

PORT OF SEATTLE
MEMORANDUM

COMMISSION AGENDA
ACTION ITEM

Item No.	5d
Date of Meeting	July 9, 2013

DATE: June 28, 2013
TO: Tay Yoshitani, Chief Executive Officer
FROM: Joe McWilliams, Managing Director, Real Estate
Paul Meyer, Manager, Seaport Environmental
SUBJECT: Marine Energy Efficiency Project

Amount of This Request: \$100,000 **Source of Funds:** General Fund

ACTION REQUESTED:

Request Commission authorization to (1) proceed with the Marine Energy Efficiency Project; (2) spend up to \$100,000 for an energy audit for the project; and (3) for the Chief Executive Officer to advertise and execute an energy savings performance-based contract, as defined in Chapter 39.35A RCW.

SYNOPSIS:

The Real Estate and Seaport operating Divisions are seeking authority for the Marine Energy Efficiency Project. The Port will select an energy services company (ESCO) in accordance with RCW 39.35A. This ESCO company will perform energy audits identifying energy efficiency improvements and propose specific energy conservation construction projects at Shilshole Bay Marina and Fishermen's Terminal. The Seaport division has not identified any specific facilities at this time, but may identify opportunities to perform energy conservation projects under this authorization. The Port is not obligated to continue with any of the projects identified in the energy audit.

There are two cost elements for this project: (1) energy audit and (2) cost of construction. The Port will spend up to \$100,000 to attain energy audits. Construction costs are unknown at this time and Port staff would return to Commission to seek authority to move forward with construction contracts. Preliminary assumptions for the cost of lighting upgrades at Shilshole Bay Marina and Fishermen's Terminal could range between \$500,000 to \$1,000,000. Both facilities have several outdoor lighting systems operated by the Port (docks, parking, outdoor work lighting) that will be evaluated as part of the audit. The upgrades assume conversion of parking lights, outdoor fixtures and dock lighting to LED fixtures. Shilshole Bay Marina will review over 82 walkway and parking lot fixtures and 1400 dock lights. Fishermen's Terminal has over 60 upland parking lot and work lighting fixtures and 95 dock lights to evaluate. The range in costs depends on the total number of fixtures included in the project and the nature and

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extent of lighting controls to be included. Until audit results are available, the cost for construction is estimated. The ESCO contractor is responsible for both design and construction. One interesting feature of RCW 39.35A and ESCO contracts is that the Port may have the ESCO contractor finance the actual construction project with the Port reimbursing the ESCO contractor from the energy savings.

RCW 39.35A allows municipalities to negotiate energy savings performance contracts to achieve energy and water conservation without the need for capital outlay. The ESCO will perform an energy audit and propose specific projects, identifying associated energy savings. The ESCO model reduces risk by guaranteeing savings and reduces impacts to capital budgets by using energy savings from newly installed equipment to pay the full cost of project.

Port staff has identified particular potential projects that will improve the energy performance of lighting systems and lighting controls at the facilities to be assessed. These projects would result in a number of sustainable improvements to the assessed facilities including utility cost-savings, safer working environments, and reduced environmental footprint. Very preliminary in-house estimates of energy savings for selected lighting projects total nearly 2 million kWh (kilowatt-hours) per year that could reduce energy costs by \$127,000 annually. These reductions would help the Port meet state and local mandates that require facilities to reduce energy and water use. The request amount was not included in the 2013 operating budget, but is expected to be offset by lower spending on tenant improvements and related costs.

BACKGROUND:

The ESCO selected by the Port will have the capability to evaluate need, retrofit facility electrical equipment, and measure results that will result in a number of conservation improvements to the assessed facilities. Chapter 39.35A RCW provides the authority to negotiate a performance-based contract for energy management systems to reduce energy use or energy cost of an existing building or facility; and the services associated with the equipment, materials or supplies. The Port will use its own competitive selection process to select an ESCO using a request for qualifications with established criteria and a request for proposals.

Following the selection of the ESCO, sufficient expense funding is available to perform an investment grade audit of selected electrical subsystems including lighting systems; heating, ventilation, and cooling (HVAC) systems and control; electro-mechanical equipment and controls; and addition of renewable energy sources. The audit will concentrate on upgrades of lighting systems. The investment grade effort will lead to the implementation of facility improvement measures. The study will provide all the details necessary for implementation of viable initiatives detailing all the associated savings, costs, potential utility funding, government and utility incentives and grants, and return-on-investment scenarios.

Upon receipt of the investment grade audit, selection of proposed improvements will be made in coordination with the Port of Seattle and any affected tenants based on pre-selected financial and consumption goals. Commission approval will be required prior to moving forward to the next phase of design and construction.

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The ESCO will guarantee the minimum savings and maximum cost of the projects. The performance of the new equipment will be guaranteed by the ESCO within the contract, and verified by annual measurement and verification over the life of the contract. Construction, operation, and maintenance for the term of the contract will be subject to negotiation at time of contract. Our current plan is to have the ESCO finance the initial design and construction and the Port will reimburse the ESCO contractor based on savings.

PROJECT JUSTIFICATION:

The upgrades and energy-efficiency strategies proposed by the ESCO will result in conservation improvements that would include utility cost-savings, safer working environments, and a reduced environmental footprint. In-house estimates of energy savings for selected lighting projects are very preliminary but indicate nearly 2 million kWh per year that could reduce annual energy costs by nearly \$127,000.

