



**COMMISSION  
AGENDA MEMORANDUM**

**Item No.** 10b

**ACTION ITEM**

**Date of Meeting** June 13, 2023

**DATE :** June 1, 2023

**TO:** Stephen P. Metruck, Executive Director

**FROM:** Kenneth R. Lyles, Interim Managing Director Maritime Division  
Linda Springmann, Director of Cruise Operations and Maritime Marketing  
Mark Longridge, Capital Project Manager, Waterfront Project Management

**SUBJECT: Pier 66 Cruise Shore Power Project Additional Construction Funding (C800120)**

**Amount of this request:** \$6,000,000  
**Previously Authorized:** \$38,000,000  
**Total estimated project cost:** \$44,000,000

**ACTION REQUESTED**

Request Commission authorization for the Executive Director to approve additional funding in the amount of \$6,000,000 for construction of the Pier 66 Cruise Shore Power project and 1) to award and execute a contract with the lowest responsible bidder 2) to enter into all final agreements to support the project, including agreements with tribes.

**EXECUTIVE SUMMARY**

The Port is an industry and regional leader in economic development and sustainability. The Port recognizes its responsibility and the importance of concerted efforts to balance economic growth with sustainability. The Seattle Waterfront Clean Energy Strategic Plan and the recently adopted Maritime Climate and Air Action Plan provide a Port investment strategy to protect the environment and improve community health. Through this approach the Port seeks to achieve its vision of being the greenest, most energy efficient port in North America and transition to zero-emission operations by 2050.

The provision of shore power for cruise ships is the Port's greatest opportunity to reduce greenhouse gas (GHG) emissions and improve local air quality. Currently, the Port's Smith Cove Cruise Terminal at Terminal 91, which opened in 2009, provides shore power at its two cruise vessel berths. The single berth facility at Pier 66's Bell Street Pier Cruise Terminal, which opened in 1999, does not have shore power for cruise vessels.

To enable shore power connections by shore power capable cruise ships at Pier 66, the Port has worked closely with Seattle City Light (SCL), Northwest Seaport Alliance, City of Seattle and other partners to plan and provide shore power to Pier 66 . The new shore power will use an innovative

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approach: installing a submarine cable from Terminal 46 to Pier 66 in lieu of bringing power through the congested City right-of-way. This approach significantly reduces project costs and avoids construction-related impacts to the waterfront.

In December 2019 the Port Commission authorized staff to proceed with the design and permitting phase of the project, to proceed on long lead material procurements in December 2021, and authorized the advertisement and award the construction contract in January of 2023. Staff has since completed the design and submitted application packages for various environmental permits while engaging important stakeholders such as the Suquamish and Muckleshoot Tribes, City of Seattle’s Department of Construction and Inspection, SCL, Washington State Ferries, the Army Corps of Engineers, Department of Natural Resources (DNR), U.S. and Washington State Fish and Wildlife, NOAA Fisheries, US Coast Guard, and the Puget Sound Pilots in the design development. Staff has also bid and negotiated the submarine cable and shore power equipment purchases respectively, and these elements are now committed in production. The major works contract was advertised, and bids were opened for the construction contract on May 16, 2023.

Two bids were received in response to the construction advertisement and acceptance of either bid would exceed the previously authorized total project budget of \$38,000,000. The lowest bid received was from Orion Marine Contractors Inc. for a total of \$20,755,000 which is \$3,868,000 or 22.9% over the Engineer’s Estimate of \$16,887,000. This overage can be chiefly attributed to the current construction market and specialized nature of the work.

The additional funds requested in this action will be used to cover the difference of the bid amount including Washington state sales tax and to ensure funds are available for project contingencies.

The recommendation is to accept the low bid of Orion Marine Contractors Inc. Their bid has been reviewed and confirmed that they are the lowest and responsible bidder. Acceptance of the low bid would also meet the project goal of 5% WMBE participation.

The project scope has been carefully developed over the past several years to optimize the cable pathway and terminal duct bank layout to minimize operational impacts. The project has gone through a long and complex permitting process. As a result, limited opportunities exist to modify the scope or packaging of the project. Significant pre-purchases of the submarine cable and electrical equipment have also been completed and are currently in production. Rejecting this current bid would delay completion of the cruise shore power activation at Pier 66 and would incur significant additional costs required to readvertise the project in one or several contract packages that may not result in any additional bids or in lower project cost.

Approval of this funding request will allow the construction phase to begin, work to start with minimal delay to complete the shore power installation in the 2024 cruise season.

