



**COMMISSION
AGENDA MEMORANDUM**

Item No.

8c

ACTION ITEM

Date of Meeting

December 9, 2025

DATE: November 21, 2025

TO: Stephen P. Metruck, Executive Director

FROM: Keri Stephens, Director, Aviation Facilities and Capital Programs
Eileen Francisco, Director, Aviation Project Management

SUBJECT: Boiler Room Upgrades (CIP# 801230) – Construction Authorization

Amount of this request: \$3,320,000

Total estimated project cost: \$4,839,000

ACTION REQUESTED

Request Commission authorization for the Executive Director to (1) advertise, award, and execute a major works construction contract, and execute related project change orders, amendments, work authorizations, purchases, contracts, (2) take other actions necessary to support and deliver the Boiler Room Upgrades project within the approved budget, and (3) utilize Port of Seattle crews to support design and construction activities. The amount of this request is \$3,320,000 for an estimated total project cost not to exceed \$4,839,000.

EXECUTIVE SUMMARY

The central mechanical plant (CMP) provides airport-wide steam and chilled water for cooling, heating, and hot water purposes. Upon completion, this project will upgrade the control systems for Boilers #1 through #3 to replace the obsolete equipment and software with a common platform that can integrate into the existing Siemens Direct Digital Control (DDC) system. This project will also install/replace steam supply and fuel flow meters on Boilers #1 through #3, as well as install a steam outlet meter on Boiler #4, which will improve energy use tracking and accuracy for the overall system, leading to better optimization and efficiency savings.

JUSTIFICATION

The CMP, which houses the boiler and chiller systems, provides the steam and chilled water necessary for providing cooling, heating, and hot water to the main terminal, concourses, and North and South satellites. It is an essential element of the airport, and it is critical that it operates in a consistent and efficient manner with the ability to continuously optimize. In recent winters, failures of old boiler controls components unexpectedly caused boiler failures necessitating urgent repairs to restore boiler redundancy and ensure sufficient heating capacity. This illustrates

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the necessity for an efficient, resilient, and redundant system. This project will replace aging components of the boiler system, some of which are over 50 years old, to ensure continued reliability, as well as to increase its overall energy efficiency and environmental tracking accuracy. Additionally, the boiler system controls will be updated for better connectivity to the CMP control room.

Diversity in Contracting

In coordination with the Diversity in Contracting Department, a 6% WMBE aspirational goal has been set for this project.

DETAILS

Scope of Work

This project will resolve fuel and steam metering issues present on Boilers #1 through #3. Additionally, the control systems for boilers #1 through #3 will be upgraded to include Siemens DDC integration with Building Automation and Control Network (BACnet) Protocol.

- (1) Install new and replace old steam supply, natural gas, and diesel fuel flow meters on Boilers #1 through #3.
- (2) Install new steam outlet meter for Boiler #4.
- (3) Upgrade control systems on Boilers #1 through #3 to include Building Automation System and Siemens DDC.
- (4) Design modification for a permanent compressed air supply for long term operation and startup under emergency conditions.
- (5) Install additional emergency shut down buttons for boiler system where absent at operator station and corridor exits to increase operational safety.

Schedule

Construction start	Q2 2026
In-use date	Q2 2027

Cost Breakdown

	This Request	Total Project
Design	\$0	\$1,519,000
Construction	\$3,320,000	\$3,320,000
Total	\$3,320,000	\$4,839,000

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ALTERNATIVES AND IMPLICATIONS CONSIDERED

Alternative 1 – Do not proceed with the project.

Cost Implications: Approximately \$1,519,000 for Notebook Development and Design.

Pros:

- (1) Defers some capital investment.
- (2) A design with up-to-date schematics of the Central Mechanical Plant has been completed, which can be utilized for future projects, if needed.

Cons:

- (1) Aging and inaccurate components will remain, leading to potential reliability issues.
- (2) Boiler system cannot be properly optimized with the existing equipment, meaning the system will continue operating with reduced efficiency.
- (3) Unable to provide accurate data and tracking for environmental reporting purposes.
- (4) Lack of emergency shut down buttons at Central Mechanical Plant exits.
- (5) Potential for additional increase in costs for materials, labor, and inflation if project completed at a later date.

This is not the recommended alternative.

Alternative 2 – Proceed with project as scoped. Install equipment needed for reliability, accuracy, and connectivity.

Cost Implications: \$4,839,000 in capital costs.

Pros:

- (1) Replaces aging and inaccurate equipment, leading to increased reliability.
- (2) New fuel flow and output meters will provide more accurate system data, allowing for better efficiency and cost savings.
- (3) Updated control panels and DDC connectivity will allow for better energy tracking, optimization, and reporting for environmental purposes.
- (4) Install new emergency shut off buttons at Central Mechanical Plant exits.

Cons:

- (1) Capital costs.

This is the recommended alternative.

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FINANCIAL IMPLICATIONS

<i>Cost Estimate/Authorization Summary</i>	Capital	Expense	Total
COST ESTIMATE			
Original estimate	\$3,406,000	\$0	\$3,406,000
Previous changes – net	\$1,433,000	\$0	\$1,433,000
Current change	0	0	0
Revised estimate	\$4,839,000	\$0	\$4,839,000
AUTHORIZATION			
Previous authorizations	\$1,519,000	\$0	\$1,519,000
Current request for authorization	\$3,320,000	\$0	\$3,320,000
Total authorizations, including this request	\$4,839,000	\$0	\$4,839,000
Remaining amount to be authorized	\$0	\$0	\$0

Annual Budget Status and Source of Funds

The Boiler Room Upgrade (CIP# 801230) is included in the 2025-2029 capital budget and plan of finance with a budget of \$4,839,000. The funding sources will be the Airport Development Fund.

Financial Analysis and Summary

Project cost for analysis	\$4,839,000
Business Unit (BU)	Terminal Building
Effect on business performance (NOI after depreciation)	NOI after depreciation will increase due to inclusion of capital (and operating) costs in airline rate base.
IRR/NPV (if relevant)	N/A
CPE Impact	\$0.01 in 2028

Future Revenues and Expenses (Total cost of ownership)

This project will likely have no impact on Aviation Maintenance operating & maintenance (O&M) costs.

ATTACHMENTS TO THIS REQUEST

- (1) Presentation slides

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

May 23, 2023 – The Commission authorized the Executive Director to (1) prepare design and construction bid documents for the Boiler Room Upgrades project; (2) utilize Port of Seattle crews to support design and pre-construction activities. The amount of the request was \$1,479,000 and was approved as Item No. 8c.