

SAN PEDRO BAY PORTS

CLEAN AIR ACTION PLAN

Clean Air Action Plan Implementation Progress Report Second Quarter 2020

ACCOMPLISHMENTS

GENERAL

- The Ports held their ninth CAAP Implementation Advisory Working Group meeting on June 24, 2020 via webinar. Future meetings will likely continue to take place via webinar while the California Stay-At-Home order remains in effect.
- The Ports have continued to make progress toward CAAP goals and staff at both ports are now telecommuting.

COVID-19 IMPACTS

- For the first five months of the year, cargo volumes were down about 13% at the San Pedro Bay Ports compared to 2019.
- COVID-19 impacts to the Ports technology demonstrations will be discussed below under Early Demonstrations and Deployments within the Trucks and Terminal Equipment headings.

TRUCKS

- **2018 Tariff Modification.** As of October 1, 2018 all new trucks entering the Port Drayage Truck Registry (PDTR) must meet 2014 model year or better. As of the end of Q2 2020, more than 3800 “2014 Model Year” or newer trucks have registered in the PDTR since the tariff change went into effect.
- **Clean Truck Fund Rate.** On March 9, 2020, the Port of Los Angeles (POLA) and the Port of Long Beach (POLB) Boards approved a CTF Rate of \$10 per Twenty-Foot Equivalent Unit (TEU) at a joint board hearing. The \$10 per TEU CTF Rate will be charged to the Beneficial Cargo Owners (BCOs) that utilize trucks hauling loaded containers in and out of the marine terminals at both ports, with a permanent full exemption for California Air Resources Board (CARB) certified zero emission (ZE) trucks. The Ports set the amount of the CTF Rate as a resolution in advance of tariff approval to allow for stakeholder planning. The CTF Rate amount will not be collected until the following actions take place: (1) CARB adoption of a heavy-duty low NO_x engine manufacturing standard; (2) Board approval of a CTF Rate collection mechanism; and (3) adoption of a Port of Los Angeles Tariff Amendment by the Board and the Los Angeles City Council that authorizes the details of the CTF Rate collection. In addition, Port staff have been working on the development of the structure for the incentive program to be funded by the CTF Rate. Since April 2020, Port staff has held weekly meetings with the South Coast Air Quality Management District (AQMD) and CARB to discuss the potential incentive program structure and requirements. Additional stakeholder outreach, including focused workgroup meetings and workshops will be scheduled in the coming months. Finally, the Ports have been coordinating with the Agencies to hold a Truck Manufacturer Summit to bring together leaders from CARB, AQMD, the San Pedro Bay Ports and zero-emission truck (ZE) Original Equipment Manufacturers (OEMs) to identify the actions needed to build and transition to a market for zero emissions heavy-duty trucks. In addition, the Ports are

seeking to obtain commitments from stakeholders for coordinated action. Outcomes of the Summit will be reported out.

- **Rate Collection Mechanism.** In anticipation of the CTF Rate, the Ports released a Request for Proposals (RFP) in Q1 2019 which included minimum requirements for how to collect a rate from BCOs. The Ports have tentatively selected a contractor and are negotiating the contract for services. The Ports plan to bring separate contracts to their respective Boards of Harbor Commissioners (Boards) for consideration later this year.
- **Comprehensive Long Term Strategy for ZE Trucks**
At the March 9th joint board meeting, Port staff were directed to develop a comprehensive long term strategy plan on how the Ports would meet the CAAP goal for 100% zero-emissions trucks entering and exiting the ports by 2035. Initial work on the plan began in April 2020. Each Port will return to their individual Board in July with an update on the approach and progress to date.
- **Large-Scale Zero Emission Truck Deployment Pilot Project.** In April 2020, the Ports finalized their [Concept Paper](#) for a large-scale deployment of 50 to 100 ZE trucks operating in routine duty cycles at the Ports. The Concept Paper informs the Ports approach to the \$40 million CARB and California Energy Commission funding opportunity for a large-scale truck deployment. The Ports have been, and will continue coordinating with AQMD on the development of a project proposal for this solicitation.
- **Early Deployment and Demonstrations.** The Ports continue to manage several grant-funded demonstrations of ZE trucks, including over 20 hydrogen fuel-cell or 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 natural gas drayage trucks through a California Energy Commission (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 20 have been registered and deployed thus far. Due to production delays and potential COVID-19 impacts, the full deployment of the low NOx trucks has been delayed. There are approximately 20 ZE electric trucks registered in the Ports' PDTR.
- **Advanced Clean Truck Regulation.** The CARB Board approved the Advanced Clean Truck Regulation on June 25, 2020. This regulation includes requirements for truck manufacturers to sell zero-emission trucks in California and a one-time requirement for large entities to report about their facilities, types of truck services used, and fleet of vehicles.

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 and demonstrations of supporting electrical infrastructure, including micro-grid controls with distributed generation and battery storage.
- At POLA, as part of the Green Omni Terminal project, 2 BYD battery-electric yard tractors, and the ShoreKat treatment system, which scrubs emissions from vessels at berth, continue to be operated. Two TransPower/Kalmar Battery Electric Yard Tractors and 3 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, as part of 2 grant projects, 2 battery-electric Taylor

top handlers and 5 BYD battery-electric yard tractors are in use. They have had minor mechanical repairs, but overall are working well. Additionally, Everport continues to demonstrate 20 Capacity renewable natural gas yard tractors.

