



Long Beach Container Terminal, Inc.



News Release

EPA Provides \$300,000 for Hybrid Yard Tractors *Can "Prius-like" Diesel-Hybrids Improve Air Quality and Survive Work in a Cargo Terminal?*

LONG BEACH, September 6, 2006 -- The U.S. Environmental Protection Agency presented a \$300,000 grant on Wednesday to the Port of Long Beach to fund the development of hybrid-powered cargo-handling equipment and testing at one of the Port's container shipping terminals.

The two-year, \$1.2 million project will research, develop, build and test ultra-low emissions hybrid cargo-handling vehicles, known as "yard hostlers," to improve air quality. The project will test hybrid technology, which combines a clean source of power with a clean diesel engine for dramatic emissions reductions.

"EPA and our partners are moving technology breakthroughs from the labs down to the docks – improving air quality while saving fuel," said U.S. EPA Deputy Administrator Marcus Peacock. "These port projects upgrade an economic engine to an environmental driver, steering Californians toward cleaner air and a stronger economy."

The Hybrid Yard Hostler Demonstration and Commercialization Project will be headed by the Port of Long Beach in partnership with the Port of Los Angeles. The testing will be at Long Beach Container Terminal's Pier F facility at the Port of Long Beach. Cargo-handling equipment manufacturer Kalmar Industries will integrate the cleaner hybrid system into the yard hostlers. CALSTART, a non-profit company that focuses on advancing cleaner technologies, is assisting in evaluation of the feasibility of the hybrid hostlers, looking at air quality impacts and fuel savings. Providing \$300,000 in funds through the EPA for this project, the West Coast Collaborative, an integral part of the National Clean Diesel Campaign, is a public private partnership working to reduce diesel emissions voluntarily up and down the West Coast.

"The Ports of Long Beach and Los Angeles have proposed a Clean Air Action Plan to greatly reduce health risks and air pollutants associated with port operations," said Port

of Long Beach Executive Director Richard Steinke. "A key element of the Action Plan is our support for research and development projects, such as this one, to spur even greater air quality improvements in the future."

"If this promising technology proves viable, we will see air quality improvements beyond anything currently required by state or federal regulations," said Port of Los Angeles Executive Director Geraldine Knatz. "This technology could significantly curtail air pollution while helping to reduce fuel consumption."

Three of the hybrid yard hostlers will be operated and tested for six months at Long Beach Container Terminal. The hybrid vehicles could use either a hybrid-electric system to combine the cleanest available diesel engine technology with an electric motor, or a hybrid-hydraulic system that would combine the cleanest available diesel engine technology with components that use hydraulic fluid compression to store energy.

The hybrid-drive system, coupled with the cleanest available diesel engine, is expected to deliver a 93 percent reduction in smog-forming nitrogen oxides and diesel particulate matter compared to typical yard hostlers. In addition, the hybrid technology is expected to reduce or eliminate emissions during idling, which can represent more than 50 percent of the yard hostler duty cycle. The estimated cuts in emissions from idling reductions during the six-month test are about 19 tons of nitrogen oxide and 200 pounds of particulate matter.

Long Beach Container Terminal is also conducting tests on yard hostlers powered by liquefied natural gas, a project which previously received grant funding from the U.S. EPA. CALSTART also is evaluating the feasibility of the LNG hostlers.

In addition to the \$300,000 award from the EPA's West Coast Collaborative, the two ports have agreed to contribute \$375,000 each in funding and services toward the project. Kalmar, Long Beach Container Terminal and the hybrid technology supplier will provide an additional \$150,000 in services.

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