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Port of
LONG BEACH
The Green Port

July 3, 2018

Samuel Wade
California Air Resources Board
P.O. Box 2815
Sacramento, CA 95812

RE: Port of Long Beach Comments on the Proposed Amendments to the Low Carbon Fuel Standard Regulation

Dear Mr. Wade,

The Port of Long Beach (Port) appreciates the opportunity to again provide comments on the proposed amendments to the Low Carbon Fuel Standard (LCFS or Rule). The Port previously submitted comments prior to the June 11 workshop and due to the language recently released, is again offering comments for consideration. Through its Clean Air Action Plan, the Port has adopted aspirational, industry-leading goals to substantially reduce port-related emissions and transition all port terminals to zero- or near-zero emission operations by 2030. This Plan will be greatly supported and accomplished with full participation in the LCFS, enabling the Port and its terminal, equipment and fleet operators to transition away from diesel equipment and vehicles while retaining cost-effective operations in the increasingly competitive world of maritime goods movement.

The Port believes the proposed amendments will significantly expand the LCFS program to allow for more mobile freight and cargo-handling equipment to qualify for credit generation. This provision is helpful and will likely spur the interest of the industry to participate in the LCFS program. In furtherance of this goal, the Port offers the additional recommendations described below to increase LCFS credit uptake by the industry and thus promote further investment in zero emissions technologies.

1. *Inclusion of Shore Power should be written into the Rule, even if use of this power is required by regulation.* Use of shore power instead of marine diesel for ocean-going vessels (OGV) berthed at port has the proven benefit of achieving significant reductions in greenhouse gases, as well as co-pollutants. OGVs are responsible for up to 50% of the Port's greenhouse gas emissions and the use of shore power for all vessels at the Port could dramatically lower this number. Crediting shore power would encourage ongoing investment in electrical infrastructure such as new power outlets where necessary, to ensure 100% compliance with the regulation, and would incentivize vessel operators to go beyond the regulation, particularly if the Port uses LCFS-generated revenues to

increase existing Port incentive programs. The ownership of credits for shore power is discussed below.

2. *Carbon Intensity Values (CI) from Renewables and Time-of-Use Charging should be applicable to mobile freight, electric cargo-handling equipment (eCHE) and Auxiliary Power for Ocean-Going Vessels (OGV) At-Berth.* Currently, book-and-claim accounting for excess renewables, renewables purchased through a green tariff program or PPA, or on-site renewables apply just to "electricity supplied as a transportation fuel." The Port does not believe that CARB intended to exclude electric cargo-handling equipment or electric auxiliary power engines for OGVs at-berth, from utilization of a lower CI for use of renewable energy. Modifying the rule to clearly include these applications for use of the lower CI associated with renewable energy would provide certainty for Port operators and fleet owners who are considering expensive upgrades or changes to their equipment.

3. *The Energy Economy Ratio (EER) table should include appropriate EERs for commercialized electric Port equipment and suitable generic EERs for other and emerging-technology equipment.* The Port is encouraged by a new EER catch-all category for eCHE in the proposed Rule, as many pieces of eCHE qualify for credit generation. However, the current generic value given is 2.7 which seems much too low for many specific types of mobile freight equipment. For example, in a CARB "Battery Electric Truck and Bus Energy Efficiency Report" dated May 2008 it showed an "EER potential range from 5.3 to 7.0 for electric yard tractors compared to similar conventional diesel vehicles." Some other pieces of equipment such as electric rubber-tired gantry cranes are commercially available and CARB could devise an EER based on their known parameters. For emerging technologies, CARB could develop a few generic EERs based on equipment size and/or capacity. Finally, the lack of appropriate and accurately derived EERs could result in fewer credits or could fail to provide enough of an economic driver for equipment conversion; thus, we encourage additional EERs to be formally adopted for specific pieces of eCHE. We support that a new EER can now be proposed for innovative technologies but caution that the extensive work and long timeline required may deter the process from being initiated. The overall EER approach should ensure that the LCFS Rule appropriately credits commercialized zero emission mobile freight equipment without restricting the inclusion and participation of early adopters of novel, electric equipment.