- At the Port of Long Beach, a total of 8 pieces of ZE cargo handling equipment (CHE) are currently in testing and demonstration. All of the 8 pieces of CHE are supported by commissioned ZE infrastructure. Under the C-Port demonstration, one Kalmar yard tractor (1 at LBCT) and 3 Taylor top handlers (2 at SSA, Pier J and 1 at LBCT) are operating in revenue service. For the top handlers at Pier J, Taylor is reviewing the data collected and exploring opportunities to provide adjustments to the top handlers to allow for more use per charge. Under the Zero-Emission Equipment Transition Project, a total of 3 BYD yard tractors and 1 BYD yard tractor adapted for the Cavotec Smart-Plug System (SPS) are currently undergoing testing and demonstration. The batteries on the yard tractors are performing well, with opportunity charging available. Many yard tractors continue to operate without opportunity charging in a single 7-hour shift with about 20-30% state of charge remaining. Interruption of charging events are currently being experienced at ITS. The cause of the error for the BYD EVSEs is currently being investigated. For the eRTG demonstration at SSA, Pier J, the guidance system is currently being tested on the first eRTG crane to ensure the cables used to power the crane stays within the trench as it travels up and down the row. The guidance system test is the last step prior to demonstration. This test was delayed because the systems integration company could not access to the terminal as a result of complying with the stay-at-home orders
- The Ports have documented various impacts to terminal equipment technology demonstrations as a result of COVID-19. These impacts include temporary shutdowns of manufacturing businesses and facilities, travel restrictions, shifting priorities for our partners and redeployment of personnel to COVID-19 related activities, and limited access to terminals for equipment testing and data collection. Some demonstrations have been paused due to low freight volumes, but the Ports are seeing slow cargo increases and businesses are starting to come back online. Lastly, some technology developers and OEMs have required budget cuts and/or furloughed employees. The Ports are beginning to see an uptick in resource shortages at project partner companies. Port staff will continue to monitor impacts related to COVID-19.

SHIPS

- **Vessel Speed Reduction Enhancements.** 96% of vessels visiting the Ports in Q2 2020 slowed down to 12 knots within 20 nautical miles of Point Fermin, and 93% of vessels slowed within 40 nautical miles.
- **Ship Incentive Programs.** The Ports continue to collaborate with other West Coast ports, as well as our local air district on ways to enhance participation in our clean ship incentive programs.
- **At Berth Regulation.** The Ports submitted a joint comment letter to CARB in response to their proposed "15-Day Changes for the At Berth Regulation" on April 29, 2020. CARB provided an informational update to their Board on the Control Measure for Ocean-Going Vessels at Berth on June 25, 2020. CARB plans to return to their Board later this summer for consideration of the final rulemaking. The Ports will continue to actively work with CARB on this effort.

OTHER

- **Technology Advancement Program (TAP).** In January 2020 the TAP updated its program guidelines to include a new Request for Information (RFI) process. This is a

process for initiating a funding request from the Ports for projects that are “shovel ready”. The concept paper template, updated guidelines, and submission instructions are available on the TAP website (<https://cleanairactionplan.org/technology-advancement-program/tap-guidelines-and-funding-opportunities/>).

Since January of this year, the Ports received a total of four RFI submittals with concept papers. One concept paper submitted did not meet TAP requirements while the remaining three concept papers are currently under review and consideration.

The Ports are moving forward with a new TAP project with AQMD to demonstrate a water-in-fuel retrofit system to curb NOx emissions from the ship’s main engine. The demonstration involves mixing water with the fuel to reduce peak temperatures during combustion to achieve the ideal ratio for operational stability while cutting NOx emissions by as much as 40% from the ship’s Tier 2 engine. The technology will be tested while the vessel is operating at slower speeds within the 40-nautical mile radius that makes up the ports’ Vessel Speed Reduction zone. The Ports received approval for this project from their respective Board of Harbor Commission (BHC) in Q2 2020.

Two separate ocean-going vessel projects with Pasha Hawaii have been approved by the Port of Long Beach Board BHC in Q1 2020. These projects will be considered by the Port of Los Angeles BHC in Q3 2020. One project involves repowering the engine of one C9 class vessel from a steam turbine engine to a dual-fuel engine capable of using either LNG or diesel. The second project involves building two new vessels that will also be LNG/diesel dual-fuel engine capable.

The 2019 TAP Annual Report is now available on the TAP website: (<https://cleanairactionplan.org/documents/2019-tap-annual-report.pdf/>).

PLANNED ACTIONS NEXT QUARTER

- The Ports will provide an update to their respective Boards of Harbor Commissioners on the Clean Trucks Program and Long-Term Comprehensive Strategy Plan for ZE Trucks.
- Continue development of the structure for the incentive program to be funded by the CTF Rate.
- Continue negotiating the joint contract for collecting the CTF Rate.
- Continue preparing the Long-Term Comprehensive Strategy Plan for ZE Trucks.
- Continue coordination with the Agencies on a Truck Manufacturer Summit.
- POLA will seek BHC approval of the new Pasha Hawaii TAP ocean-going vessel projects.
- Continue coordination with AQMD on a Large-Scale Zero Emission Truck Deployment project.

Any questions or comments can be sent at any time to the CAAP email at:

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