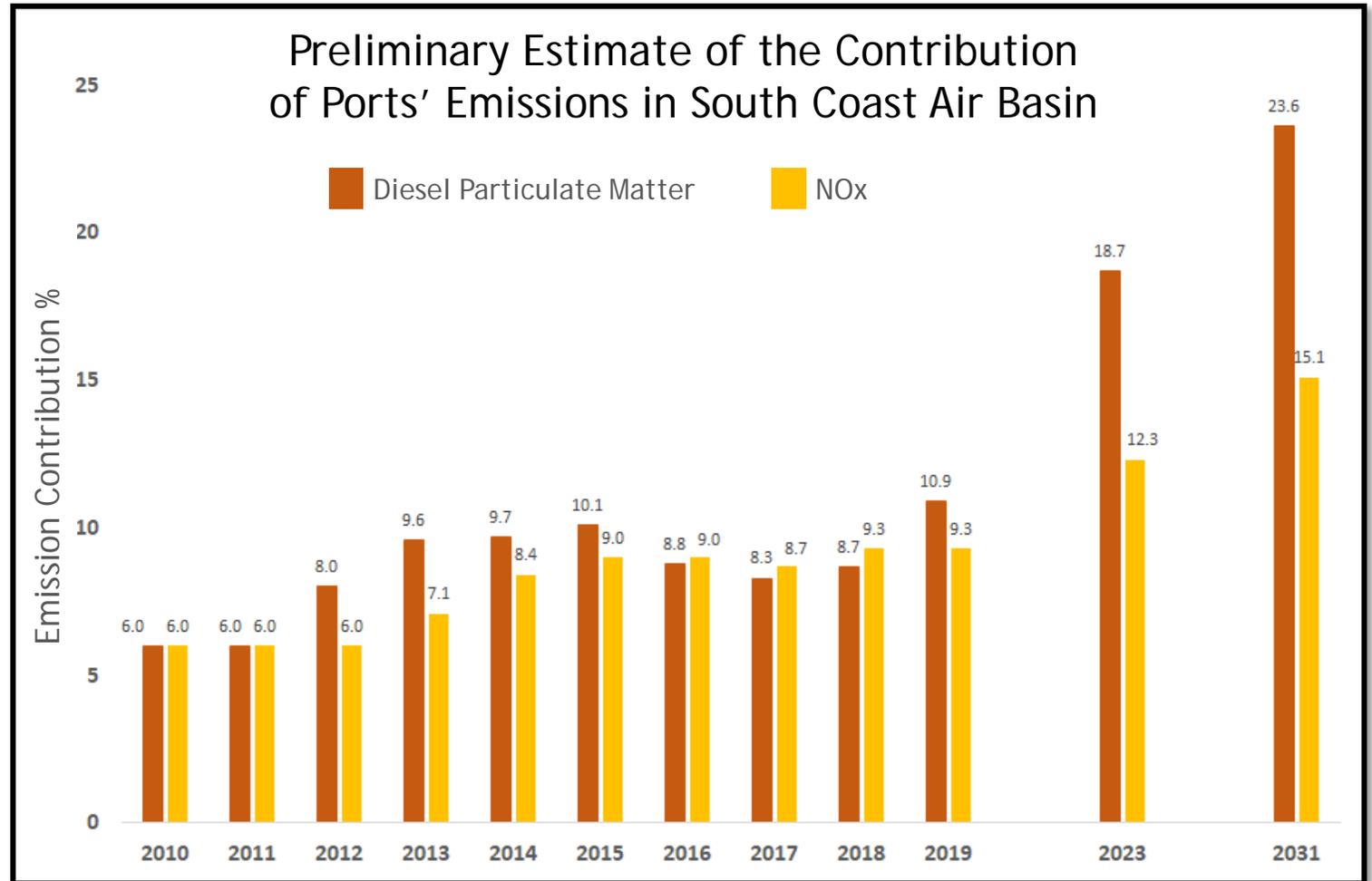
San Pedro Bay Ports Emissions



OGV = Ocean Going Vessel
MMTEU = Million Twenty-Foot Equivalent Containers

MARINE PORTS – EMISSIONS CONT'D

- Even as emissions slowly decline from the ports, their relative contribution to total emissions increases
- NOx emissions are critical to reducing regional ozone and PM
- Toxic DPM emissions have greatest impact on near-port communities



