

SAN PEDRO BAY PORTS

CLEAN AIR ACTION PLAN

Clean Air Action Plan Implementation Stakeholder Advisory Meeting

MEETING SUMMARY

March 8, 2023

All meeting attendees participated via teleconference using the Zoom platform or by phone; participant questions or comments submitted used the Zoom chat or microphone feature.

1. Welcome

- Mike DiBernardo, Port of Los Angeles (POLA) Deputy Executive Director, and Heather Tomley, Port of Long Beach (POLB) Managing Director of Planning and Environmental Affairs, made opening remarks.

2. Status Update on the Technology Advancement Program (TAP)

- The Ports presented updates on the Technology Advancement Program (TAP).
- Port staff provided an overview of the proposed revisions to the TAP Guidelines, which will better reflect the state of zero-emission (ZE) technologies and update funding eligibility. The revised Tap Guidelines are expected to be finalized in April 2023.
- The Ports explained the application process and provided a summary of the 5 eligible 2022 proposals received and the few projects that did not advance (1 was ineligible and one applicant withdrew 2 of their concept papers).
- Port staff summarized new projects approved in 2022 and 2023, including a South Coast Air Quality Management District (SCAQMD)-led Joint Electric Truck Scaling Initiative (JETSI) Project, a demonstration project to convert a diesel top-handler into a hydrogen fuel cell top handler at Fenix Marine as well as demonstrating a hydrogen mobile refueler led by Toyota Tsusho, and demonstration of two hydrogen fuel cell top handlers built by Taylor Machine Works and demonstrated by SSA. .
- Port staff also shared information on upcoming projects for Board consideration in 2023, including the PHL battery charging system demonstration, an SCAQMD-led low-pressure exhaust gas recirculation retrofit and multi-fuel injection system for ocean-going vessels (OGVs) demonstrations, and the Crowley hybrid tug demonstration.
- The two Ports provided updates for ongoing TAP projects. These projects include the Nett Technologies BlueMAX NOVA 320e Harbor Craft Demonstration, the PASHA liquefied natural gas (LNG) OGV demonstrations, two SCAQMD-led zero-emission drayage truck demonstrations in partnership with Daimler for their battery-electric trucks and a hydrogen fuel cell truck to be built by Meritor, a SCAQMD-led water-in-fuel retrofit technology demonstration in partnership with MAN Energy Solutions, and the Effenco Electric Active Stop-Start Technology Demonstration for anti-idling retrofit technology at APM Terminals (which concluded early). Information on these projects can be found in the current 2021 TAP Annual Report and the 2022 TAP Annual Report anticipated for release in April 2023. The TAP Annual Reports can be found at: <https://cleanairactionplan.org/technology-advancement-program/reports/>

- Port staff provided updates regarding their respective grant-funded demonstrations and deployments. The two Ports are administering a total of \$185M in grant funding, largely from California Energy Commission (CEC) and the California Air Resources Board (CARB). These funds include the recently awarded \$30.1M from the Maritime Administration's (MARAD's) Port Infrastructure Development Program (PIDP) for the Middle Harbor Terminal Zero Emission Conversion Project, which includes the acquisition of 60 manually operated, battery electric yard tractors and supporting infrastructure. The grant funding received by the Ports has helped deploy 122 ZE vehicles/equipment to date, with the addition of 71 pieces of ZE vehicles/equipment expected to be delivered over the next 3 years. Although most deployments are ZE, there have been a few near-zero emission trucks, vessels, and cargo handling equipment.
- The Ports emphasized their plans moving forward to seek additional technology development/demonstration projects and further grant funds, referencing both California and Federal funding programs.
- The public was invited to provide comments and ask questions to Port staff.
 - One commenter requested clarification on the TAP projects discussed in the presentation, including the ones withdrawn.
 - One attendee asked about the Liquefied Natural Gas (LNG) ships and raised a question and a concern about methane as a greenhouse gas (GHG) pollutant. The Ports clarified that the emission reductions for the TAP funded LNG ships are largely related to reducing criteria pollutants and acknowledged that LNG is a transitional fuel but not the end goal. The Ports are formally pursuing cleaner ship related technologies and fuels via the Green Corridor efforts. The LNG vessels demonstration, in particular, is a way to see incremental progress while waiting for cleaner options to become available. The Ports also assured the attendee that no permanent fueling (bunkering) is in place.
 - One attendee asked for clarification on who is eligible to apply for TAP funds. Port staff clarified that any public or private entity is eligible to apply, and the project team must include a port operator to demonstrate the technology within the San Pedro Bay Ports. More information on the TAP RFI process may be found online.
<https://cleanairactionplan.org/request-for-information-san-pedro-bay-ports-technology-advancement-program/>

3. San Pedro Bay Ports 2022 Accomplishments & 2023 Priorities

- Port staff summarized their joint 2022 accomplishments. Achievements included the commencement of the Clean Truck Fund (CTF) Rate collection that began on April 1, 2022 and the establishment of CTF Rate Year 1 Spending Plans. The SCAQMD JETSI project and 1 new TAP project were both approved. The Ports finalized their respective 2021 Air Monitoring Report and 2021 Emissions Inventory Report, the joint 2021 TAP Annual Report, and

the joint 2021 Cargo Handling Equipment (CHE) Feasibility Assessment. Additionally, the Ports initiated the green shipping corridors with transpacific partners.

