COMMISSION
AGENDA MEMORANDUM **Item No.** 8g

ACTION ITEM **Date of Meeting** August 12, 2025

DATE: July 7, 2025

TO: Stephen P. Metruck, Executive Director

FROM: William Shelton - Contractor, Capital Project Manager
Jennifer Maietta, Director, Real Estate Asset Management
Stephanie Jones-Stebbins, Managing Director, Maritime

SUBJECT: Waterfront Smart Meters (C801269)

Amount of this request:	$4,000,000
Total estimated program cost:	$13,000,000

ACTION REQUESTED

Request Commission authorization for the Executive Director to approve additional funding for design and construction of the Waterfront Smart Meters Program in the amount of $4,000,000 for a total authorized amount of $4,475,000.

EXECUTIVE SUMMARY

Initially authorized by Commission in September 2024, the Waterfront Smart Meters program (CIP C801269) will accomplish the following objectives:

- Upgrade existing metering infrastructure across waterfront properties to smart meters for accurate, remote, automated, real-time data collection to meet future city and state energy and greenhouse gas reporting requirements.
- Install related equipment (gateways, cellular communication, conduits, network switches, etc.) needed to establish a secure and reliable communication network between smart meters and the Port's Energy Management System (EMS), currently under development.

Buildings and level of metering are being prioritized through the phasing of this CIP to meet city and state energy compliance requirement deadlines. At the program level, it is anticipated that about 164 electric and natural gas meters would be installed, but this number will be refined as design advances. This request will fund the construction of the first set of meters to be installed and continuing design effort.

JUSTIFICATION

Much of the waterfront utilities are currently being metered using traditional utility meters which require manual recording to determine energy use. Manual reading of utility meters is inefficient, costly, and can be inaccurate. In addition, the City of Seattle and the State of Washington are currently changing their energy reporting requirements to require the utilization of smart meters for energy use reporting purposes.

The Port's Maritime Environmental and Sustainability Department (ME&S) procured the services of a consultant in 2021 to survey the Port's existing Waterfront infrastructure to make preliminary building-meter assignments, as well as provide key findings and recommendations for implementation of smart meters across the Port's Waterfront Facilities. Using the results from the survey, ME&S developed the smart meter program which looks to install electric, water and gas smart meters across waterfront facilities. Deployment of this technology is being phased and prioritized to meet compliance requirements.

This project is in support of the Port's Century Agenda goal to be the greenest, most energy efficient port in North America. It will enable the Port to comply with local and state energy codes, enable accurate and transparent calculation of Energy Use Intensity to meet the WA Clean Building Performance Standard (CBPS), and provide efficient energy-use data gathering needed to better identify and plan future building energy efficiency projects.

Installation of Smart Meters will provide the following benefits:

- Electricity monitoring at 10-minute intervals.
- Natural gas monitoring at 1-hour intervals or better.
- Greenhouse gas emissions monitoring.
- Revenue-grade utility monitoring.
- Enable facility managers to identify equipment issues.
- Enable remote reading of utility meters to increase safety, save time, and improve accuracy.
- Compliance with Clean Building Performance Standard.
- Compliance with Building Emissions Performance Standard.
- Compliance with Seattle Commercial Energy Code.
- Data to perform capital planning for converting HVAC and domestic hot water from natural gas to electricity.

Diversity in Contracting

The design is being accomplished by Port of Seattle engineering staff while construction will be executed by PCS.

DETAILS

This project includes installation of natural gas, water, and electric smart meters and all associated conduit, cable, LTE connections, network switches, and gateway infrastructure. These meters will also be connected to the Port's energy management system where the data from the meters will be stored for future analysis and reporting. This funding will enable the construction of the Phase 1 Smart Meters and the design of Phase 2 Smart Meters as well as potentially the design of other future phases of the smart meter program.

Scope of Work

The following buildings will have existing meters replaced and/or new smart meters installed to monitor building level energy use.

Phase 1 (Construction):

- Pier 66 Conference Center and Cruise Terminal
- Terminal 91 Smith Cove Cruise Terminal and C-175
- World Trade Center West
- Marine Maintenance Building A-1
- Fishermen's Terminal C-15

Phase 2 (Design):

- Fisherman's Terminal campus
- T91, Buildings A-1, C-155, C-173
- Maritime Industrial Center Building A-1
- Pier 66 Anthony's Restaurant

Future Phases (Design):

- Other Port Maritime Facilities yet to be identified by Environmental Sustainability

Design scope:

1. Develop 30%, 60%, 90%, 100%, and ready for award drawings and specifications.
2. Develop cost estimates for construction phase of project.
3. Environmental and permitting support.
4. Coordination with Port of Seattle ICT and the new EMS provider.
5. PCS pre-award support and coordination.

