

GOLDMAN SCHOOL
OF
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The Honorable Pete Buttigieg Secretary
U.S. Department of Transportation
1200 New Jersey Avenue, SE Washington, D.C. 20590

RE: Port of Oakland's Zero Emissions Freight Equipment Project Application to PIDP Grant Program Dear Secretary Buttigieg:

I write in support of the Port of Oakland's (Port) \$11 million grant request through the U.S. Maritime Administration's Port Infrastructure Development Program (PIDP) to create an enhanced sustainable utility infrastructure network for zero emissions freight equipment at the seaport.

The replacement of an aging sub-station, distribution circuit upgrades, the addition of a 2MW fuel cell, 4 MW of on-port solar generation and a new interconnection with EBMUD water treatment plant will help begin the process of electrifying cargo handling equipment (CHE, consisting of yard trucks, top-picks, side-picks, cranes) at the Port. It will also help expand shore power supply for ships and refrigeration containers. We hope this new capacity will help avoid the need to run ship engines during grid emergencies related to wildfire and heat events and facilitate the replacement of diesel-powered equipment and trucks with electric drives.

It is, however, very important to understand that the projects supported by this grant are only a few of the steps needed to reduce emissions from diesel powered equipment at the Port. Projects supported by this grant must be designed and sized to facilitate future additional infrastructure changes, including:

- vehicle and equipment charging stations;
- enhanced on-site renewable generation (the RE potential at the Port is larger than 4MW);
- energy storage, including batteries, on-site renewable hydrogen generation & storage; and,
- islanding capacity to allow the Port to operate during grid emergencies;

More specifically, the infrastructure supported by this grant should be designed to accommodate sufficient electric power capacity to electrify the **entire** yard truck fleet (about 275 vehicles) and other CHE equipment operating in at the Port. This transition, including the build-out of charging capacity, will happen gradually, but can be accomplished over an 8-10 year period as existing equipment ages out. The federal grant money will be wasted if this round of infrastructure has to be replaced before the end of its service life in order to accommodate higher equipment charging capacity, or if it essentially precludes future projects needed to fully electrify operations at the Port.

The grant-supported infrastructure should also accommodate, or at least not preclude, future opportunistic fast-charging capacity for drayage trucks serving the Port. The thousands of drayage trucks serving the Port will charge predominantly at their home bases and in transit, but clearly some complementary charging will be needed in or near the Port. The Port utility could supply the power for such charging infrastructure if it has compatible electric distribution capacity.

Finally, the fuel cell supported by this project should be designed at the outset to use renewable hydrogen or renewable methane (e.g. methane from the waste water plant located adjacent to the port). It would be a mistake to build infrastructure to supply pipeline fossil gas to support the fuel cell. The Port and associated shipping and trucking operations are already one of the largest sources of greenhouse gas emissions GHG emissions in the Bay Area. Installation of permanent fossil gas pipeline capacity would clearly drive the Port in the wrong direction on GHG emissions and will rapidly become a stranded asset. Fossil gas should be used in the fuel cell, if at all, only as a very limited, interim step toward a zero-carbon configuration.

Clearly this grant cannot support all the electrification needs at the Port of Oakland, but it should be designed and sized as a building block toward full electrification of Port and freight operations.

Thank you for considering these recommendations.

Respectfully,



David Wooley