



Fact Sheet

Zero-Emissions Terminal Equipment Transition Project



Port of
LONG BEACH
The Green Port

Purpose

The Port of Long Beach is partnering with Southern California Edison, three major terminal operators, Total Transportation Services, Inc., multiple technology vendors, the International Brotherhood of Electrical Workers, Long Beach City College, and Clean Energy Fuels for one of the nation's largest demonstration and deployment projects for zero-emissions cargo-handling equipment. The project will support the air quality goals of the Clean Air Action Plan and further reduce the Port's impact on the environment and neighboring communities.

The California Energy Commission awarded a \$9.7 million grant toward the expected \$13.7 million total cost of the projects.

Each piece of equipment will be demonstrated in a rigorous seaport environment for 12 months. The project is anticipated to be completed at the end of 2020.

Project Components

- Repower nine rubber-tire gantry cranes at SSA Marine Pier J to full electric power. This project will be the nation's largest deployment of fully electric RTGs at a single terminal. RTGs comprise only 5 percent of the terminal fleet at the Port but up to 20 percent of

equipment emissions.

- Develop and demonstrate 12 zero-emissions yard tractors. This project will test the performance of battery-electric yard tractors in a rigorous port duty cycle at two Port terminals – International Transportation Service and Long Beach Container Terminal – in one of the largest demonstrations of such equipment at a port complex.
- Demonstrate the feasibility of “smart” yard tractor charging to support widespread deployment of zero-emissions equipment. In the long term, the Port needs a quick way to charge large fleets of electric cargo-handling

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equipment. Working with Southern California Edison and a technology developer, the Port will test a prototype automated charging system to support the fast, large-scale charging system necessary to transition the fleet to zero emissions.

- Convert four liquefied natural gas drayage trucks to plug-in hybrid capability, or electric trucks with an LNG range extender. The Port will study the inclusion of a geofencing component that can set the trucks to run automatically in zero-emissions mode near the Port. Additionally, the trucks will be powered with renewable natural gas.
- Support workforce development training programs relevant to the project's technologies. The Port is partnering with Long Beach City College and the International

Brotherhood of Electrical Workers to evaluate existing workforce development and training programs and to determine the extent to which they support the Port's goal of transitioning to zero-emission port equipment by 2030. This effort will also assess the relevant existing skills of the regional workforce, identify critical gaps in those skills to support these types of transportation electrification projects, and develop recommendations for augmenting existing workforce development and training programs.

- Communicate and engage with communities on the benefits of and progress made toward zero emissions through public education events, tours, news releases, equipment demonstrations and other outreach.

Partners

Southern California Edison
International Transportation Service
Long Beach Container Terminal
SSA Marine
Total Transportation Services, Inc.
Long Beach City College
International Brotherhood of Electrical Workers
Clean Energy Fuels
Cavotec
BYD Motors
US Hybrid

Contact

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