

**DOCKETED**

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*Comment Received From: Morgan Caswell*  
*Submitted On: 11/8/2019*  
*Docket Number: 19-TRAN-02*

**POLB Comments on the October 25 Workshop Concepts**

*Additional submitted attachment is included below.*



Port of  
**LONG BEACH**  
*The Green Port*

November 8, 2019

Christina Cordero  
California Energy Commission  
Docket Unit, MS-4  
Re: Docket No. 19-TRAN-02  
1516 Ninth Street  
Sacramento, CA 95814-5512

**Re: Medium- and Heavy-Duty Zero-Emission Vehicles and Infrastructure Solicitation Concepts**

Dear Ms. Cordero:

The Port of Long Beach (Port) appreciates this opportunity to provide comments on the five concepts for funding as presented by the California Energy Commission (Energy Commission) at the October 25, 2019 Staff Workgroup in Sacramento. The Port supports the goals set under the Clean Transportation Program to explore various solicitation concepts that will increase infrastructure for the deployment of zero-emission (ZE) medium- and heavy-duty (HD) advanced vehicle technologies within the California freight system.

In the 2017 Clean Air Action Plan Update (CAAP), the Port of Long Beach and the Port of Los Angeles (Ports) adopted bold, industry-leading goals to transition terminal equipment to zero-emissions by 2030, and the heavy-duty drayage truck fleets serving the Ports by 2035. Funding opportunities such as the Clean Transportation Program are critical to the success of our ZE program and thus advance our shared clean-air initiatives.

The Port would like to provide comments on the respective proposed concepts.

**Concept #1: Freight, Zero-Emission Vehicle Infrastructure Deployment for Vehicle Demonstrations**

*Support Multiple Technology Pathways*

The Port commends the Energy Commission on including funding for both electric charging and hydrogen fueling. Implementation of zero emissions technologies will likely involve a variety of approaches at different facilities and for different pieces of

equipment. It is important to not limit the proposed solicitations to one particular pathway.

*Time for Preliminary Capacity Check*

The Energy Commission should extend the solicitation period if a preliminary electrical load capacity check is required for each proposed project site. At a minimum, the Port recommends extending the solicitation period to accommodate the three to four months it would take to obtain this information from the utilities for the application submittal. If the Port is requesting a new service with several megawatts of requested capacity it could take months to get a letter and scope of work from the utility. It would be unfortunate if feasible, innovative projects are not applied for because applicants cannot meet the tight timeline to gather this information. The preferred option is to make this requirement an initial deliverable in the Energy Commission's Agreement with the Recipient.

*Include Harbor Craft and At-Berth Technology Applications*

The Port recommends the Energy Commission include other applications, such as harbor craft and ships at berth, as eligible to be supported by the infrastructure, and not limit the solicitation to deployment of ZE infrastructure for only medium- and HD advanced on-road or off-road vehicles. The CAAP identifies both harbor craft and ocean-going vessels as significant sources of both criteria pollutants and greenhouse gas emissions.

*Include Energy Storage as an Option Under Eligible Projects*

The Port also recommends allowing energy storage as an option under eligible projects. While energy storage projects at the Ports are not always feasible due to massive energy demands at the terminals and the limited space in which to site batteries, there are potentially innovative battery storage options that could be considered for funding. In particular, battery storage solutions that allow for multi-use opportunities such as peak shaving, charging cargo handling equipment, and charging of harbor craft could provide a unique opportunity to maximize the use of the real estate taken by the battery storage solution.

*Include Mobile Fuelers as Eligible for Funding*

Mobile fuelers should be eligible for funding for maritime demonstrations. A mobile fueller for a ZE hydrogen fuel cell rubber tire gantry (RTG) crane or other cargo handling equipment will be less costly and much faster to deploy than permanent hydrogen infrastructure. Deployment of permanent, fully sized to capacity hydrogen infrastructure may require many years of planning and permitting, and would unlikely meet grant timelines. In order for hydrogen to become a feasible ZE alternative in the maritime industry, mobile fuelers of various sizes, similar to that of traditional gasoline or diesel mobile trucks currently used, will be required to support full fleets. Design of a mobile fueller to meet the specific needs of maritime applications should also be eligible under this concept.

*Limit Requirement to Six (6) Months of Data Collection*

The Port recommends the Energy Commission consider decreasing the data collection requirement from 12 months to 6 months. It has been the Ports experience through the Technology Advancement Program and our other demonstration projects with the

California Resources Board (CARB) that 6 months of data collection provides sufficient throughput, usage, and operations data.

*Provide Additional Time for Commissioning*

An infrastructure solicitation for demonstration of innovative charging solutions should provide additional time for commissioning challenges. As an example, the Port and the City of Long Beach require UL certification for all components of charging stations and energy storage deployed at a marine terminal. On some of our current project demonstrations, we have allowed third party certification companies to provide on-site testing in lieu of the UL requirement, with the expectation that the technology developer will use this certification as a stepping stone towards formal UL certification. The third party certification process can be lengthy, lasting multiple months depending on whether or not modifications to the charging station/energy storage is required.

