

THE NORTHWEST SEAPORT ALLIANCE
MEMORANDUM

MANAGING MEMBERS
ACTION ITEM

Item No.: 9D
Meeting Date: May 5, 2026

DATE: April 27, 2026

TO: Managing Members

FROM: John Wolfe, CEO

Sponsor: Jason Jordan, Sr. Director, Environmental & Planning
Project Manager: Graham VanderSchelden, Environmental

SUBJECT: Cargo Handling Equipment Zero Emission Accelerator Program

A. ACTION REQUESTED

Request the Managing Members project authorization in the amount of \$2,300,000, for a total authorized amount of \$2,300,000, for work associated with the NWSA's Cargo Handling Equipment Zero Emissions Accelerator Program (CHE-ZAP), Project Identification No. 2023-03SH.

B. SYNOPSIS

The CHE-ZAP is an incentive program that would support the purchase of zero emission (ZE) cargo handling equipment (CHE) and installation of charging by NWSA tenants, working towards our Clean Air Implementation Plan (CAIP) target of deploying 30 pieces of ZE CHE between 2026 and 2030. Near-term ZE CHE deployments will build critical hands-on local experience with ZE technologies and momentum towards our 2050 Northwest Ports Clean Air Strategy vision to phase out emissions.

If authorized, the program will be launched in May to enable terminal operators to leverage funding from the state's Medium and Heavy-Duty Zero Emission Incentive Program (WAZIP), which launched in late April. As proposed, maximum incentive amounts (\$200-250k per piece of equipment + charger) are calibrated to achieve parity with purchasing diesel equipment when stacked with WAZIP incentives. Staff will run a competitive process to select projects that are best aligned with our goals, prioritizing emission reductions (i.e. replacing old and heavily used equipment), highest external financial contribution, and project feasibility (i.e. likelihood of successful deployment and ability to deliver on schedule).

C. BACKGROUND

The 2020 Northwest Ports Clean Air Strategy (NWPCAS) established the vision of phasing out emissions from seaport related activities by 2050. Of the emissions that the NWSA is seeking to phase out through implementation of the NWPCAS, CHE is the largest source of diesel particulate matter (DPM) and second largest source of greenhouse gas (GHG) emissions that occur on port facilities where we have the greatest degree of influence and the 3rd highest source of DPM and GHG emissions when the entire airshed is considered.

The NWSA's 2026-2030 NWPCAS Clean Air Implementation Plan (CAIP) includes several actions to support implementation of ZE CHE and otherwise reduce CHE emissions. Those actions and associated performance metrics are as follows.

Actions:

- Encourage/support tenant use of renewable diesel.
- Continue including Tier 4 minimum requirements in new/amended leases.
- Develop ZE terminal master plans.
- ***Develop and implement a technology demonstration program.***
- Install key enabling infrastructure to support ZE fleet transitions.
- ***Support purchases of ZE CHE.***
- Explore non-traditional funding models for ZE CHE and infrastructure.

Performance metrics:

- Percentage of terminals using renewable diesel. [Target: all terminals by 2030]
- ***Number of ZE CHE deployed between 2026-2030 [Target: 30 pieces]***

The CHE-ZAP is the mechanism by which staff propose we execute the action to "Develop and implement a technology demonstration program" and will contribute significantly to achieving the target of deploying 30 pieces of ZE CHE between 2026 and 2030. The 2021-2025 target of 25 pieces of ZE equipment was not achieved. Direct investment is the most certain pathway for increasing the pace near-term, working towards the 2026-2030 target.

Additional motivation for starting this program are:

- When charging infrastructure is included, ZE CHE are currently about three times as expensive to purchase as diesel alternatives, making them currently infeasible for private operators to purchase without incentives.
- The Washington Medium and Heavy-Duty Zero Emission Incentive Program ([WAZIP](#)) launches in late April. Given the current political climate, this is the best opportunity to leverage external funding to deploy ZE CHE in the near term.

- Most terminal operators indicate that this kind of incentive program is a key next step on the pathway to ZE by 2050, alongside infrastructure planning and development. Based on engagement with terminals, staff expect significant interest in the program, as proposed.

Environmental Work Group

Staff met with the Environmental Work Group (EWG) on March 16 and April 27 to discuss the CHE-ZAP. Based on feedback from the working group, staff revised the project selection criteria to prioritize projects that result in the greatest direct emission reductions (i.e. replace the oldest and most heavily used equipment) and leverage the highest external contributions.

The EWG also encouraged staff to accelerate efforts to work with terminal operators to transition to renewable diesel much more quickly than our stated goal of 2030. Based on EWG feedback, staff have added proposers' use of renewable diesel as a project prioritization criteria. We will also explore mechanisms to strongly encourage or require use of RD in future joint projects and funding opportunities.

