

SAN PEDRO BAY PORTS

CLEAN AIR ACTION PLAN

Clean Air Action Plan Implementation Progress Report Second Quarter 2021

ACCOMPLISHMENTS

GENERAL

- The Ports posted a first quarter of 2021 Clean Air Action Plan Implementation Progress Report in April of 2021.

COVID-19 IMPACTS

- The Ports continued to experience high cargo throughput in Q2 2021. These high volumes are due to an uptick in goods based spending and e-commerce as people continue to spend discretionary income on goods manufactured overseas. The Ports continue to monitor the situation very closely.
- Due to the ongoing COVID-19 pandemic future CAAP stakeholder meetings will continue to take place via webinar.
- Both Ports are developing plans for return to in-person work at this time. However, it is unclear exactly when staff will return to the office and when in-person, public meetings will commence once again.
- COVID-19 impacts to the Ports' technology demonstrations are addressed below under Early Demonstrations and Deployments within the Trucks and Terminal Equipment headings.

TRUCKS

- **Clean Truck Fund (CTF) Rate.** The Ports have made continued progress on the development of the Clean Truck Fund Rate tariff and the rate collection mechanism (described below). The Port of Long Beach (POLB) Board of Harbor Commissioners adopted a resolution on May 24, 2021 identifying certain exemptions for low NOx trucks from the future Clean Truck Fund Rate. In a resolution approved on June 17th, 2021, the Port of Los Angeles (POLA) Board of Harbor Commissioners directed staff to conduct a robust stakeholder engagement process with the Port of Long Beach that will lead to adoption of a tariff to implement the Clean Truck Fund Rate by the end of Q4 2021. Commencement of collection of the Clean Truck Fund Rate is expected to occur in early 2022.
- **Rate Collection Mechanism.** In anticipation of the CTF Rate, the Ports released a Request for Proposals (RFP) in 2019, which included minimum requirements for how to collect a rate from Beneficial Cargo Owners. An agreement with the selected contractor, PortCheck, was approved by the POLB Board of Harbor Commissioners on March 26, 2021, and the POLA Board of Harbor Commissioners on May 20, 2021. Finalizing this contract with PortCheck will allow for the rate collection to begin in early 2022 once Federal

Maritime Commission approval has been obtained, the system fully developed, and the tariff amended with the Clean Truck Fund Rate implementation plan.

- **Large-Scale Zero Emission (ZE) Truck Deployment Pilot Project.** On November 19, 2020, the California Air Resources Board (CARB) and the California Energy Commission (CEC) released a unique joint funding opportunity for a large-scale ZE truck deployment within the state. The Ports coordinated with the South Coast Air Quality Management District (AQMD) and other regional partners on the development of a project proposal, including 100 ZE battery electric trucks and associated charging infrastructure, for this solicitation. The AQMD proposal was awarded nearly \$27 million. The grant agreement between AQMD and CARB was executed on June 4, 2021 and the grant agreement between AQMD and CEC was approved at the CEC business meeting on July 15, 2021. The Ports and AQMD are actively developing a three-party Memorandum of Understanding (MOU) which will include \$1.5 million in match funding from each Port towards the project, and is expected to be brought to each Port's respective Board in Q3 2021.
- **Early Deployment and Demonstrations.** The Ports continue to manage several grant-funded demonstrations of ZE trucks, including over 20 hydrogen fuel-cell and battery electric trucks as part of supply chain pilots. The Ports have also committed to supporting regional demonstrations. This includes the deployment of near-zero emission natural gas drayage trucks through a CEC grant secured by AQMD that is expected to fund up to 140 low NOx trucks. AQMD has begun contracting with trucking companies to deploy the low NOx trucks; approximately 30 near-zero emission trucks have been registered and deployed thus far with Ports' funds. There are approximately 29 ZE electric trucks registered in the Ports' Drayage Truck Registry with access to both Ports. COVID-19 continues to have an impact on the future estimated delivery times of both the low NOx trucks and ZE trucks.
- **Proposition 1B Support and the Kickstart Incentive Program.** The Ports supported AQMD with outreach to the drayage community regarding the Proposition 1B (Prop 1B) Program, which had \$50 million available in incentives to turn over the dirtiest pre-2010 diesel trucks to clean low NOx or ZE trucks. The open solicitation period closed on April 30, 2021. POLB provided application support to 22 drayage truck drivers, resulting in 10 application submissions to replace a total of 21 diesel trucks. To further accelerate the transition to cleaner trucks, both Ports plan to allocate an additional \$1 million per port for low NOx and ZE drayage trucks as part of the "Kickstart Incentive Program." This program will be administered by the AQMD utilizing the Prop 1B Program guidelines. The POLB Board of Harbor Commissioners approved an MOU between POLB and AQMD defining the administration requirements of the Kickstart Incentive Program and committing \$1 million in POLB incentive dollars on April 26, 2021. The development of an MOU between POLA and AQMD is underway.
- **Advanced Clean Trucks/Fleets Regulation.** As part of the Advanced Clean Trucks (ACT) Regulation that CARB passed in June 2020, CARB continues to move ahead with establishing the requirements for large entities and fleets. The Office of Administrative Law approved the regulation on March 15, 2021. The regulation requires, among other obligations, large fleet owners, including government agencies, to report information about their heavy-duty vehicles. The reporting deadline was extended from April 1, 2021 to May 1, 2021. Ports' staff will continue to monitor the development and implementation of these regulations.