4. *Allow fleet operators to use the same simplified calculations that CARB uses on behalf of electrical distribution utilities to calculate credits.* The requirement to keep track of the battery capacity rating, depth of discharge, charger efficiency rating, and charge return factor can be complicated and cumbersome for some equipment operators at the Port, which may be why none have elected to opt into the program. Allowing the same simplified calculation that CARB staff uses would likely improve participation of the Port and terminal operators. This proxy method of recording electricity used is similar to

the proposed calculation to calculate the renewable energy from residential non-metered electric vehicle charging. The Port strongly encourages adoption of this calculation for equipment, to simplify crediting and reduce the cost and physical footprint of metering equipment required.

5. *The usage of Renewable Energy CI Values should be allowed for CHE and Auxiliary Power for Ocean-Going Vessels At-Berth.* Currently, book-and-claim accounting for excess renewables, renewables purchased through a green tariff program or PPA, or on-site renewables apply just to *transportation* fuels. The Port does not believe that CARB intended to exclude electric cargo-handling equipment or electric auxiliary power engines for ocean-going vessels at-berth, from utilization of a lower carbon intensity (CI) for use of renewable energy. Modifying the rule to clearly include these applications for use of the lower CI associated with renewable energy would provide certainty for Port operators and fleet owners who are considering expensive upgrades or changes to their equipment.

6. *Verification of calculations for electricity derived LCFS credits should be exempt for a declared period of time.* The exemption for electric vehicles and equipment for third party verification is currently only said to last until CARB has trained the verifiers; this period of time was not specified. Given the relatively low volume of electricity-derived LCFS credits, verification should be exempt for a stated amount of time, or at least a period of 5 years to allow this segment of the market to mature without fleet owners being concerned about paying third-party verification costs with little notice or time to budget. Further, after that period of time projects that fall under a threshold of credits (perhaps 6,000 which is the proposed threshold for verification in fuel transactions) should be exempt indefinitely from third-party verifications. Making this exemption and the timetable for verification exemption clear in the revised Rule would help ease concerns of Port fleet owners and help them budget for electric equipment and LCFS program costs.

7. *The Port supports the transfer of ownership of LCFS credits in certain circumstances.* In some instances at the Port where the two are distinct entities of fleet operator and fleet owner, the fleet operator is often contracted to manage the equipment and does not have an equity stake in it. The Port supports the proposed amendment language for electric forklifts and other eCHE which provides the fleet owner with the credit that will help properly incentivize the upgrade of equipment from diesel to electric, because this type of upgrade is significantly less feasible without the added value and benefit of the LCFS credit. The opportunity to designate another entity to be the credit generator is also advantageous for ease of reporting and operational complexities.

With regards to the ownership of the credit for shore power, the Port looks forward to reviewing that language once released. It is suggested that the credit generator and owner for this activity be the owner of the fueling supply equipment (FSE), just as EV charging stations receive credit for vehicles charged at their site under the Rule. Since the Port and terminal operators must invest in significant infrastructure in order to allow vessels to charge, this award of credits would help overcome barriers to the installation and utilization of stationary and mobile shore power infrastructure. Permitting the owner of the shore power infrastructure to generate and claim the credits will enable the value of the credits to be possibly passed through more readily to the vessel and fleet operators without subjecting them to the burdensome reporting requirements that may not be economically feasible for them, dependent upon the number of port calls their fleets make in California each year.

To review, the fact that the Port nor any port terminal operators are currently generating LCFS credits suggests that the current Rule did not provide enough incentive for the industry to become involved and subject itself to the potentially burdensome reporting and verification requirements. The changes in the proposed amendments to the Rule that allow for more eCHE and like equipment at the Port to qualify for generation and for credits to be transferred from a fleet operator to an aggregator are encouraging, but the complexity of crediting and high cost of electric equipment replacement will likely continue to prevent a high level of engagement unless the suggestions above are addressed in the final amendments. These revisions and clarifications could aid the industry in participating in the LCFS program, enabling the Port and its terminal operators to begin transitioning towards zero emission equipment while retaining cost-effective operations in the increasingly competitive world of maritime goods movement.

We appreciate the opportunity to provide comments now as the Board determines the language to be incorporated in the final amendments to the Rule. Thank you for your time and attention to these comments, and if you have any questions please contact me at heather.tomley@polb.com or (562) 283-7100.

Sincerely,

Heather A. Tomley
Director, Environmental Planning
Port of Long Beach