

# SAN PEDRO BAY PORTS

# CLEAN AIR ACTION PLAN

## Clean Air Action Plan Implementation Stakeholder Advisory Meeting

### MEETING SUMMARY

October 12, 2022

All meeting attendees participated via teleconference using the WebEx platform or by phone. Questions or comments were submitted via the WebEx Q/A or microphone feature.

#### 1. Welcome

- Heather Tomley, Port of Long Beach (POLB) Managing Director of Planning and Environmental Affairs, and Tim DeMoss, Port of Los Angeles (POLA) Environmental Affairs Manager, made opening remarks.

#### 2. Status Update on the 2021 Feasibility Assessment for Drayage Trucks

- The Ports' consultant, Gladstein, Neandross, and Associates (GNA), provided a status update on the 2021 Feasibility Assessment for drayage trucks.
  - GNA outlined the structure of the feasibility assessment, including the basic parameters evaluated, the fuel-technology platforms considered, and the sources of information used.
  - GNA highlighted changes in the way information is presented between the 2018 and 2021 feasibility assessments.
  - GNA presented basic screening methodology using two main criteria: commercial availability and technical viability. Those technologies which passed the initial screening were assessed using three additional parameters: operational feasibility, economic workability, and infrastructure availability. Note: Scoring for technical viability is based on Technology Readiness Level (TRL), which does not, by itself, determine feasibility.
  - GNA presented preliminary results of the 2021 drayage truck assessment update, highlighting key developments since 2018 and Original Equipment Manufacturer (OEM) advancement of zero emission platforms.
  - Public comments are currently under review in preparation for final release of the feasibility assessment. Written comments were received from the South Coast Air Quality Management District (SCAQMD), the Los Angeles Cleantech Incubator (LACI), Trade, Health, and Environmental (THE) Impact Project coalition, Hyzon, and Air Products. Areas of significant debate amongst public comments are under review.
- The public was invited to provide comments and ask questions to GNA and Port staff.
  - One attendee inquired about challenges encountered with battery-electric (BE) trucks during initial demonstrations. GNA described challenges including loss of power enroute, range, infrastructure charging reliability, and delayed parts and repair. Note that these types of issues are to be expected in pre-commercial technology.

- One attendee inquired about the public comment received requesting updates to the 2021 assessment including assessment of advances in 2022 and a full analysis of fuel cell trucks. GNA responded that public comments and requests continue to be assessed. Port staff affirmed the commitment to preparing these assessments every three years. The length of time and effort that goes into preparation, including time allotted for public comment, necessitates maintaining the end date. The Port acknowledged growing interest in fuel cell technology, noting that there may not be an opportunity to include additional analysis in this current assessment.
- One attendee commented about modifying engines for direct hydrogen injection, rather than reliance on bespoke engines. GNA responded that Cummins has the X15, which will be a multi-fuel platform with hydrogen as an option. It is not commercially available, so it was not reviewed for this analysis. If available, the technology could be included in the next feasibility assessment.
- One attendee commented about the date of the assessment providing a significant boost to battery electric trucks and inquired if there is a way to include the more recent growing development and success of hydrogen trucks. The team is still considering how to equitably address current developments in the report.

### **3. Status Update on the Clean Truck Fund Rate Implementation**

- The Ports presented updates on the Clean Truck Program implementation.
  - Port staff provided a general snapshot of statistics from August 2022. This snapshot included trucks in the Port Drayage Truck Registry (PDTR), number of moves, and advanced technology breakdown.
  - The Ports presented information on the Clean Truck Fund (CTF) rate specifics and funds collected to date. Information shared also included spending priorities for the CTF rate funds and estimated projections for the amount of revenue generated.
  - The presentation also included information on the ZE Truck Voucher Incentive Program.
  - POLA presented information on the Early ZE Truck Deployment strategy.
  - POLB presented information on progress with charging infrastructure, including the Public Truck Charging and Fueling Assessment of September 2021 and issuance of a Request for Information (RFI) in February 2022. POLB also shared information regarding the possible adoption of the Electric Vehicle Infrastructure Training Program (EVITP).
  - The Ports presented updates on CARB truck regulations and next steps in CTF implementation.
- The public was invited to provide comments and ask questions to Port staff.
  - One attendee questioned whether the funds would be better spent on near-zero trucks, while the ZE technology is further developed. The Ports responded that both Boards approved a spending plan on zero emission

trucks only, so staff may only allocate funds to ZE projects. POLB did advance funds towards the Kick-Start program, to administer funds through SCAQMD Prop 1B for low-NOx trucks. However, moving forward the Ports are focusing funds on decarbonizing trucking in California and moving towards zero emissions. Acknowledging inflation and the rising cost of the ZE trucks, the Ports plan to hold conversations with CARB in the near future to potentially to create more enticing incentives.

- One attendee commented on the CARB Innovative Small e-Fleet Update incentive program, supportive of independent owner/operator small fleets. The funds were allocated within an hour. Would the Ports be willing to explore and model this type of program as an option? The Ports responded that this is a possible consideration for future CTF rate spending plans.
- One attendee requested additional information regarding challenges encountered by BE trucks during demonstration. The Ports responded that the demonstrations were focused on drayage trucks in SCE and LADWP territory. The communications issues were loss of communication to the charge-back system or communication challenges between the trucks and the CCS-1 chargers. With early deployment of these technologies, manufacturers are working to develop consistency to implement charging standards.
- One attendee asked about the vehicle class eligibility for CTF rate dollars. The Ports responded that these funds are dedicated to Class 8 drayage trucks in service at the Ports.
- One attendee commented on the current incentive funds that are not being utilized, possibly due to manufacturing constraints. The attendee encouraged the Ports to consider funding infrastructure including grid capacity. POLA responded that conversations have started with the CEC about co-funding with the Energize program, as well as topics such as stacking funds and assisting with infrastructure development. Opportunities to work with the utilities and collaborate with development on a larger scale will continue to be explored moving forward.
- One commentor reported that OEMs are not taking orders for trucks. In order to be granted an extension on 2008 - 2010 trucks, a purchase order was required to be submitted by September 1, 2022. The Ports' staff responded that this is outside of the Ports' jurisdiction and should be taken up with CARB, since they are the regulating body.