Each smart meter will need to be connected to an Energy Management System (EMS) to allow for remote reading. The ME&S and ICT teams are currently working on selecting a new EMS provider within the next six months under a separate project. Design of the smart meters will not be completed until an EMS provider is on board to allow for coordination.

Construction scope:

1. Install new smart meters or replace existing meters with smart meters.

2. Install conduit and cable from smart meters to EMS communication hardware which will also be installed under this scope.
3. Provide an LTE connection between some smart meters and the EMS gateway as indicated in the design.
4. Ensure smart meters are connected to the Port's network and are communicating with the Port's new EMS.

Schedule

Activity

Preliminary Design start	February 2024
Commission authorization for Phase 1 design	September 2024
Commission authorization for additional design/construction	August 2025
Procurement of new EMS complete (estimated – separate project)	Q1 2026
Smart Meters construction start (first phase)	Q2 2026
Smart Meters construction complete (first phase)	Q1 2027
Commission authorization for additional design/construction	Q2 2027
In-use date (all meters)	Q4 2029

Cost Breakdown	This Request	Total Program
Design	$500,000	$975,000
Construction	$3,500,000	$3,500,000
Program Total	$4,475,000	$13,000,000

ALTERNATIVES AND IMPLICATIONS CONSIDERED

Alternative 1 – Defer installation of smart meters and rely on utility billing data for energy information and conduct required audits as a means of achieving compliance with city and state law.

Pros:

(1) Preserve capital capacity for other projects.

Cons:

(1) Meter reading will need to be done manually, which is time consuming and labor intensive.
(2) Potential for reporting errors due to manual readings.
(3) Without installing these smart meters, the Port may not meet future state and local energy reporting requirements. As a result, the Port may need to expend further funding to install energy-efficiency measures (EEM) to meet clean building performance standards.

This is not the recommended alternative.

Alternative 2 – Install smart meters at all waterfront facilities at once

Pros:

(1) Allows for installation of all meters across the waterfront facilities.
(2) Potential for decreased cost as work will be done all at once.

Cons:

(1) Does not allow for prioritization of facilities. May result in not meeting City and State energy reporting requirements.
(2) Increased risk of design issues being compounded across all facilities. Performing the work in phases allows lessons learned to be easily developed and implemented in future phases.

This is not the recommended alternative.

Alternative 3 – Install smart meters in phases over multiple years, prioritizing facilities that need smart meters sooner than others to meet city and state reporting requirements

Pros:

(1) Allows for prioritizing facilities to meet city and state reporting requirement deadlines.
(2) Allows for implementation of lessons learned from one set of meters to the next.
(3) Allows for changing design approach in future years of meter installation.
(4) Allows for more time to develop better designs for non-time critical meters.

Cons:

(1) Potential for increased cost due to work being done by potentially different contractors over a series of years.
(2) Increase in the Port's Overhead as there will need to be multiple designs developed.

This is the recommended alternative.

FINANCIAL IMPLICATIONS

Cost Estimate/Authorization Summary

COST ESTIMATE	Capital	Expense	Total
Original Program Estimate	$13,000,000	$0	$13,000,000
Current Change	$0	$0	$0
AUTHORIZATION			
Previous authorizations	$475,000	$0	$475,000
Current request for authorization	$4,000,000	$0	$4,000,000
Total authorizations, including this request	$4,475,000	$0	$4,475,000
Remaining amount to be authorized	$8,525,000	$0	$8,525,000

Annual Budget Status and Source of Funds

This program was included in the 2025 Capital Plan under Waterfront Smart Meters (C801269) at an estimated total program cost of $13,321,000 over the next four years.

This project will be funded by the General Fund.

Financial Analysis and Summary

Program cost for analysis	$13,000,000
Business Unit (BU)	Waterfront Portfolio Management, Cruise Operations, Marine Maintenance, and Ship Canal Fishing & Operations
Effect on business performance (NOI after depreciation)	Annual depreciation will increase by approximately $414K based on estimated 30-year service life, thereby reducing the NOI by the same amount.
IRR/NPV (if relevant)	NA
CPE Impact	NA

Future Revenues and Expenses (Total cost of ownership)

This project will provide accurate meter readings for billing and compliance purposes at maritime facilities across the Port. Meters will be able to be read remotely, saving the Port time and money. Accurate and timely meter readings will enable the Port to precisely bill tenants for utility costs, monitor energy usage, and run analyses to better understand how the Port is using energy. This will preserve the economic vitality of our operations and serve the Port, tenants, and their customers well by providing a safe and sustainable working environment.

ADDITIONAL BACKGROUND

n/a

ATTACHMENTS TO THIS REQUEST

(1) Presentation slides

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

September 10, 2024 - Request Commission authorization for the Executive Director to approve design funding in the amount of $350,000 for the Waterfront Smart Meters Phase 1 Project for a total authorized amount of $475,000.