- **Feasibility Assessment for Trucks.** As part of the 2017 CAAP update, the Ports committed to developing assessments for drayage trucks at least every three years. The Feasibility Assessments evaluate the current snapshot of emerging zero-emission and near-zero emission truck technologies. The first report, [2018 Feasibility Assessment for Drayage Trucks](#), was released in April 2019, with an update later in May 2020. The Ports began work on the second Feasibility Assessment for Drayage Trucks in Q1 2021. Data collection and outreach are underway and release of the Draft 2021 Feasibility Report for Trucks is anticipated by the end of 2021.

TERMINAL EQUIPMENT

- **Early Deployment and Demonstrations.** The Ports continue to manage several grant funded demonstration projects, including ultra-low NOx and electric yard tractors, electric top handlers, and electric rubber-tired gantry cranes, as well as innovative approaches to charging infrastructure including micro-grid controls with distributed generation and battery storage.

At POLA, as part of the Green Omni Terminal project, one BYD battery electric yard tractor continues to be operated. The second BYD yard tractor at Pasha is under repair due to charging issues. Two TransPower/Kalmar battery electric yard tractors and three TransPower battery electric heavy-duty forklifts are being evaluated by third-party engineers to comply with OSHA requirements at Pasha. They will be put in service when this evaluation is complete. At Everport, two battery electric Taylor top handlers are in use. The BYD battery electric yard tractors at Everport were not in use during this quarter due to repairs. Additionally, Everport continues to operate 20 Capacity ultra-low NOx renewable natural gas yard tractors. The grant demonstration periods for these 20 yard tractors and two battery electric Taylor top handlers are complete and Everport will continue to operate the equipment in revenue service.

At POLB, a total of 15 pieces of ZE cargo handling equipment (CHE) have been commissioned to date with supporting ZE infrastructure. One Kalmar yard tractor and three Taylor top handlers are in demonstration at LBCT under the C-Port project. Through the Zero-Emission Equipment Transition Project, a total of five BYD yard tractors are currently in demonstration at ITS while at LBCT, one unit was placed into revenue service as a trial test. Preliminary feedback from LBCT equipment operators have centered on the need to adapt to ergonomic features inherent in the BYD cab design that are different from the diesel units. As of June 2021, four eRTG cranes are currently operating at SSA, Pier J. The fifth RTG conversion is set to take place the following quarter. Operators have reported cleaner air in the immediate vicinity due to removal of the diesel combustion stack; there is also less noise and vibration, which are all positive. A total of three LNG plug-in hybrid electric trucks have been placed into revenue service at TTSI. The fourth truck will be delivered next quarter.

The Ports have documented various impacts and delays to terminal equipment technology demonstrations as a result of COVID-19 and the unprecedented spike in container volumes. Demonstration projects continue to experience difficulty acquiring necessary equipment parts for production and/or repairs, delayed project execution due to extended permitting timeframes, and prohibitions on overseas personnel traveling to California to conduct in-person testing and trainings on new equipment. Ports' staff will continue to monitor these impacts.

- **Feasibility Assessment for Terminal Equipment.** As part of the 2017 CAAP update, the Ports committed to developing assessments for terminal equipment at least every three years. The Feasibility Assessments evaluate the current status of clean terminal

equipment technologies and infrastructure. The first report, [2018 Feasibility Assessment for CHE](#), was released in September 2019. The Ports commenced the second Feasibility Assessment for Terminal Equipment in Q1 2021. Data collection and outreach are underway and the release of the Draft 2021 Feasibility Report for Terminal Equipment is anticipated by the end of 2021.