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**JUSTIFICATION**

The Bell Street Pier Cruise Terminal at Pier 66 is a single berth cruise facility in the heart of downtown Seattle’s waterfront. Pier 66 is the Port’s first cruise terminal—opened in 1999—and is homeport to Norwegian Cruise Line (NCL) and its subsidiary Oceania Cruises. This terminal, along with the Smith Cove Cruise Terminal at T91 contribute significantly to the region’s economy, generating more than 5,500 jobs and nearly \$900 million in total local business revenue each cruise season.

In addition to its economic development mission, the Port is also a global leader in sustainability and is committed to addressing global climate change and improving local air quality. In 2017 the Port’s Commission adopted GHG reduction targets in alignment with the Paris Climate Agreement, then updated goals in October 2021 in recognition of the climate crisis. In November 2021, the Port Commission adopted the Maritime Climate and Air Action Plan which identifies strategies and actions the Port can take over the next 10 years to achieve the Port’s Century Agenda GHG target to reduce emission 50% by 2030 and to position the Port to phase out emissions entirely by mid-century. Most recently, in May 2022 the Port launched a collaborative effort to explore the feasibility of a maritime green corridor aimed at accelerating the deployment of zero greenhouse gas (GHG) emission ships and operations between Alaska, British Columbia, and Washington.

By installing shore power at Pier 66 by 2024, the Port will meet its objective in the Northwest Ports Clean Air Strategy to provide shore power at all major cruise berths six years early and further supports the Port’s efforts to meet its GHG targets. The electricity needed to power ships berthed at Pier 66 is available from City Light without extensive infrastructure upgrades or transmission changes. This project does require the Port to invest in the new connection from the south, but the unique solution of utilizing a submarine cable for power delivery, instead of trenching in the congested City right of way, significantly reduces the overall cost.

The Port’s two shore power connected cruise berths at T91 are already resulting in significant emission reductions. In 2022, 83% of shore power equipped homeport calls at Terminal 91 connected and avoided an estimated 2,100 tonnes of CO<sub>2</sub>.

On a basis of cost per tonne of carbon emissions avoided, assuming a 30-year infrastructure life and \$44 million cost, staff estimates the cost (in 2023 dollars) of the cumulative carbon reduction by 2050 to range from \$355 to \$406 per tonne. This range depends on the percentage of shore power connections attained, from 77% (the number of shore power capable homeport calls at Pier 66 in the 2023 season), to reaching the Port’s goal of 100% of all calls connecting to shore power and is in line with other emission reduction investments at the Port, like the Airport’s Stage 3 Mechanical Upgrades, which was \$300 per tonne.

To-date the Port has been awarded three grants for the Pier 66 Shore Power project: EPA’s Diesel Emission Reduction Act (DERA) grant; VW Settlement grant through Washington State Department of Ecology; and Centralia Coal Transition (TransAlta) grants, totaling \$2,920,000 (of

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which the \$1,000,000 TransAlta grant has already been received). The Port has also received \$2,000,000 of funding for this work from the Washington State Department of Commerce. Cost sharing strategies and discussions with the Port’s leasehold partner, Norwegian Cruise Line Holdings, continue and will be further developed.

The Port continues to work with SCL to draft an agreement or agreements that would provide an overarching approach for cost-sharing and responsibilities in delivering the Pier 66 Shore Power Project, and for long-term operations and maintenance.

***Diversity in Contracting***

The project team in coordination with the Diversity in Contracting Department has included a 5% WMBE goal in the major work contract aspirational goal for this work.

**DETAILS**

**Scope of Work**

The major components of the P66 shore power project’s work scope include the following:

- (1) Pier 66 onsite shore power infrastructure/equipment/system inclusive of shore power cable management device.
- (2) Approximately one mile of 29.4kV submarine cable and associated armoring.
- (3) Environmental impact mitigation as required by agencies and Tribal Governments.
- (4) Terminal 46 onsite shore power infrastructure, including power vaults, switches and conduit ductbanks.
- (5) Offsite shore power related infrastructure and feeders by Seattle City Light.
- (6) Design development, permitting, environmental review and construction support.

***Schedule***

Design and Permitting Authorization	Q4 2019
Long lead item and City Light Service Agreement commission funding authorization	Q4 2021
Memorandum of Agreement with Seattle City Light	Q1 2023
Construction funding authorization (this request)	Q1 2023
Final Permits Issued	Q1 2023
Major Works Contract Advertised, Awarded	Q2 2023
Site Construction Starts	Q3 2023
In-use date	Q2 2024

Costs stated below reflect total project costs and do not account for any reimbursements from grants, Seattle City Light, Norwegian Cruise Lines or other project partners.