#### **4. 2021 San Pedro Bay Ports Annual Emissions Inventory**

- The Ports presented updates on the 2021 San Pedro Bay Ports Air Emissions Inventory (EI) results.
  - The Ports presented background on the EI, which is an annual activity-based inventory of source categories and pollutants/greenhouse gases. Port staff noted that although each Port publishes separate EIs, however, this

presentation represented a combination of POLA and POLB results. The EI is coordinated with and reviewed by EPA, CARB, and SCAQMD.

- The Ports presented the 2021 snapshot, focusing on the peak disruption to the supply chain, largely due to the COVID-19 pandemic.
- The Ports explained the 2021 ship emissions, which were overall significantly higher, contributing to the majority of DPM and NOx emissions. Supply chain congestion resulted in more container ships at anchor. Higher emissions at berth were largely due to an increase in visits from vessels not equipped with shore power and larger ships remaining at berth for longer periods of time. Additionally, the statewide Energy Emergency Alert, requesting ships at berth to unplug, impacted emissions.
- The Ports outlined the new vessel queuing system implemented by Pacific Maritime Management Services (PacMMS), noting that this was implemented through a public/private partnership and took place beginning November 16, 2021. Expected benefits are anticipated in the 2022 EI.
- The Ports presented container throughput and vessel call comparisons between the baseline year of 2005 and 2021 and between 2020 and 2021.
- The Ports detailed air emissions challenges during 2021, with an increase in DPM, NOx, SOx, and GHG emissions when compared to 2020. There was also an increase of 16% more TEU throughput, accounting for some of the higher emissions. It is important to note that compared to 2005 levels, DPM and SOx are down and have surpassed the goal for 2023 levels. NOx is down by 46% from 2005, but has not quite reached the 2023 goal.
- The Ports shared strategies for moving forward with CAAP goals by continuing to coordinate with State agencies on State and Federal regulations, funding technology advancement, actively participating in the Green Shipping Corridor initiative, providing ship incentive programs, and investing the CTF rate.
- The Ports shared website information to access the EI for each port.
- The public was invited to provide comments and ask questions to Port staff.
  - One attendee inquired about incentives for cold ironing. The Ports replied that currently the CARB at Berth Regulation is in effect, requiring control of emissions at berth for container, cruise, and passenger vessels. Both ports have substantial shore power infrastructure, particularly at the container terminals and cruise terminal. Moving forward, in January 1, 2023, the new CARB At Berth Regulation emission reduction requirements will go into effect for container, passenger, and refrigerated cargo vessels, and requirements for roll-on, roll-off and tanker vessels will start in 2025. Capture and control demonstrations were briefly discussed, as were funding programs designed to support shore power in surplus to regulations.

## **5. Status Update on the Green Shipping Corridor**

- C40 Cities, an international non-profit, provided a presentation on the Los Angeles (LA) - Shanghai (SH) Green Shipping Corridor Partnership.

- The C40 Cities presenter described the worldwide need for action, the necessity to create this collaboration, and the scope of the Green Shipping Corridor. The worldwide need for action includes the climate crisis, addressing emissions, and the challenge response of LA and SH. Reasons for creating the Green Shipping Corridor are to realize actual emissions reductions (greenhouse gases and other pollutants), to showcase cutting edge technology developments, to serve as a model, and to catalyze technological, economic, and policy efforts.
  - C40 Cities presented information regarding project partners and collaborators.
  - C40 Cities provided insight into collaborator's input towards the Green Shipping Corridor Implementation Plan and identification of achievable interim and long-term goals.
  - C40 Cities shared key definitions, goals and objectives, and project partners' plans. The Green Shipping Corridor plans to demonstrate the feasibility of deploying the world's first Zero Carbon Fuels Ship(s), by or before 2030.
  - C40 Cities described the partners' decarbonization activities.
- The public was invited to provide comments and ask questions to Port staff.
  - One commentor asked several questions related to fuels and timing. C40 responded to the question regarding fuel, stating that the corridor is fuel agnostic, any fuel or blend of fuels demonstrated to reduce life cycle carbon emissions is acceptable. As the corridor develops, partners will work together to evaluate fuels and technology against mid-term and long-term decarbonization goals. There will be an advanced working group, continuing to address these types of activities through 2023.
  - One attendee inquired about inclusion of Honolulu Harbor in the Green Shipping Corridor. C40 Cities responded that this Green Shipping Corridor addresses the end-to-end route of Los Angeles to Shanghai. The group has not explored the possibility of additional stops along the way, but potentially this will be examined as the Green Shipping Corridor moves forward.

## 6. Additional Comments & Questions

- Participants provided additional comments and questions regarding port-related topics.
  - One commentor asked how additional power and energy supply capacity would be addressed in the 2021 Feasibility Assessment for Drayage Trucks. GNA responded that a section of the assessment looks at this issue. It is recognized that there is a substantial amount of infrastructure development needed to support the drayage fleet with electric trucks. This will include public charging and fleet owned facilities. Infrastructure to support 10,000 – 15,000 drayage trucks will involve high capacity grid interconnects and years to design and build.