MOU PROGRESS

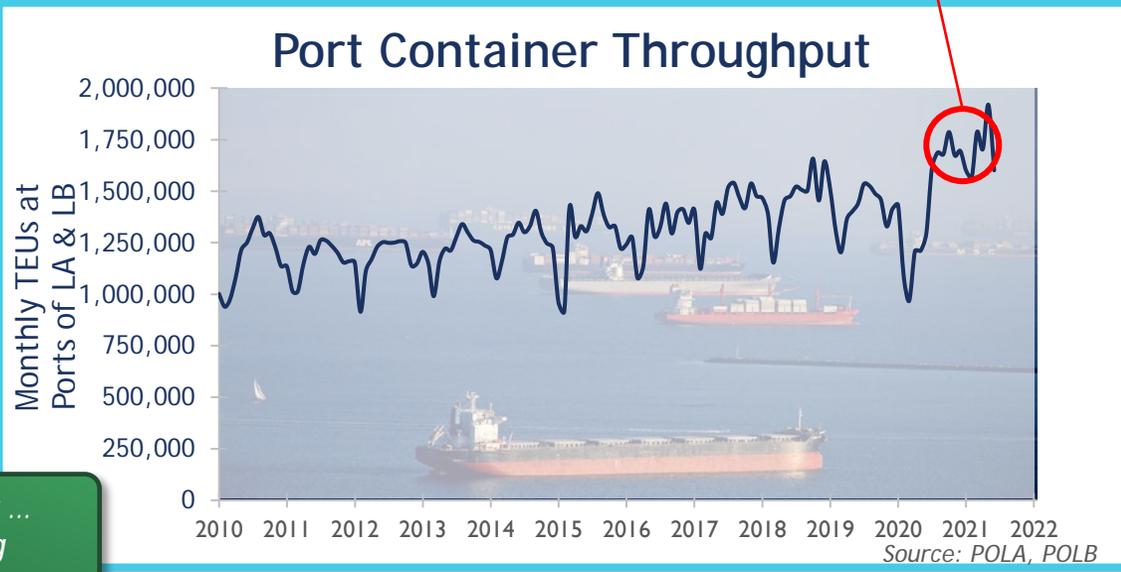
- Previous MOU discussion has focused on accelerating truck turnover to achieve early emission reductions
 - Ports adopted goal of \$10/TEU rate, but no implementation date set
 - SIP credit was anticipated for 2023
 - Trucks contribute about 25% of port-wide emissions
- Development of Clean Truck Rate put on hold by ports in early 2020 due to uncertainty brought on by the COVID-19 pandemic



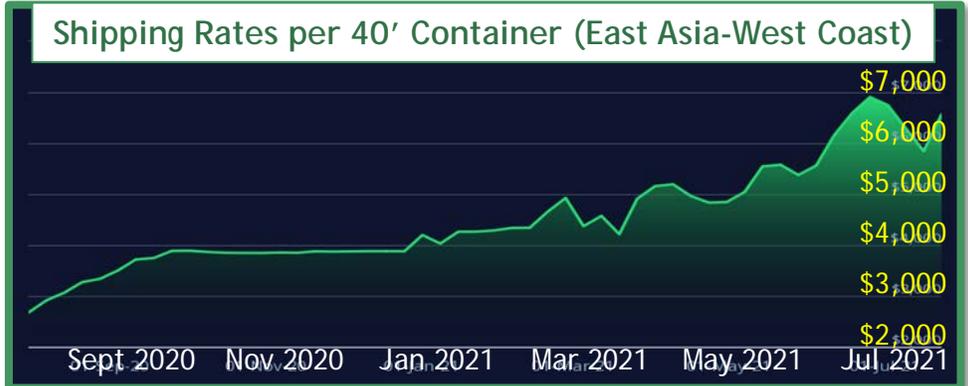
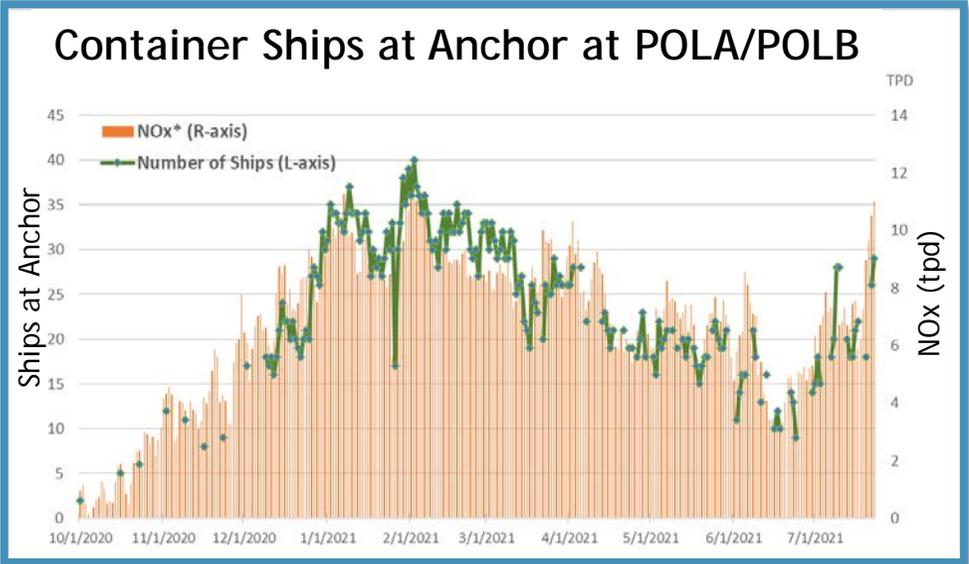
RECENT PORT ACTIVITY

