



Fact Sheet

Port Advanced Vehicle Electrification (PAVE) Project



Purpose

The Port of Long Beach's Port Advanced Vehicle Electrification Project will design, install, and deploy electrical charging infrastructure, including electrical conduit, wires, switchboards, transformers, and switchgears, to support battery-electric yard tractors and forklifts at Total Terminals International's facility at Pier T. The PAVE Project includes the world's first heavy-duty, off-road direct current fast-charging system for battery electric yard hostlers.

The Port's 2017 Clean Air Action Plan Update sets goals for zero-emissions cargo handling by 2030 to further reduce the Port's impact on the environment and neighboring communities. The PAVE Project supports this zero-emissions future. Plans also include developing a Dynamic Energy Forecasting Tool capable of estimating and identifying the costs and requirements of converting Port terminals to zero-emissions and advanced energy operations, to be shared with other ports across the country.

The California Energy Commission awarded \$8 million for the

\$16.8 million project, which will be completed by March 2022.

Project Components

- Design and construct charging outlets for almost 40 pieces of electrical terminal equipment at TTI, the Port's busiest terminal, supporting the first phase of a transition to zero-emissions terminal equipment
- Four zero-emission yard tractors will demonstrate the world's first direct current fast-charging system for battery-electric yard hostlers in a rigorous, heavy-duty port environment. Two additional zero-emission yard tractors will demonstrate alternating current fast-charging
- Deploy battery storage and energy management strategies to minimize and better understand the grid impacts associated with widespread deployment of electric vehicles and equipment
- Develop a comprehensive portwide Dynamic Energy Forecasting Tool to predict how much energy and supportive infrastructure seaports will need to support zero-emissions

terminal equipment. The Port will work with its industry partners to make other seaports aware of the tool and will host training sessions instructing ports how to use the tool and develop comprehensive infrastructure plans of their own

- Support workforce development by promoting electric vehicle infrastructure training programs

Partners

Total Terminals International
 Southern California Edison
 ChargePoint
 Kalmar/TransPower
 International Brotherhood of Electrical Workers
 Electric Vehicle Infrastructure Training Program
 South Coast Air Quality Management District

Contact

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