Project Objectives:

- Reduce energy consumption at the facilities by 10% or more.
- Total cost of ownership of project for each facility meets a financial objective of simple payback between five to eight years and seven percent return on investment, subject to negotiation.
- No negative interference with the current performance of any related and existing systems.
- All costs related to project audit, design, materials and installation, implementation and measurement and verification will be paid from energy cost savings produced by the new equipment.
- No impact on current operations of the tenant or the Port.
- Installed systems will be fully compliant with federal OSHA, Washington State Labor and Industry standards and other applicable regulations and standards for design and construction.

PROJECT SCOPE OF WORK AND SCHEDULE:

Scope of Work:

- Phase I: Prepare investment grade audit
 - Establish base line energy use profile
 - Develop energy saving alternatives
 - Prepare life cycle analysis of energy savings alternatives
 - Formulate a strategy between Port, tenants and ESCO to facilitate upgrades
- Phase 1: Design & Construction (future phase)
 - Engineering Design
 - Construction
- Measurement and Verification (future phase)

The following facilities are being considered to be included within the scope of the final proposal. The expected areas of cost effective energy efficiency upgrades are listed if known,

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although additional areas may be included based on cost effectiveness and energy savings discovered during the audit.

Facility	Suggested upgrades	Control
Shilshole Bay Marina	Parking lighting, Exterior admin building lighting, dock lighting, lighting controls, Admin building (Port control portion)	Port
Fishermen’s Terminal	Parking lighting, Exterior common lighting, dock lighting, lighting controls, interior net sheds	Port

Schedule:

- Commission authorization to execute contract July 2013
- Procure ESCO August 2013
- Phase I pre-assessment September, 2013
- Phase I Audit October 2013
- Evaluate Audit October 2013
- Recommendations for energy efficiency December 2013

FINANCIAL IMPLICATIONS:

Budget/Authorization Summary:

	Capital	Expense	Total Project
Current request for authorization	\$0	\$100,000	\$100,000
Total Authorizations, including this request	\$0	\$100,000	\$100,000
Remaining budget to be authorized (cost of selected improvements)	\$TBD	\$TBD	\$TBD
Total Estimated Project Cost	\$TBD	\$TBD	\$TBD

Project Cost Breakdown:

	This Request	Total Project
Investment Grade Energy Audit	\$100,000	\$100,000
Design, Construction, Implementation	\$0	\$TBD
State & Local Taxes (estimated)	\$0	\$TBD
Total	\$100,000	\$TBD

Budget Status and Source of Funds:

The 2013 Seaport Environmental Services Operating Budget includes \$50,000 for the Energy Efficiency program for a Seaport property. The additional \$100,000 requested for Real Estate properties was not anticipated in the 2013 Operating Budget, but will be offset by lower spending on tenant improvement and related costs. At this time, there are no plans to evaluate Seaport properties as part of the investment grade audit, but opportunities may arise to use the ESCO to evaluate specific facilities using this contract in the future

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Financial Analysis and Summary:

CIP Category	Not applicable
Project Type	Environmental – Energy Efficiency
Risk adjusted discount rate	Not applicable
Key risk factors	<ul style="list-style-type: none">▪ Will audits provide solutions to meaningfully reduce energy costs and thus achieve the project objectives▪ Will recommended projects be suitable for the needs of the facilities
Project cost for analysis	TBD
Business Unit (BU)	Recreational Boating, Fishermen’s Terminal, Commercial Properties Seaport Properties, TBD
Effect on business performance	Per stated objectives, the goal of the identified energy saving projects will be to achieve a simple payback of investment in 5 to 8 years.
IRR/NPV	Not applicable

STRATEGIC AND OBJECTIVES:

The Port’s Century Agenda defines a strategic goal to meet future growth in energy usage through conservation and renewable resources. The affected facilities will eventually reduce operational costs with reduced electrical energy usage after completing payback with savings. Electrical infrastructure for the facility will be updated and modernized. Reducing energy consumption and associated reduction in greenhouse gas emissions from deferred energy generation helps meet a number of state and local mandates that require facilities to reduce their energy and water use. City of Seattle Ordinance # 123226 requires owners of nonresidential buildings to measure and disclose energy efficiency performance (SMC 22.920). RCW 70.235.020 requires the state to reduce greenhouse gas emissions to 1990 level by 2020 and reduce emissions by 35% from 1990 levels by 2035.

ENVIRONMENTAL SUSTAINABILITY:

This project demonstrates environmental sustainability by improving existing Port assets and better utilizing existing resources. This project has a positive effect on the environment through reduction in energy consumption, which in turn reduces greenhouse gas emissions through deferred electrical generation.

BUSINESS PLAN OBJECTIVES:

This project is consistent with the Real Estate and Seaport business strategy of being the global leader among seaports in demonstrating environmental stewardship and reducing the environmental impact of our operations. The projects meet local state and federal regulations as effectively and efficiently as possible and demonstrate collaboration with industry to reduce environmental impacts while reducing operational costs leading to enhanced competitive

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advantage. The projects will upgrade existing assets and invest in new developments to sustain and enhance economic viability of Real Estate and Seaport assets.

ALTERNATIVES AND IMPLICATIONS CONSIDERED:

ALTERNATIVE 1: Execute the contract with an ESCO and have the ESCO perform an investment grade audit at Shilshole Bay Marina, Fishermen's Terminal, and other potential properties. The audit will define the energy savings initiatives that meet our energy consumption and financial metrics. **This is the recommended action.**

ALTERNATIVE 2: Do nothing: Leave the electrical facilities systems at the identified facilities unchanged. Electrical utility costs will follow a 3% to 6% increase yearly, increasing port operation costs. This action is not recommended.

OTHER DOCUMENTS ASSOCIATED WITH THIS REQUEST:

- None

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS:

- None