**Concept #2: Transit and Truck Fleets, Capital Expense Assistance for Zero-Emission Infrastructure Deployment**

*Delay Deployment of Infrastructure for Truck Fleets*

The Port supports the Energy Commission's proposed concept for infrastructure to support heavy-duty drayage trucks. It is critically important for infrastructure to be in place early in implementation of heavy-duty zero emission trucks, to support and promote bringing the vehicles into the operation. However, there are potential concerns with the requirement to have a commitment to purchase ZE vehicles at the same time as installing the infrastructure given the current lack of availability of zero-emission class 8 trucks. As written, this concept would ultimately be geared towards last-mile delivery or transit fleets as there are currently no ZE class-8 trucks available to purchase. Additionally, CARB recently approved as part of its Fiscal Year 2019-2020 funding plan an allocation of money for a demonstration of 50-100 zero emission drayage trucks. Such funding would ideally be paired with funding for infrastructure through an Energy Commission concept such as this. As such, the Port recommends delaying the opening of a fleet infrastructure deployment solicitation to better align with the planned CARB fleet demonstration project solicitation.

**Concept #3: ZEV Blueprints for MD/HD Vehicles Infrastructure (Including Small Seaports and DACS)**

In 2017, under Agreement ARV-17-048, the Energy Commission provided the Port with the opportunity to develop an innovative, replicable electric vehicle and equipment blueprint plan for the port community. Finalized in May of this year, the Port developed the first *Port Community Electric Vehicle Blueprint* (EV Blueprint) which lays out the actions necessary to achieve our ZE goals. The following comments support the justification for the next step, "Phase II," which is to lay the groundwork for an actionable implementation plan to support the installation of infrastructure in the Port community.

*Include Infrastructure Design Plans Under Eligible Projects*

The Ports EV Blueprint identified the path towards ZE and provided an economical, demonstrated approach to EV planning. One major action item identified by the EV Blueprint is the need for specific infrastructure design plans which will provide greater insight on infrastructure planning on a terminal-by-terminal basis. These design plans

would include equipment specifications, operational configurations, site layouts, rough costs, schedules and energy resiliency and cybersecurity considerations. The Port strongly encourages the Energy Commission expands this concept to include funding for actionable, infrastructure design plans.

#### *Include Metering*

In order to build an infrastructure design plan which is data-driven, we need to deploy energy meters across the terminals. Today, we rely on the terminal operator to request 15-minute interval data from the utility. The information quickly becomes obsolete and the location of the meters does not allow for a breakdown of energy usage by equipment type. In order to cost-effectively, and accurately write a plan which outlines the infrastructure requirements for a terminal's operation, additional meter data will be imperative.

#### *Include Charging Specifications and Equipment Certification*

The EV Blueprints and/or infrastructure design plans should identify the number of and necessary specifications for EV charging stations, without requiring specific charging standards be identified. There are currently no adopted standards for HD electric or hydrogen equipment or charging stations. As identified in the EV Blueprint and the associated National Renewable Energy Lab charging standards white paper, funding agencies and utilities should play a major role in advancing standardization by prescribing the specific connector systems and charging outlets eligible for funding. Concept #1 is an ideal opportunity for the Energy Commission to aid in the adoption of true standards for HD vehicles and equipment.

Given the Port's experiences with infrastructure deployment to date, it would also behoove the Energy Commission to encourage sites to consider electrical certification requirements, including site certification by Nationally Recognized Testing Laboratories, and eventually a path to UL certification in their EV Blueprints. A required description of the planned certification process for charging station deployment would also be applicable to Concept #1.

#### **Concept #4: Hydrogen Rail & Marine Applications**

The Port commends the Energy Commission for including a concept specifically geared towards marine and rail operating on hydrogen. There have been significant challenges in advancing hydrogen locomotive and marine technologies. It is important to not limit the solicitation to either new builds or repowers as the marine and rail applications will likely require different solutions. Mobile fueling should also be eligible for funding under this concept. The \$6.6 million dollars proposed may not be enough funds for large, innovative HD projects that rail and marine applications demand; thus, the Port suggests that one showcase project should be chosen rather than multiple. Finally, the project deadline of 2024 for this concept is stringent for these types of projects. As such, this solicitation should allow for proof of concept design projects.

#### **Concept #5: Miscellaneous – Long-Haul and Innovative Applications**

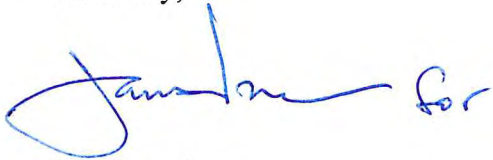
The Port supports the proposed ideas of class 8 ZE drayage trucks and targeted infrastructure deployment for operations on the I-710 and near Port facilities. In the Clean Air Action Plan, the Ports of Los Angeles and Long Beach committed to a 50 to 100 Zero

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Emission Truck Pilot Program to test ZE drayage trucks at scale in order to demonstrate feasibility, stimulate the production of these vehicles and provide meaningful data in real world Port operations. The Port is currently working on a concept paper to begin outreach to secure funding for this imperative and exciting program. We think this program would fit well into Concept #5 as proposed, and we look forward to discussing it more with the Energy Commission.

The Port appreciates the opportunity to provide comments on the Medium- and Heavy-Duty Zero-Emission Vehicles and Infrastructure Solicitation Concepts and we thank you for your receptiveness to our input. We look forward to continuing to work with the Energy Commission on advancing our shared clean air goals and aiding in future solicitations. Should you have any questions, please contact staff, Rose Szoke, at 562-283-7106 or [rose.szoke@polb.com](mailto:rose.szoke@polb.com).

Sincerely,

A handwritten signature in blue ink, appearing to read "Matthew Arms", with a stylized flourish at the end.

Matthew Arms  
Acting Director of Environmental Planning