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AGENDA REPORT

TITLE	Adoption of Procurement Targets for Energy Storage Systems
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AMOUNT No Budget Impacts
 REVENUE CAPITAL EXPENDITURE OPERATING EXPENSE NON-OPERATING EXPENSE

PARTIES INVOLVED N/A

SUBMITTED BY Chris Chan, Director of Engineering

APPROVED BY J. Christopher Lytle, Executive Director

REQUESTED ACTION	RESOLUTION
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EXECUTIVE SUMMARY

In accordance with the requirements of Assembly Bill 2514 (AB 2514) and based on the results of a feasibility study conducted by WSP, Inc. to determine procurement targets for procuring energy storage systems, staff is recommending to the Board of Port Commissioners (Board) to adopt the finding that energy storage systems are not viable nor cost-effective for the Port at this time.

<u>ADDITIONAL FINDINGS</u>	APPLIES	DOES NOT APPLY
MARITIME AVIATION PROJECT LABOR AGREEMENT (MAPLA)		X
LIVING WAGE REGULATIONS		X
GENERAL PLAN CONFORMITY		X
OWNER-CONTROLLED INSURANCE PROGRAM (OCIP)		X

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BACKGROUND

The Port of Oakland (Port), as a municipal utility, serves the Oakland International Airport (Airport), a portion of the former United States Naval Fleet Industrial Supply Center-Oakland (FISCO), and the former Oakland Army Base (OAB) with electricity from the wholesale market. Other portions of the Maritime area and Commercial Real Estate area are served by Pacific Gas and Electric Company (PG&E). This agenda report is related only to the three areas served by the Port as a municipal utility.

An energy storage system is a system that is capable of absorbing energy, storing the energy, and dispatching the energy at a later time, similar to the concept of a rechargeable battery. Energy storage systems can assist utility companies in better managing variable and intermittent loads and resources without the need for creating new power plants.

Assembly Bill 2514 (AB 2514) was created and signed into law on September 29, 2010 to encourage and expand the use of energy storage systems by electric utility companies. AB 2514 requires the governing board of a local publicly owned electric utility to open a proceeding to determine appropriate procurement targets, if any, for viable and cost-effective energy storage systems and, by October 1, 2014, to adopt an energy storage system procurement target, if determined to be appropriate, to be achieved by the utility by December 31, 2016, and a 2nd target to be achieved by December 31, 2021. On March 15, 2012, the Board commissioned a formal review to determine the viability and cost effectiveness of energy storage systems and determine and recommend procurement targets for energy storage systems, if the systems are viable and cost effective for the Port.

In November 2013, the Port hired WSP Inc. (WSP), an engineering consulting firm, to evaluate the feasibility of procuring and implementing energy storage system within the Port's electric system. The study, attached as Exhibit B, concludes that energy storage systems are not yet viable nor cost effective for the Port of Oakland at this time.

ANALYSIS

WSP reviewed electricity usage and power purchase data provided by Port staff and assessed the application of energy storage technologies on the Port's grid. WSP concluded:

- The Port does not generate enough excess renewable energy to take advantage of energy storage.

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- Utilizing energy storage to reduce the Port's peak demand will increase the Port's emissions rather than decrease emissions because of the timing of the Port's peak use of energy and the emissions factor of grid energy.
- Other technologies WSP examined were either not commercially available or were not cost effective for the Port.

In addition to the study conducted by WSP, staff reviewed studies and guides published by Electric Power Research Institute (EPRI) and Sandia National Laboratory (SNL) which generally reports that no single storage system can meet all of the needs of the electric grid but that costs are improving and technology is rapidly changing.

Staff recommends that the Board 1) adopt the finding from WSP's study that energy storage systems are not viable nor cost-effective for the Port at this time; 2) direct staff to continue looking for energy storage options and opportunities; and 3) report back to the Board no later than October 1, 2017 with an update on the procurement target for energy storage as mandated by AB2514.

BUDGET & STAFFING

The proposed action does not have any budget or staffing impact.

MARITIME AVIATION PROJECT LABOR AGREEMENT (MAPLA)

The matters addressed under this action are not within the scope of the Port of Oakland Maritime and Aviation Project Labor Agreement (MAPLA) and the provisions of the MAPLA do not apply to this action.

STRATEGIC PLAN

The action described herein would help the Port achieve the following goals and objectives in the Port's Strategic Plan (<http://www.portoakland.com/pdf/about/strategicPlan2011-2015.pdf>).

- Goal G: Objective 2: Partner to share risk, accountability, benefits and improve environmental and safety compliance.

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LIVING WAGE

Living wage requirements, do not apply because the requested action is not an agreement, contract, lease, or request to provide financial assistance within the meaning of the Living Wage Regulations.

ENVIRONMENTAL

This is not a project subject to analysis under the California Environmental Quality Act.

GENERAL PLAN

This action does not change the use of any existing facility or create new facilities, and therefore does not require a General Plan conformity determination pursuant to Section 727 of the City of Oakland Charter.

**OWNER-CONTROLLED INSURANCE PROGRAM (OCIP)
PROFESSIONAL LIABILITY INSURANCE PROGRAM (PLIP)**

This action is not subject to the Port’s Owner Controlled Insurance Program (OCIP) or Professional Liability Insurance Program (PLIP) as it is not a capital improvement construction project or design project supporting such construction.

OPTIONS

1. Adopt a resolution finding energy storage systems are not viable or cost-effective for the Port at this time; and direct staff to review viability and cost-effectiveness of energy storage systems with a report back to the Board by 2017 (3 years) as required by AB 2514. This is the recommended action.
2. Adopt a resolution finding energy storage systems are not viable or cost-effective for the Port at this time; and direct staff to review viability and cost-effectiveness of energy storage with a report to the Board on an annual basis.

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RECOMMENDATION

It is recommended that the Board:

1. Adopt a resolution finding energy storage systems are not viable or cost-effective for the Port at this time;
2. Adopt a resolution directing staff to continue looking for opportunities to implement energy storage systems; and
3. Adopt a resolution directing staff to report back to the Board of Port Commissioners by October 1, 2017 with an update on energy storage system procurement targets, if appropriate.

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Exhibit A

Map of Port Electric Service Area

