

THE NORTHWEST SEAPORT ALLIANCE
MEMORANDUM

MANAGING MEMBERS
ACTION ITEM

Item No. 9B
Date of Meeting March 8, 2024

DATE: February 26, 2024

TO: Managing Members

FROM: John Wolfe, CEO

Sponsor: Tong Zhu, Chief Commercial & Strategy Officer

Project Manager: Kyle Smith, Engineering

SUBJECT: WUT Shore Power Project Authorization

A. ACTION REQUESTED

Request project authorization in the amount \$1,850,000, for a total authorized amount of \$2,200,000, for work associated with the WUT Shore Power Project Authorization, Master Identification No. 201173.01.

B. SYNOPSIS

The Northwest Ports Clean Air Strategy includes a goal to install shore power at our major international container terminals by 2030. WUT shore power is a key project to achieving that goal and the next in the program after Terminal 18. Advancing the design now is important to position us to complete a competitive grant application for the EPA Clean Ports program and deliver the project within the projected grant period of performance.

C. BACKGROUND

Facilities with shore power capabilities allow ships to shut down their diesel generators while at berth and power their on-board systems by connecting directly to the local power grid. This results in reduced emissions at the port and fuel savings for the carriers.

The Washington United Terminal wharf was originally constructed in 1997 with an extension constructed in 2009. As part of the extension in 2009, electrical equipment as well as conduit and a connection vault on the pier extension were installed with future ship to shore capabilities in mind. While not a complete solution, this existing infrastructure will be utilized to complete the current project.

It is important to continue the WUT Shore Power design process in 2024 to help improve the competitiveness of the project for grant funding and allow it to be implemented quickly if/when grant funds are secured. The \$3 billion EPA Clean Ports program, established through the Inflation Reduction Act grant program, has time constraints on when funding must be allocated and spent. Projects that can be completed in shorter timeframes are likely to be more competitive. All the funding from the Clean Ports program is being deployed in a single round of applications, increasing the urgency to put together a large, competitive, ask.

Northwest Ports Clean Air Strategy

In 2021, Managing Members adopted an update to the Northwest Ports Clean Air Strategy (NWPCAS), which established the vision to phase out emissions from our seaport related activities by 2050 and an interim goal to install shore power infrastructure at our major international container terminals by 2030.

D. PROJECT DESCRIPTION AND DETAILS

This project will install a safe and functional shore power system at WUT in service to the NWSA's Northwest Ports Clean Air Strategy goal to install shore power at its major international container terminals by 2030.

Project Objectives

- Significantly reduce emissions from vessels while at berth, contributing to achievement of our Northwest Ports Clean Air Strategy goals.
- Modernization of terminal facility and provides additional amenities.
- Fuel cost savings for ocean carriers.

Scope of Work

This project will include all work necessary to facilitate ship-to-shore power connections for a variety of port side berthing configurations at the Washington United Terminal.

The scope of work will include:

- Civil and Electrical engineering design
- Grant acquisition
- Infrastructure improvements in coordination with Tacoma Public Utilities
- Installation of new electrical transmission equipment in terminal substations
- Trenching and conduit
- Installation of shore power connection equipment

Schedule

The project is still in the early design phase and much of the schedule is subject to change. The current estimate is that the project will be in design phase throughout 2024 and 2025 with design completion occurring sometime in 2026. Advertising for contractor bids would occur at the conclusion of the design and permitting. There will be a lengthy procurement process once a contract is awarded due to the long lead times in acquiring the electrical equipment that will be used. Construction could begin in 2027. These timelines will change significantly if grant funding is received.

Basis of Design	Q1 2024
30% Design	Q2 2024
Bid Documents Complete	2026
Advertise for Bids	Q2 2026
Equipment Procurement	Q3 2026
Begin Construction	2027

E. FINANCIAL IMPLICATIONS

Project Cost Details

	This Request	Total Project Cost	Cost to Date	Remaining Cost
Pre-Design	\$0	\$165,000	\$143,000	\$22,000
Design	\$1,850,000	\$2,035,000	\$0	\$2,035,000
Construction	\$0	\$20M - \$40M	\$0	\$20M - \$40M
Total	\$1,850,000	\$22M - \$42M	\$143,000	\$22M - \$42M

Source of Funds

The current Capital Investment Plan (CIP) Budget allocates \$1,137,000 for the design portion of this project. The construction cost will be added to the CIP after the design has progressed enough to provide a cost estimate. Managing Member approval will be required for any costs above the \$1,137,000 requested.

Financial Impact

Assuming the project will be completed, the additional annual depreciation of the design cost is estimated to be \$57,000 for twenty years. The customer at the WUT and WUT Intermodal Yard provides a combined total estimated of \$17.1 million revenue in 2024. The 2024 net income is estimated to be \$14.8 million.

F. ENVIRONMENTAL IMPACTS/REVIEW

Permitting: The Scope of Work fits under the Port’s current Programmatic Repair and Maintenance permits. However, those permits will be renewed prior to construction of this project and the scope will need to be reviewed against those new permit requirements.

