



Port of
LONG BEACH

The Green Port

June 15, 2016

Submitted Electronically: <http://www.arb.ca.gov/lispub/comm/bclist.php>

Clerk of the Board
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Re: Port of Long Beach Comments on FY 2016-17 Low Carbon Transportation Investments/Air Quality Improvement Program Funding Plan

To the Members of the Air Resources Board:

The Port of Long Beach (Port) appreciates the opportunity to comment on the California Air Resources Board's FY 2016-17 Funding Plan for the Low Carbon Transportation Investments and the Air Quality Improvement Program (LCTF/AQIP). The Port has worked aggressively, in partnership with terminal operators and the maritime goods movement industry, to reduce emissions from port-related operations, and funding assistance programs such as LCTF/AQIP are critical to help transition to cleaner equipment and thus advance our clean-air goals.

In looking ahead to the next fiscal year, the Port sees a significant opportunity to push the pace of zero- and near-zero emissions (ZE/NZE) technology development and deployment particularly related to cargo-handling equipment (CHE). As evidenced by recent grant applications and technology demonstrations, we believe there is a very real, near-term opportunity to transform the roughly 1,200 pieces of CHE that operate at the Port in close proximity to disadvantaged communities. As such, we offer ARB the following comments on the FY 2016-17 LCTF/AQIP funding plan.

1. Increase funding for cargo-handling equipment demonstrations.

Under the Advanced Technology Demonstration category, the LCTF/AQIP discussion document identifies \$18 million for off-road equipment, which includes seaport-related cargo-handling equipment, automated port strategies, airport equipment, and locomotives. The Port believes this level of funding underestimates the near-term opportunities to accelerate ZE cargo-handling technologies, and we would encourage ARB to increase this category beyond \$18 million.

Port cargo-handling equipment is a category ripe for ZE technology development, and current demonstrations have shown great promise, for example, by providing critical information to better understand the performance capabilities of battery-electric yard tractors. Additionally, real-world projects such as Port of Long Beach's Middle Harbor terminal, which uses automated port equipment and advanced logistics to slash emissions, make the case for investments in advanced container-handling strategies.

Comments on FY 2016-17 Low Carbon Transportation Investments/Air Quality Improvement Program Funding Plan

June 15, 2016

Page 2 of 3

To date, however, there has been relatively little funding for such demonstrations. Within the next year, the Port sees an opportunity to demonstrate different types of low-emission yard tractors to provide more options for end users, to pilot advanced logistics technologies, and to develop ZE top handlers, which make up 10% of our CHE inventory. Much of this technology development has already begun. Additional investments could tip the balance to encourage greater levels of investment and commitment by technology developers to advance more ZE options for cargo-handling equipment, including different technologies and types of equipment, and to move toward commercialization.

The Port understands these technologies will be very expensive to develop. A ZE top handler prototype could cost upwards of \$1 million, and automated port equipment and logistics strategies could vastly exceed that number. The air quality benefits, however, are potentially significant. To accelerate real change in this industry, the Port strongly urges ARB to increase the proposed FY2016-17 amount of \$18 million for off-road advanced technology in order to take advantage of the immediate opportunities and provide near-term air quality benefits to nearby communities.

2. Increase funding for zero-emissions cargo-handling equipment deployment.

The LCTF/AQIP discussion document identifies \$5 million for ZE Freight Equipment Pilot Commercial Deployment. The Port believes this amount significantly underestimates the opportunities for immediate deployment, as recent funding solicitations for ZE equipment have generated substantial interest. The Port believes that a concentrated investment in this equipment today could make substantial progress toward transforming the industry within the next 5 years.

Light and medium duty electric and fuel-cell forklifts are commercially available, and with a variety of light, medium and heavy duty forklifts (about 230 units at the Port of Long Beach) in operation – 20% of our CHE inventory – there is ample opportunity for replacement. Rubber-tired gantry cranes (RTGs) make up 5% of our fleets but up to 17% of the CHE emissions; electrifying this equipment, which is possible today, would eliminate these emissions. The prospects for ZE yard tractors are even more compelling. Yard tractors are the workhorses of our terminals, and with more than 640 of these units operating at the Port, they make up half of all cargo-handling equipment. Several terminals are already demonstrating ZE yard tractors, and the response has been positive. With adequate funding, we believe there is a significant opportunity for forklifts, RTGs, and yard tractors to transform to zero emissions within the next 5 years.

Tellingly, the industry has signaled its willingness to invest in cleaner equipment if the incentives are available. Earlier this year, terminal operators applied for more than \$33 million for ZE forklifts, yard tractors, and RTGs through the Proposition 1B program, far exceeding the available \$14.5 million. In contrast, the Proposition 1B funding program for heavy-duty trucks was undersubscribed. This situation highlights the immediate demand for ZE cargo-handling equipment, and the Port encourages ARB to allocate more funding for freight equipment deployment for the FY 2016-17 funding cycle.

3. Extend HVIP incentives to off-road equipment.

The LCTF/AQIP discussion document identifies \$18 million for HVIP, which offers financial incentives to end users who buy zero-emissions vehicles. Only on-road trucks and buses, however,

Comments on FY 2016-17 Low Carbon Transportation Investments/Air Quality Improvement Program Funding Plan

June 15, 2016

Page 3 of 3

are eligible for HVIP funding. In keeping with the comments above, the Port urges ARB to make HVIP funds available for off-road equipment, which would give our operators access to an additional \$18 million in incentives.

4. Increase funding for zero-emissions infrastructure.

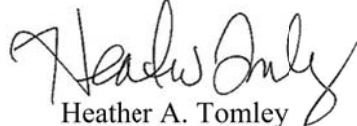
The Port believes that infrastructure is fundamental to carrying ZE technologies to market and is pleased that charging stations are eligible for funding under LCTF/AQIP. The charging stations themselves, however, are often the least expensive component of charging infrastructure. Far more significant are the costs of upstream equipment, such as substations, transformers, electrical conduit, and lines to bring additional power down to port terminals and other charging facilities. Under the proposed LCTF/AQIP plan, infrastructure projects may compete against equipment projects for already scarce funds. So as not to hamper the pace of zero-emissions development, the Port recommends boosting the proposed funds for ZE infrastructure and allowing upstream equipment as an eligible expense.

Additionally, the Port strongly supports ARB's proposed rollover of unfunded FY 2015-16 proposals from the Advanced Technologies demonstrations, particularly the Multi-Source Facility Demonstration Project. Many of these unfunded proposals include cutting-edge ZE/NZE control strategies that can provide significant near-term emissions reductions. In the interest of quickly advancing the pace of ZE technology development, the Port respectfully requests an expedited review and awards allocation of the submitted proposals with no new solicitations required.

The Port remains committed to pursuing zero emissions across all source categories. To date, there has been significant investment in heavy-duty truck technologies and intelligent transportation system demonstrations, in which the Port has supported and participated. The Port believes, however, that these projects should advance prior to further significant investments in FY 2016-17. Meanwhile, our terminals have signaled their interest in ZE equipment if funds are made available. As such, the Port encourages ARB to target next year's funding toward off-road equipment.

The Port appreciates the opportunity to provide comments on the FY 2016-17 LCTF/AQIP funding plan, and we thank you letting us provide input throughout this process. We look forward to continuing to work with you on advancing our shared clean air goals.

Sincerely,



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

RKM