Staff is already working on a renewable diesel landscape assessment and engaging with terminal operators to provide education and understand any barriers to adoption. We will continue to work aggressively to facilitate the transition to renewable diesel and accelerate wherever possible, while recognizing our limited control over the pace of the transition.

Based on feedback from the EWG, staff will be exploring mechanisms for joint purchasing of ZE CHE with other west coast ports, with the goal of reducing costs of future ZE CHE deployments.

D. PROJECT DESCRIPTION AND DETAILS

The CHE-ZAP is an incentive program to accelerate the deployment of ZE CHE by NWSA and operating partners. Staff's goal is to begin the process of competitively selecting the first round of projects starting in May 2026, to enable program participants to also leverage funding from the WAZIP program, which launched in late April.

The WAZIP program offers point of sale vouchers of between \$90k to \$1 million for CHE, depending on equipment type. Vouchers of \$10k-30k are also available for chargers, depending on size. The point of sale vouchers are provided directly to the dealer or OEM selling the vehicles/chargers and directly discount the purchase price for fleet owners. These funds do not flow through the NWSA and are not included in the NWSA Income statement or program budget.

Program Structure

The CHE-ZAP will have the following key characteristics.

- Proposed incentive funding pool is \$2.3 million for this first phase of the program, based on budgeted amount in the 2026 CIP. This would incentivize an estimated 9-11 pieces of ZE CHE and associated charging, which would be deployed by June 2027.
- Maximum allowable incentive levels will be calibrated to achieve cost parity with purchasing an equivalent diesel piece of equipment, when NWSA and WAZIP incentives are stacked. With this approach, the maximum incentive for equipment plus charging would be \$200k-\$250 per piece of equipment.
 - NWSA incentive would contribute up to 10-50% of the total project cost, depending on equipment type.
- The program will be open only to NWSA tenants and operating partners on NWSA property. As a result, any infrastructure upgrades to support charging would occur on our property.
- Projects will be selected via a competitive process.

Project Prioritization Criteria

The competitive project selection process will be scored utilizing the following criteria to ensure the projects best aligned with program objectives are selected.

- **Emission reductions/impact:** prioritize projects that result in the greatest emission reductions by replacing the oldest and most heavily used equipment.
- **External contributions:** prioritize projects that leverage the highest percentage of external (non-NWSA) funding.
- **Project feasibility:** project proposals must demonstrate technology readiness, availability of power for charging and ability to implement the program within the WAZIP availability window, which extends through June 2027.
- **ZE transition plan:** prioritize projects by terminals that have plans/strategies for transitioning to zero emissions and can clearly articulate how deployments under this program will advance those efforts.

For example:

- Demonstrating/confirming technology feasibility for terminal duty cycles.
- Replacing equipment purchases that would otherwise be diesel, with intent to continue doing so if feasible.
- Improving infrastructure on NWSA property that will enable future ZE technology deployments.
- Assessing business case for ZE CHE and refining understanding of total cost of ownership.
- Building labor familiarity and confidence in the technology.
- Developing skills of maintenance workforce.

- **Use of Renewable Diesel:** prioritize terminals that have or are demonstrating their commitment to emission reductions by committing to use renewable diesel.

Schedule

Aligning with the schedule for the first round of WAZIP vouchers, this first phase of CHE-ZAP projects will need to be completed by June 2027. Incentives will be paid out both upon acquisition of the ZE CHE and installation of charging infrastructure. As such, expenditure of the incentive funds would likely occur towards the end of 2026 and into 2027. Additional funds are allocated to this program in the 5-year CIP.

Staff will return to Managing Members with additional authorization requests for further phases of the program in future years as needed, updating the program structure as conditions change and based on Commissioner feedback.

Call for Projects issued to terminal operators.	May 2026
Project selection.	June 2026
Rolling call for projects, if not all funding is committed.	June 2026-December 2026
Completion of projects.	By June 2027

E. FINANCIAL IMPLICATIONS

Project Cost Details

The first phase of the program (running through mid-2027) will utilize up to \$2.3 in NWSA funds, providing an incentive of \$200-250k, depending on equipment type.

Source of Funds

The funds for this project will be provided by NWSA operating income.

Financial Impact

The 2026 to 2030 NWSA operating budget included this \$2.3 million in 2026 expense as a portion of the total program cost of \$7.5 million over the five-year period. The 2027-2031 budget will be updated to reflect changes in the timing of the expense.

F. ENVIRONMENTAL IMPACTS/REVIEW

We expect any construction to install charging infrastructure related to implementing this program will be a tenant improvement. Potential environmental impacts would be


evaluated through our standard tenant improvement review process which considers permitting, remediation, stormwater, and air quality considerations.