- POLB highlighted many of their accomplishments in 2022. Funding achievements included the completion of the \$1.5M DERA Project funded by the Environmental Protection Agency (EPA) to replace 3 diesel RTG cranes with hybrid RTG cranes and securing \$30.1M through MARAD's PIDP for 60 ZE yard tractors with the associated infrastructure. Drayage truck successes included POLB opening the first two public chargers for drayage trucks in the US, publishing an electric charging toolkit for HD trucks, hosting a joint agency drayage truckers workshop, and executing two lease agreements for public drayage charging. POLB also hosted a grant workshop for Port tenants and continued to implement grant funded projects.
- POLA highlighted many of their accomplishments in 2022. Funding achievements included the release of \$5M from CTF Rate funds to contract with CALSTART for ZE Truck Voucher Incentive Program, their board approved two proposals from the ZE 25 Truck Deployment RFP (\$3M from CTF Rate funds for 22 trucks), and completion of the Everport Advanced Yard Tractor Project. POLA continued their major grant funding projects for the Pasha Green Omni-Terminal, the Everport Advanced Cargo Handling Equipment Project, the West Basin Container Terminal, Advanced Infrastructure Demonstration, and Shore to Shore Project. POLA also completed a public charging study (Volvo LIGHTS project).
- The Ports discussed their 2023 priorities for trucks. POLB will finalize a ZE Voucher Incentive Program contract with CALSTART and POLA will amend their existing contract with CALSTART. The Ports will continue to implement the Year 1 CTF Rate spending plans, as well as develop and approve Year 2 plans. POLB will release two public charging solicitations for 2 sites. The Ports will also continue truck demonstration projects. Additionally, the Ports will complete the Drayage Truck 2021 Feasibility Assessment and both will monitor and provide input on the State drayage truck regulations.
- The Ports discussed their 2023 priorities for CHE and will continue the ZE infrastructure master planning efforts with marine terminals. Additionally, the Ports will continue implementing CHE demonstration and deployments and pursue additional grant funding for ZE CHE deployments.
- The Ports discussed their 2023 priorities for OGVs. The Ports are supporting implementation of at berth terminal plans and will continue OGV demonstration projects, including those under TAP. The Ports will also conduct outreach to national and international ports as part of green shipping corridors efforts.
- The Ports discussed their 2023 priorities for commercial harbor craft (CHC), which will include supporting the implementation of the CARB CHC regulation, continuing CHC demonstration projects, and pursuing additional grants for ZE CHC deployments.

- The Ports discussed their 2023 priorities for locomotives. The Ports will implement clean demonstration projects, execute a TAP ZE switcher demonstration project, and pursue additional grant funding for ZE locomotive projects. The Ports are also tracking the development of CARB's Locomotive regulation.
- The Ports announced that their latest Emission Inventories (2021) and Air Monitoring Reports are complete and will be available online:
 - POLA Emission Inventories - <https://www.portoflosangeles.org/environment/air-quality/air-emissions-inventory>
 - POLB Emission Inventories - <https://polb.com/environment/air/#emissions-inventory>
 - POLA and POLB Air Monitoring Reports - <https://monitoring.cleanairactionplan.org/reports/>
- The Ports summarized numerous grants that they are tracking for local, state, and federal opportunities to support the CAAP, such as the Inflation Reduction Act of 2022, Maritime Administration (MARAD) Ports Infrastructure Development Project (PIDP), EPA Diesel Emission Reduction Act (DERA), SCAQMD Carl Moyer, CEC Clean Transportation Program, and CARB Low Carbon Transportation Investments and AQ Improvement Program.
- The public was invited to provide comments and ask questions to Port staff.
 - One commenter posed questions regarding setting interim targets for metrics en-route to reaching the goals (such as the 2030 goal for 100% ZE CHE). The Ports commented on their understanding of how targets or interim metrics would be helpful, and explained that it would be difficult to set targets without having completed infrastructure planning. The Ports explained that, although the Ports do not have much direct control, the tenants see the goals as requirements and the Ports are able to provide TAP funds to encourage advancement of new technologies. Additionally, the Ports are underway with infrastructure master planning. CEC funds were awarded for Pier J and will commence immediately.
 - One attendee asked if the Ports anticipate significant emission reductions starting in 2023 due to the CARB At Berth requirement. The Ports indicated that there are a lot of factors at play, including lingering effects of the COVID-19 pandemic which have influenced whether or not shore power capable vessels visit the terminals, but emissions are anticipated to decline year-over-year for vessels at berth between 2021 and 2022. The Ports emphasized that there are more capture and control technologies in development and emission reductions are anticipated, in part, due to improved on-terminal efficiency now that the supply chain congestion has subsided.

