



Zero Emission Cargo Handling Equipment

Position

The NWSA is seeking \$4.4 million in funding to support the conversion of cargo handling equipment to zero emissions.

Background

In 2021, the NWSA updated its Northwest Ports Clean Air Strategy, setting the goal to eliminate greenhouse gas emissions associated with its marine cargo operations by 2050. Part of this strategy involves the replacement of diesel powered cargo handling equipment with zero emission equipment.

The purchase price of a new battery electric terminal tractor is roughly three times greater than a comparable new diesel machine and requires substantial infrastructure upgrades to support charging. While operational costs for battery electric terminal tractors are lower than for diesel machines, the 7-year total cost of ownership for battery-electric machines is estimated to be greater than diesel machines by nearly \$200,000.

Program design

The program would cover up to 50% of the cost of the replacement unit and associated charging/fueling infrastructure, capped at \$220,000 per unit. This would fund up to 20 pieces of equipment.

The NWSA would be the recipient of this appropriation and would provide funding to equipment owners to purchase zero-emission replacement pieces of cargo handling equipment. Program beneficiaries (i.e.

Project funding	
NWSA	\$4.4 million
State (proposed)	\$4.4 million
TOTAL	\$8.8 million

marine terminal operators) would only spend the funds on purchasing a replacement zero emission piece of cargo handling equipment and associated charging/fueling infrastructure. The NWSA would assess suitability of the program beneficiaries before acceptance to the Zero-Emission Cargo-Handling Equipment Replacement Program, based on engine tier, ownership and use criteria (i.e. equipment must have been used at least 500 hours in previous calendar year, diesel equipment to be scrapped must be owned (i.e. not leased), diesel equipment to be scrapped must be a diesel Tier 0-3 engine). Once approved, the tenant would be responsible for selecting and purchasing suitable replacement equipment and scrapping the old diesel machine.

While zero-emissions cargo handling equipment remains largely in the demonstration stage, particularly for larger and heavier-duty equipment, there are significant public health opportunities from reducing diesel consumption in CHE.”

- Clean and Prosperous WA, Washington’s Decisive Decade

Contact

Sean Eagan
Govt. Affairs Director
(253) 223-5117 (m)
seagan@nwseaportalliance.com

How does the state benefit?

The project will result in the total elimination of diesel particulate matter and greenhouse gases from 20 pieces of equipment, resulting in a reduction of 12.46 tons of PM2.5 and 10,678 tons of GHG over the lifetime of the project.

The project locations are marine terminals in both Seattle and Tacoma. The census tract that includes these terminals and surrounding census tracts all score a 9 or 10 out of 10 for the “diesel pollution and disproportionate impacts” index, according to the Washington State Department of Health. Many properties controlled by the NWSA and Port of Tacoma lie within the boundaries of the Puyallup Indian Reservation, indicating impacts on indigenous communities.



Zero emission cargo handling equipment in Tacoma’s South Intermodal Rail Yard.