G. PREVIOUS ACTIONS OR BRIEFINGS

- Environmental Work Group 4/27/2026
- Environmental Work Group 3/16/2026

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Cargo Handling Equipment Zero Emission Accelerator Program Project Authorization




THE NORTHWEST
SEAPORT ALLIANCE
SEATTLE + TACOMA

Graham VanderSchelden
Environmental Project Manager II

1

ACTION REQUESTED

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2

Background

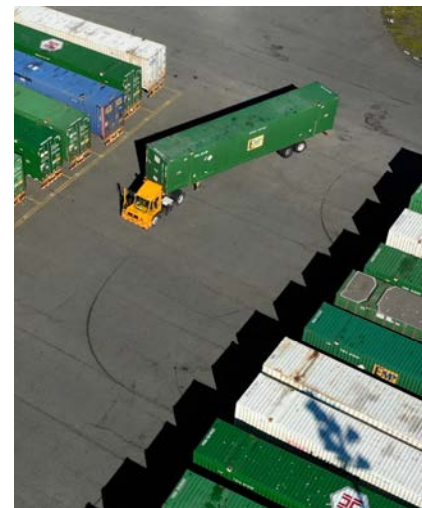
- **NWPCAS:** Phase out emissions by 2050
- **2026-2030 CAIP:** Deploy 30 pieces of ZE CHE
- **2026 – 2030 CHE Action Plan**
 - Encourage/support tenant use of renewable diesel.
 - Tier 4 lease requirements.
 - Develop ZE terminal master plans.
 - ***Develop and implement a technology demonstration program.***
 - Install key enabling infrastructure.
 - ***Support purchases of ZE CHE.***
 - Explore non-traditional funding models.



3

Background - Motivation

- Battery electric CHE are generally at least 2x as expensive as conventional, not including charging.
- WAZIP program launched in late April; likely the best funding opportunity to leverage in the next 1-2 years.
- Most terminal operators have expressed interest in deploying ZE CHE, provided adequate funding available.
- Opportunity to build momentum and local experience with the technology.



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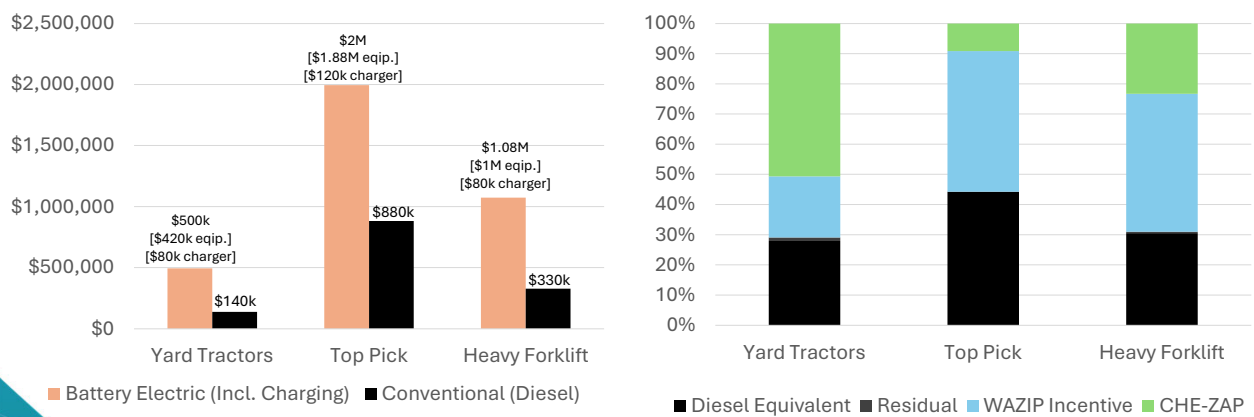
Program Overview

Incentive program to accelerate the adoption of ZE CHE by NWSA tenants and operating partners.

- Projects (and associated infrastructure upgrades) would occur on our property.
- Designed to achieve diesel cost parity when stacked with state WAZIP voucher.
 - Total incentive pool of \$2.3M
 - \$200-250k maximum incentive per piece of equipment (9-11 pieces of equipment).
 - Up to 10-50% of costs to purchase ZE CHE and install charger (depending on equipment type).



Estimated Cost Breakdown



■ = Operator Contribution

Project Selection Criteria

Emission reductions/impact: Replacing oldest and heaviest used equipment.

External contributions: Leverage the highest percentage of external (non-NWSA) funding.

Project feasibility: Ability to deliver on time and on budget.

ZE transition plan: How the project contributes to the operators plans to transition to ZE.

Renewable Diesel Use: Prioritize terminals that have demonstrated commitment to emission reductions through renewable diesel use



Program Schedule

Activity	Timeframe
Call for Projects issued to terminal operators	May 2026
Project selection	June 2026
Rolling call for projects, if not all funding is committed	June 2026-December 2026
Completion of projects	By June 2027

Financial Impact

- The budget for the first phase of the CHE-ZAP is \$2.3M (this request).
- The 2026-2030 Capital Investment Plan (CIP) allocates \$7.5 million for this program over 5 years.
 - Future authorization requests will be made for future program phases, as needed.
- The funds for this program will be provided from operating income.

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