Ports continuously setting monthly records

- Goods movement continues to increase
- Recent surge in port activity
 - Goods movement industry and ports experiencing robust activity
 - Significant congestion



"...our outlook now ... shows a very strong second half of the year" - POLA 7/14/21



POTENTIAL OUTCOME OF MOU APPROACH DISCUSSED UP TO 2020

- Given the slow progress on the Clean Truck Program (CTP), no surplus emission reductions are expected
 - Proposed \$10/TEU rate not high enough to accelerate truck turnover
 - Port economic study and recent history shows the effect of this low rate on port throughput would be minimal
 - Minimal cargo diversion ($\leq 1.4\%$) up to \$70/TEU
 - Even if CTP goes into effect in 2022, trucks won't be funded until 2023
 - CARB proposing a rule requiring all new drayage trucks to be ZE in 2023
 - Fund may partially pay for CARB rule, but CTP reductions will not be surplus
 - Result is slow turnover to ZE, with the bulk of the fleet being old diesels
- Potential usefulness of the current MOU approach is no longer clear

~250 - 450
ZE trucks/yr

DRAYAGE TRUCK FLEET

As of March 2020 when \$10/TEU rate approved:

- 130 NZE trucks
- ~9 ZE trucks
- 7,540 trucks in drayage registry need to turn over by 2023

As of May 2021:

- 163 NZE trucks
- 30 ZE trucks
- 6,300 trucks in drayage registry need to turn over by 2023

~1,200 pre-2010 trucks turned over since rate approved, but only ~50 are NZE/ZE

Trucks with Access to POLB & POLA by Engine Year



POLB chart from May 2021

LATEST DEVELOPMENTS

- After June 2021 Mobile Source Committee, Ports' Directors expressed strong interest in an MOU approach
- Building off the CAAP, staff developed an updated MOU proposal covering all sources
 - Heavy-Duty Trucks
 - Cargo Handling Equipment
 - Ocean-Going Vessels
 - Locomotives
 - Harbor Craft
- MOU should also include contingency measures if committed actions by the ports are not carried out



MOU APPROACH SUMMARY

- Previous emission reductions from ports largely attributable to CARB regulations
 - Emission levels relatively flat in past decade
- Continued delay on port action results in greater burden on other parts of supply chain (e.g., warehouses)
- Years of discussions on a MOU have not resulted in sufficient progress to reduce port-wide emissions
 - Latest draft MOU more comprehensive than previous limited approach
- Absent additional forcing mechanism, it is not clear that ports will adopt the specific measures needed to meet air quality needs

PRELIMINARY CONCEPT OF INDIRECT SOURCE RULE



- Potential approach
 - Apply to all terminal operators
 - Efficiency metric approach
 - Develop a port-wide weighted average emissions efficiency baseline based on current activity
 - Establish San Pedro Bay ports emissions efficiency target (e.g., lbs of NO_x/TEU, lbs of NO_x/barrel, etc.)
 - Less actions required for cleaner / more efficient operators
 - Optional mitigation fee

BENEFITS OF PURSUING PORT ISR

- Potential emission reductions are greater than for warehouses
- Both ends of truck trip can be addressed to encourage accelerated turnover and to more equitably balance the costs associated with goods movement
- Other emission categories can also be jointly addressed (e.g., ships, CHE, locomotives) that make up the majority of the emissions
 - Other ports throughout the world are making greater progress on these sources
 - Credit can be given to terminal operators who have already implemented cleaner technologies
- Provides the Board an option to continue to make progress on emission reductions if the MOU is further delayed

STAFF RECOMMENDATION

- Pursue updated comprehensive MOU approach simultaneously with ISR for marine ports
 - Report back to Board every 3 to 6 months on progress of MOU/ISR development