4. Status Update on the Clean Truck Program Implementation

- The Ports provided a summary of the truck population in the Port Drayage Truck Registry (PDTR), with some breakdowns by model years and fuel types.
- Port staff presented an overview on the Clean Truck Fund (CTF) Rate. Year 1 collection began April 1, 2022 at \$10 per TEU or \$20 per FEU for non- ZE trucks.
- The Ports presented the current CTF Rate Status, indicating there has been no major delays to port operations and no reported incidents of rates being passed along to drivers. Each port is collecting approximately \$2.5M-\$4M monthly, creating an incentive fund of approximately \$67.2M through January 2023. Through February 2023, the Ports have allocated approximately \$14M towards ZE trucks and infrastructure.
- Both Ports have prioritized ZE Truck vouchers for Year 1 funds. Each port will also use some Year 1 funds for ZE infrastructure and ZE pilot project deployment and demonstration.
- POLB provided an update on their public charging infrastructure program. In 2022, POLB issued a [Request for Information](#) (RFI) to gauge interest and solicit general information for developing public truck charging on four Port-owned sites identified in the Port's Public Charging and Fueling Study. POLB is preparing to solicit proposals to build out two public charging sites, which may be partially funded with CTF Rate funds.
- POLA summarized their ZE Truck Voucher Incentive Program. An initial \$5M was released in September 2022 for CARB's Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP) and 4 voucher applications are currently under review. As of January 2023, CARB had \$25M in HVIP funds remaining from fiscal year 2021-2022. Available funds are updated periodically at <https://californiahvip.org/funding/>. Due to low demand in 2022, the Ports are adjusting CTF Rate vouchers funds to add plus-ups to CARB's HVIP vouchers.
- POLA provided an update on their early Zero-Emission Truck Deployment Request for Proposals (RFP) from late 2021, indicating 2 proposals were approved and a third is pending board approval.
- Port staff shared preliminary concepts for the CTF Rate Year 2 spending priorities, proposing a pivot to focus predominantly on both public and private ZE truck infrastructure. The Ports plan to continue funding the Voucher Incentive Programs and provide a small set aside for pilot/demonstration projects.
- Port staff indicated that outreach efforts for CTF Rate Year 2 spending priorities will include meetings with key stakeholders, including the trucking industry and its representatives, environmental/community organizations, and air quality agencies.
- The Ports provided a brief status update on the draft CARB Advanced Clean Fleet Regulation that is anticipated to be finalized in 2023 and includes ZE truck requirements for fleets starting as early as January 1, 2024.

- The public was invited to provide comments and ask questions to Port staff.
 - One attendee asked clarifying questions regarding how the Ports ZE Voucher Incentive Program will work with HVIP. The Ports clarified that the plus-ups are in addition to modifiers, with the larger plus-up amount for fleets with 10 or fewer trucks. POLB indicated they will take this to their Board soon and explained that it will take a few additional months before these plus-ups will become available in HVIP.
 - One attendee commented on the CTF Rate not directly benefiting those that turned over their truck inventory early and stated that they would like to see the drivers/truck owners reap greater benefits. The Ports indicated that the CTF rate is directly invested in ZE trucks and infrastructure for the broader trucking community, including drivers should they own their truck, and can be used for future vehicle purchases.
 - One attendee urged the ports to increase the rates to \$50-\$70 per TEU in order to expand the funding available for trucks and infrastructure, especially with the upcoming CARB regulations. Specifically, this commenter requested the Ports to consider increased support for battery-electric trucks for drayage.

5. Additional Comments & Questions

- The public was invited to provide comments and ask questions to Port staff.
 - One commenter requested an update to the CAAP meeting format.
 - One attendee asked for clarification on who the lead is for the Green Shipping Corridor Implementation Plan and when it will be released. Port staff said it is being led by POLA and the Port of Shanghai with support from POLB, and other partners such as C40. The Ports indicated they intend to release the plan by April/May 2023.
 - One attendee commented that they would like to see CAAP related reports indicate the number of lives saved as a metric of success.