Remediation: Design needs to consider proximity to the environmental cap on the property and we will need consent from Ecology and to provide them with advanced notice before breaching the cap. Measures will need to be employed to manage excavated materials and promptly repair the cap/prevent any infiltration of surface run-off into underlying materials.”

Stormwater: There are no significant stormwater considerations for design.

Air Quality: This project will result in significant emission reductions from vessels at berth and is on the critical path to meeting our goal of installing shore power at our major international container terminals by 2030.

G. PREVIOUS ACTIONS OR BRIEFINGS

<u>Date</u>	<u>Action</u>	<u>Amount</u>
March 15, 2023	Executive Authorization for Design	\$166,000
September 7, 2023	Executive Authorization for Design	\$134,000
January 2, 2024	Executive Authorization for Design	\$50,000
TOTAL		\$350,000

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WUT Shore Power Project Authorization



**THE NORTHWEST
SEAPORT ALLIANCE**
SEATTLE + TACOMA


Kyle Smith
Project Manager II, Engineering

March 8, 2024

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ACTION REQUESTED

Request project authorization from the NWSA Managing Members in the amount of \$1,850,000, for a total authorized amount of \$2,200,000, for the Washington United Terminal Shore Power project, Master Identification No. 201173.01.



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Northwest Ports Clean Air Strategy

Vision: Phase out emissions from our seaport related activities by 2050.

Interim goal: Install shore power at major international container terminals by 2030.

- Allows vessels to shut down generators and operate on clean electricity from the grid.

NWSA Tariff: Requires shore power capable vessels to connect while at shore power equipped terminals.



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NORTHWEST PORTS
CLEAN AIR STRATEGY

NORTHWEST PORTS CLEAN AIR STRATEGY 2020



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Project Description and Details

Project Objectives:

- Install a safe and functional shore power system which will significantly reducing emissions from vessels while at berth, contributing to achievement of our Northwest Ports Clean Air Strategy goals
- Modernization of terminal facility and provides additional amenities
- Fuel cost savings for ocean carriers



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Project Description and Details

The project scope will include all work necessary to facilitate ship-to-shore power connections for a variety of port side berthing configurations

- Civil and Electrical engineering design
- Grant Acquisition
- Infrastructure improvements in coordination with Tacoma Public Utilities
- Installation of new electrical transmission equipment in terminal substations

Project Schedule

Activity	Timeframe
Basis of Design	Q1 2024
30% Design	Q2 2024
Design Complete	2026
Advertise for Bids	Q2 2026
Begin Construction	2027

Schedule will change significantly if grant funds are obtained.

Source of Funds

- The estimated cost of the Pre-Design and Design for this project is \$2,200,000
- The estimated budget for design for this project is \$2,200,000.
- The 2024-2028 Capital Investment Plan (CIP) allocates \$1,135,000 for design for this project.
- The current estimated cost of the project is \$22M - \$42M.
- The construction of this project will be added to the budget during the regular budget development cycle after a more detailed construction estimate is determined.
- This work and associated budget is consistent with the NWSA valuation



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Financial Summary

Item	Budget Estimate	Cost to Date	Remaining Cost
Pre-Design	\$165,000	\$145,000	\$20,000
Design	\$2,035,000	\$0	\$2,035,000
Construction	\$20M - \$40M	\$0	\$20M - \$40M
Project Total:	\$22M - \$42M	\$0	\$22M - \$42M



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Environmental Impacts / Review

- Permitting: Staff expect that the work can be implemented under the existing maintenance permit
- Remediation: Design needs to consider proximity to the environmental cap on the property and we will need consent from Ecology and to provide them with advanced notice before breaching the cap. Measures will need to be employed to manage excavated materials and promptly repair the cap/prevent any infiltration of surface run-off into underlying materials
- Stormwater: There are no significant stormwater considerations for design
- Air Quality: This project will result in significant emission reductions from vessels at berth and is on the critical path to meeting our goal of installing shore power at our major international container terminals by 2030



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Shore Power Program

Project	Status	Goal Completion Date
T-5	Complete	2024
Husky	Construction	2024
T-18	Design, pursuing grant funds	2027
WUT	Design, pursuing grant funds	2028
PCT	Pre-design	2030
T-30	Pre-design	2030

Prioritization Criteria

- Alignment with commercial priorities
- Permit compliance (T-5)
- Emission reduction potential
- Cost

Average 2018-2023 Shore Power Capable Stats by Terminal

	Total Calls	SP Capable Calls	Total Hours	SP Capable Hours
T-18	289	131	11,465	5,274
Husky	93	60	6,958	4,930
PCT	93	78	4,229	3,564
WUT	98	46	7,618	3,509
T-5*	86	56	4,548	2,943
T-30	117	38	3,687	1,009

* T-5 only includes data from 2022-2023, after single berth international container operations began.



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