

**PORT OF SEATTLE**  
**MEMORANDUM**

**COMMISSION AGENDA**  
**ACTION ITEM**

**Item No.** 6b  
**Date of Meeting** March 26, 2013

**DATE:** March 18, 2013  
**TO:** Tay Yoshitani, Chief Executive Officer  
**FROM:** David Soike, Director, Aviation Facilities and Capital Program  
Wayne Grotheer, Director, Aviation Project Management Group  
**SUBJECT:** Parking Garage Emergency Lights Project at Seattle-Tacoma International Airport  
(CIP #800230)

**Amount of This Request:** \$1,930,970                      **Source of Funds:** Airport Development Fund  
**Est. State and Local Taxes:** \$305,070  
**Est. Total Project Cost:** \$5,269,600

**ACTION REQUESTED:**

Request Commission authorization for the Chief Executive Officer to execute a funding authorization, as part of the Interagency Agreement, with the State of Washington Department of Enterprise Services (DES) to proceed with the design and construction of emergency lighting initiatives at Seattle-Tacoma International Airport (Airport). The amount of this request is \$1,930,970. The total cost of the project is \$5,269,600.

**SYNOPSIS:**

The parking garage has light fixtures throughout the parking areas and stairwells that allow for 24-hour operations. A portion of them have dual functions serving as emergency light fixtures when normal power is lost. The current emergency lighting system is an interim (temporary) fix after a system failure occurred in 2007. This interim solution is not code compliant. This project will bring the parking garage emergency lighting up to current life/safety code compliance while reducing energy consumption.

This request authorizes the Airport Parking Garage Emergency Lights project to provide an energy savings solution of up to 50 percent by using current technology to reduce energy consumption while meeting applicable life safety code requirements for egress area illumination levels. In 2012, McKinstry, in accordance with Washington State Energy Service Company (ESCO) program performed a review of the Airport Parking Garage. McKinstry provided the Port with an Investment Grade Audit that measured and calculated energy savings and determined the requirements and initiatives required to achieve those savings. This authorization will design, implement, and construct those initiatives.

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The Interagency Agreement between the Port of Seattle and the State of Washington DES allows the Port to use the DES ESCO contracts for energy services. Upon executing the funding authorization, the Port, acting through DES, will execute an energy services authorization; and a design/construction contract with the ESCO. The construction contract will include specific contractual provisions applicable to the Port along with the Port's technical specification requirements. The ESCO will self-perform all design and construction services. The ESCO guarantees the costs for design, construction, and energy savings as identified in the audit report.

This project is included in the 2013-2017 capital budget and plan of finance.

### **BACKGROUND:**

On July 23, 2009, the Port executed an Interagency Agreement with DES for future energy/Utility Conservation services through the DES ESCO (Energy Services Company) contractor program.

On June 7, 2012, a funding authorization (ILA Work Authorization) was executed by the Port for the ESCO to conduct the investment grade audit for an amount not to exceed \$26,309.

The overall Parking Garage Emergency Light project consists of two major components:

- On July 6, 2012, Port of Seattle Commission authorized design of the infrastructure that will ensure the Port continues to meet applicable life safety code requirements for egress. The infrastructure provides the foundation to install new light fixtures that will reduce energy consumption.
- This authorization will provide the design and construction of the new light fixtures. The new lights will utilize new technology that reduces energy consumption and has a longer lifecycle, therefore decreasing maintenance and operations costs. The new light fixtures will provide reliable egress lighting and comply with code requirements.

### **PROJECT JUSTIFICATION:**

The purpose of this project is to ensure that code required level of egress illumination is provided for the safety of customers.

#### ***Project Objectives:***

- Satisfy applicable code requirements for emergency lighting;
- Provide proper egress lighting for the safety of customers;
- Decrease electrical loads on the emergency circuits by utilizing current lighting technology in fixtures that require less power; and
- Decrease maintenance and operations cost by utilizing current lighting technology in fixtures with longer lamp life.

### **PROJECT SCOPE OF WORK AND SCHEDULE:**

#### ***Scope of Work:***

- Provide detailed engineering design;
- Retrofit existing emergency lights with new retrofit kits on floors 1-8 including stairwells; and
- Provide construction services for all material, labor, and equipment.