SHIPS

- **Vessel Speed Reduction.** 96% of vessels visiting the Ports in Q2 2021 slowed down to 12 knots within 20 nautical miles of Point Fermin, and 93% of vessels slowed within 40 nautical miles. Additionally, the two Ports have started reviewing the vessel speed reduction programs for opportunities to achieve greater emissions benefits this quarter.
- **Ship Incentive Programs.** The Ports continue to collaborate with other West Coast ports as well as the local air district on ways to enhance participation in their clean ship incentive programs. POLB adopted a revised Green Ship Incentive Program at their May 10, 2021 Board Meeting. The revised program incorporates the Environmental Ship Index, an international voluntary incentive program which calculates the performance of vessels based on their NOx, sulfur oxides, carbon dioxide emissions, and fuel consumption. Tier III vessels will now be eligible for up to \$9,000 per call, which is the greatest Tier III incentive of any ship program worldwide.
- **At Berth Regulation.** CARB's Board approved the latest update to the At Berth Regulation at their Board meeting on August 27, 2020. The Ports are engaging affected terminals and shipping operators in order to coordinate on development of Terminal/Port Plans, which are due on December 1, 2021.

HARBOR CRAFT

- **Commercial Harbor Craft Regulation.** Staff for both Ports are actively working with CARB on the development of this regulation. On March 16, 2021, CARB held a public workshop to discuss additional changes to the draft proposed Commercial Harbor Craft (CHC) Regulation. The Ports reviewed the draft regulation texts and provided comments in a formal joint Ports' comment letter on April 16, 2021.

OTHER

Technology Advancement Program. Since the TAP RFI was released in January 2020, the Ports have received nine concept papers. Of the nine concept papers submitted to date, Ports' staff have invited five applicants to each submit a full proposal. Four full proposals have been received (one project concept was later rescinded due to significant changes in the project scope and team). Of the four, two proposals have been reviewed by the TAP Advisory Committee (AC) and were recommended for funding consideration. The remaining two proposals are still under review.

Projects currently in demonstration have made significant progress last quarter. Due to existing travel restrictions to the U.S. from Canada, Nett Technologies (Nett) worked remotely with Pacific Tugboat to complete the calibration of Nett's BlueMAX™ NOVA 320e aftertreatment system. Pacific Tugboat began collecting 1,000 hours under a durability test required for CARB verification; Nett expects to complete the project by the end of 2021. Under a separate demonstration, installation of the water-in-fuel (WIF) system developed by MAN Energy Systems commenced on the vessel, MSC *Anzu*. Following testing of the WIF system in August 2021, the vessel will be commissioned in October

2021 in Europe prior to coming to the San Pedro Bay Ports. Lastly, one of two newly built PASHA LNG vessels began sea trials (*George III*) last quarter while the second vessel (*Janet Marie*) was still under construction with delivery targeted for December 2021. A third PASHA vessel (*Reliance*) will be arriving in Shanghai to undergo repower efforts with delivery set for 2022. All three vessels will be installed with dual-fueled engine technology capable of burning LNG or diesel in the propulsion system, with the system optimized for LNG.

The Ports continue to engage and support interested stakeholders. This includes holding TAP bi-weekly meetings between the two Ports, leading the TAP AC meetings every 8 weeks with agency partners, responding to general inquiries, and participating in virtual meetings to provide updates on technology demonstrations.

PLANNED ACTIONS NEXT QUARTER

- Continue development of the structure for the incentive program to be funded by the CTF Rate.
 - Hold two public outreach meetings to receive stakeholder input on the CTF Rate.
- Begin development of the rate collection mechanism for the CTF rate.
- Continue coordination with AQMD on a Large-Scale ZE Truck Deployment project.
 - Finalize a three-party MOU with AQMD to provide match funding from the two Ports.
- Implement stakeholder outreach on the Truck and Cargo Handling Equipment Feasibility Assessments.
- Continue working with CARB on updating the Commercial Harbor Craft Regulation.
- Continue outreach to the industry regarding the new At Berth Regulation and the development of Port/Terminal Plans.
- Continue to evaluate the vessel speed reduction programs.

Send any questions or comments to the CAAP email at: caap@cleanairactionplan.org