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<b>Cost Breakdown</b>	<b>This Request</b>	<b>Total Project</b>
Design	\$0	\$1,255,000
Material Pre-Procurements	\$0	\$7,600,000
Construction (Incl. contingency, WSST, mitigation, etc.)	\$6,000,000	\$35,145,000
<b>Total</b>	<b>\$6,000,000</b>	<b>\$44,000,000</b>

**ALTERNATIVES AND IMPLICATIONS CONSIDERED**

**Alternative 1** – Defer or cancel implementation of Shore Power at P66.

Cost Implications: While this approach would avoid the majority of capital costs going forward, significant penalties would need to be paid to cancel existing contracts for the advance materials, and the design costs to date would need to be expensed.

Pros:

- (1) Lower capital costs.

Cons:

- (1) The Port would not be able to provide shore power connections at Pier 66, and would not be able to meet the Port’s Commission adopted GHG reduction targets.
- (2) Significant penalties would need to be paid to cancel existing material contracts for the submarine cable and electrical equipment.

This is not the recommended alternative.

**Alternative 2** – Award the major works contract to the lowest bidder and implement the current design, proceed to activate the cruise shore power system as soon as possible.

Cost Implications: Commits the Port to a single major works contract to construct electrical infrastructure, install owner furnished submarine cable and electrical equipment.

Pros:

- (1) Achieves greatest GHG reductions as soon as possible.
- (2) Utilizes current design and procurement efforts to implement plan.

Cons:

- (1) Costs are significantly higher than previously estimated.
- (2) Federal permits are still under final review. There is a very slight but non-zero risk that these may not be achieved, or may be delayed.

***This is the recommended alternative.***

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**FINANCIAL IMPLICATIONS**

Current total project estimate has increased 16% from the prior authorized amount of \$38.0M due to historically high construction escalation, a very active bidding market and the specialized nature of the work.

The distribution of the capital and expense values below are estimated and will depend on the bid amounts, final construction quantities and resultant costs to be shared with SCL. The expense amount shown is the anticipated Public Expense portion of the project to be reimbursed by SCL based on the bid pricing, however the actual reimbursement will be based on actual construction prices. Capital totals below also include anticipated ERL project funding to cover anticipated incremental costs for soil disposal on Terminal 46.

<b><i>Cost Estimate/Authorization Summary</i></b>	Capital	Expense	Total
<b>COST ESTIMATE</b>			
Previous estimate	\$35,000,000	\$3,000,000	\$38,000,000
Current change	\$5,869,000	\$131,000	\$6,000,000
Revised estimate	\$40,869,000	\$3,131,000	\$44,000,000
<b>AUTHORIZATION</b>			
Previous authorizations	\$35,000,000	\$3,000,000	\$38,000,000
Current request for authorization	\$5,869,000	\$131,000	\$6,000,000
Total authorizations, including this request	\$40,869,000	\$3,131,000	\$44,000,000
Remaining amount to be authorized	\$0	\$0	\$0

***Annual Budget Status and Source of Funds***

This project has been included in the approved 2023 Plan of Finance under C800120 P66 Shore Power with a total project cost of \$32.5M.

The Port’s cost share of the project is being funded by the Tax Levy. Approximately \$3M of the project is funded with grants from U.S. EPA, WA Dept of Ecology, and TransAlta, plus an additional \$2.0M from the Washington State Department of Commerce.

Ongoing discussions with the Port’s leasehold partner, Norwegian Cruise Line Holdings, may result in additional non-Port funding for the project.

***Financial Analysis and Summary***

Project cost for analysis	\$44,000,000
Business Unit (BU)	Cruise Operations

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Effect on business performance (NOI after depreciation)	<ul style="list-style-type: none"><li>• No incremental operating revenue or cost-savings is directly associated with this project.</li><li>• On-going maintenance expenses, if any, are not yet known. Other ongoing costs may include recurring payments for a long-term easement granted by the DNR to SCL, rate to be determined.</li><li>• Estimated useful life of shore power infrastructure is 30 years, resulting in a depreciation expense of approximately \$1.47M annually. NOI after depreciation will reduce by that respective amount.</li></ul>
IRR/NPV (if relevant)	N/A

**ATTACHMENTS TO THIS REQUEST**

- (1) Presentation slides

**PREVIOUS COMMISSION ACTIONS OR BRIEFINGS**

December 4, 2019 – Design and permitting authorization of \$1,255,000

December 14, 2021 – Advance material procurement authorization of \$7,600,000

January 10, 2023 – Construction Funding authorization of 29,145,000