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### ***Schedule:***

Commission Authorization	March 2013
State Execution of contract/Notice to Proceed	April 2013
Design	April-May 2013
Construction	June-August 2013
Performance Monitoring and Verification	September 2013

### **FINANCIAL IMPLICATIONS:**

<b><i>Budget/Authorization Summary:</i></b>	Capital	Expense	Total Project
Original Budget	\$750,000	\$0	\$750,000
Previous Budget Increase	\$4,519,600	\$0	\$4,519,600
Revised Budget	\$5,269,600	\$0	\$5,269,600
Previous Authorizations	\$1,157,081	\$0	\$1,157,081
Current request for authorization	\$1,930,970	\$0	\$1,930,970
Total Authorizations, including this request	\$3,088,051	\$0	\$3,088,051
Remaining budget to be authorized	\$2,181,549	\$0	\$2,181,549
Total Estimated Project Cost	\$5,269,600	\$0	\$5,269,600

<b><i>Project Cost Breakdown:</i></b>	This Request	Total Project
Construction	\$1,365,837	\$3,293,900
Construction Management	\$63,946	\$554,430
Design	\$320,443	\$652,260
Project Management	\$56,000	\$431,330
Permitting	\$0.00	\$32,610
State & Local Taxes (estimated)	\$124,744	\$305,070
Total	\$1,930,970	\$5,269,600

### ***Budget Status and Source of Funds:***

The Parking Garage Emergency Lights project (CIP #C800230) is included in the 2013-2017 capital budget and plan of finance in the amount of \$5,269,600. The source of funds for this project is the Airport Development Fund.

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### ***Financial Analysis and Summary:***

<b>CIP Category</b>	Electrical Infrastructure
<b>Project Type</b>	Renewal & Replacement
<b>Risk adjusted discount rate</b>	N/A
<b>Key risk factors</b>	N/A
<b>Project cost for analysis</b>	\$2.25 million (light fixtures only)
<b>Business Unit (BU)</b>	Landside, Parking
<b>Effect on business performance</b>	NOI after depreciation will increase
<b>IRR/NPV – with DOC grant</b>	IRR = 12.3%, NPV = \$440,703
<b>IRR/NPV – without DOC grant</b>	IRR = 7.8%, NPV = \$78,931
<b>CPE Impact</b>	None

The financial analysis above is for the scope and budget related to light fixtures only. Some of the soft costs allocated to this scope of work were authorized previously, so the total project cost for analysis purposes exceeds the current request for authorization.

### ***Lifecycle Cost and Savings:***

Life Safety code requires monthly testing for emergency systems. This project provides emergency lighting that by design will eliminate the need for monthly testing. This project will reduce annual maintenance/testing requirements by \$140,000 and reduce energy consumption by \$135,000 per year. The guaranteed energy savings stated by the ESCO is 1,572,475 kWh per year. Any shortfalls in those guaranteed savings is paid for by the ESCO. The ESCO guarantees a maximum project cost for design and construction.

This project qualifies for \$235,560 in Bonneville Power Administration (BPA) conservation incentives and \$361,772 in Department of Commerce (DOC) grants. The BPA conservation incentive is administered by the Port of Seattle and is essentially assured as long as the project is completed on schedule. The Port will be competing with other entities for available DOC grant funding. Port personnel believe this project is a strong candidate for DOC funding; however, the certainty of award to the Port of Seattle cannot be accurately assessed. The two figures for IRR and NPV show the results with this grant and without.

### **STRATEGIC OBJECTIVES:**

This project aligns with the Port's objective to be the greenest, and most energy efficient port in North America by meeting all increased energy needs through conservation and renewable sources.

### **ENVIRONMENTAL SUSTAINABILITY:**

This project will provide the opportunity to apply environmental sustainability principles primarily through the use of energy-efficient light fixtures. These will reduce the energy use by an estimated 50% while providing more than four times the lamp operating life compared to what is currently installed.

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### **BUSINESS PLAN OBJECTIVES:**

This project aligns with the Port's objective to minimize the Airport's environmental impacts and reduce energy demand through conservation while operating a world-class international airport by ensuring safe, secure, and sustainable operations.

### **TRIPLE BOTTOM LINE SUMMARY:**

The project supports economic development by investing in an upgraded parking garage to serve the public's safety needs at the Airport. This project helps the environment by reducing energy consumption at the Airport, allows our business partners to expand their operations and supports an Airport small-business tenant's objective.

### **ALTERNATIVES CONSIDERED AND THEIR IMPLICATIONS:**

Alternative 1 – Do nothing. Do not implement this contract. This alternative is not recommended because the temporary solution has reached its life expectancy and will begin to fail and the parking garage currently does not meet egress lighting code. This alternative will negatively affect the safety of the public. This is not the recommended alternative.

Alternative 2 – Execute the contract with the State and have ESCO design and construct the energy savings initiatives outlined in the audit. This alternative will meet the life/safety code requirements for egress illumination levels and provide safety for the public. **This is the recommended alternative.**

### **OTHER DOCUMENTS ASSOCIATED WITH THIS REQUEST:**

- None

### **PREVIOUS COMMISSION ACTIONS OR BRIEFINGS:**

- July 6, 2012, the Commission authorized the design for the electrical infrastructure for a new source of emergency power to feed the parking garage emergency lighting circuits to ensure that code-required level of egress illumination is provided for the safety of customers.