



**THE PORT
OF LOS ANGELES**
Executive Director's
Report to the
Board of Harbor Commissioners

DATE: MAY 10, 2016

FROM: ENVIRONMENTAL MANAGEMENT

SUBJECT: RESOLUTION NO. _____ - TECHNOLOGY ADVANCEMENT PROGRAM GRANT AGREEMENT WITH MAERSK AGENCY U.S.A., INC. AS AGENT FOR MAERSK LINE A/S, AND COST SHARE AGREEMENT WITH THE PORT OF LONG BEACH FOR THE OCEAN-GOING VESSEL ENERGY EFFICIENCY MEASUREMENT DEMONSTRATION PROJECT

SUMMARY:

Staff requests that the Board of Harbor Commissioners (Board) approve and enter into a Grant Agreement with Maersk for the Project in the amount of \$1,000,000 as well as approve and enter into a Cost Share Agreement with POLB to share \$500,000 of the proposed Project cost. The Clean Air Action Plan (CAAP) Technology Advancement Program (TAP) Advisory Committee (AC) has reviewed and recommends funding for an Ocean-Going Vessel Energy Efficiency Measurement Demonstration Project (Project) proposed by Maersk Agency U.S.A., Inc. as agent for Maersk Line A/S (Maersk) located in Charlotte, North Carolina. The proposed Project will demonstrate energy and fuel-based efficiency improvements with enhanced data collection on four of Maersk's ocean-going vessels (OGVs) calling at the Ports of Los Angeles and Long Beach (Ports). The total requested TAP funding amount is \$1,000,000, which will be shared equally by the City of Los Angeles Harbor Department (Harbor Department) and the Port of Long Beach (POLB) for a total of \$500,000 from each.

RECOMMENDATION:

It is recommended that the Board of Harbor Commissioners (Board):

1. Find that the proposed action is exempt from the requirements of the California Environmental Quality Act (CEQA) under Article III Class 6(2) of the Los Angeles City CEQA Guidelines as determined by the Director of Environmental Management;
2. Approve the TAP Grant Agreement with Maersk for the total not-to-exceed amount of \$1,000,000;

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3. Approve the Cost Share Agreement with the Port of Long Beach for the reimbursement of \$500,000 from the Port of Long Beach to the City of Los Angeles Harbor Department, as established by the Clean Air Action Plan Master Cost Sharing Agreement No. 2546;
4. Authorize the Executive Director to execute and the Board Secretary to attest to the Grant Agreement with Maersk, for and on behalf of the Board;
5. Authorize the Executive Director to execute and the Board Secretary to attest to the Cost Share Agreement with the Port of Long Beach, for and on behalf of the Board; and
6. Adopt Resolution No. _____.

DISCUSSION:

Project Background/Context - The 2006 San Pedro Bay Ports CAAP was adopted by both Boards of Harbor Commissioners of Los Angeles and Long Beach on November 20, 2006. The 2010 CAAP update was subsequently approved in November 2010. A significant initiative of the CAAP is the TAP, which accelerates the availability of new strategies into the suite of control measures that will ultimately result in significant reductions of DPM, NOx, SOx, and other pollutants. The Mission Statement for the TAP is:

“To accelerate the verification or commercial availability of new, clean technologies, through evaluation and demonstration, to move towards an emissions free port.”

The TAP is the catalyst for identifying, evaluating, and demonstrating new and emerging emissions reduction technologies applicable to the port industry that could be utilized in future updates to the CAAP as new control measures, alternatives to existing measures, or as additional mitigation options for new projects. The TAP is a joint initiative that provides grant funding on a cost share basis. The TAP is funded by the Harbor Department and the POLB with each allocating up to \$1.5 million annually to the program, which is leveraged with funding from other parties. TAP implementation is guided by the management and staff of the Harbor Department and the POLB through the AC, comprised of representatives from the U.S. Environmental Protection Agency, California Air Resources Board, and the South Coast Air Quality Management District. The TAP AC screens, evaluates, and recommends meritorious projects. To date, over \$13 million has been allocated to TAP projects since the program's inception in November 2006.

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Project Description - Maersk plans to retrofit twelve 10,000 TEU container vessels at a cost of \$125 million over two years to achieve energy efficiency and fuel consumption improvements. The retrofits will include modifications of the bulbous bows, installation of improved propellers, de-rating of the main engines, and additional efficiency improvements. TAP funding requested for this proposed Project will assist in paying for the equipment and data collection systems necessary to verify the environmental benefits of the retrofits and efficiency improvements on four of the twelve large container vessels. The total cost of the equipment and data collection systems will be \$8.4 million. The requested \$1 million in TAP funding will support the extra equipment, data collection systems, and data analysis necessary to quantify the benefits of the retrofits and efficiency efforts as detailed in the Scope of Work in the proposed Grant Agreement with Maersk (Transmittal 1).

The expected outcome of this proposed Project is to establish a methodology for quantifying the energy and emissions benefits from energy efficiency improvements on OGVs from both an emissions inventory and validation standpoint. Additionally, this proposed Project may build and enhance the data collection and analysis methods proposed by the "California Air Resources Board's Recommended Emissions Testing Guidelines for Ocean-Going-Vessels." This is the first opportunity to quantify the emission benefits of energy efficiency improvements for OGVs and it is expected that this will establish a path forward for the Ports, industry, and the regulatory agencies to incorporate these types of improvements into future emissions inventories and planning documents.

The TAP AC received and evaluated the Maersk Project proposal, assessed the technological merit of the proposed technology, and has recommended it for TAP funding.

The proposed Project, if successfully demonstrated, is expected to decrease fuel consumption on the four OGVs by 10.7%, resulting in savings of 10,000 metric tons of fuel on an annual basis. This will reduce greenhouse gas (GHG) emissions by an estimated 31,140 tons of carbon dioxide (CO₂) per year. Diesel particulate matter (DPM), oxides of nitrogen (NO_x), and sulfur oxides (SO_x), will also be reduced as a result of lower engine loads and the associated reduced fuel consumption.

Cost Share - In June 2007, the Harbor Department and the POLB executed the Clean Air Action Plan Master Cost Sharing Agreement No. 2546 (Transmittal 2) to establish an arrangement for sharing costs of all agreed upon CAAP expenditures. In accordance with the provisions of the Master Cost Sharing Agreement, a supplemental Cost Share Agreement between the Harbor Department and the POLB is being submitted for approval (Transmittal 3). The Cost Share Agreement identifies the Harbor Department

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as the contracting port and establishes that the costs associated with the proposed Project will be shared by the Harbor Department and the POLB in the amount of \$500,000 each.

FINANCIAL IMPACT:

All operating & maintenance costs for the demonstration project will be covered by Maersk. The total cost of this proposed Project is approximately \$8,400,000 paid by the following funding partners:

Maersk	\$ 7,400,000
Harbor Department	\$ 500,000
Port of Long Beach	\$ 500,000
TOTAL	\$ 8,400,000

Funds for fiscal year (FY) 2015/16 for this Project are available in Account 59965, Center 0330, Program No. 000 and will be expended as follows:

FY 2015/2016	\$ 250,000
FY 2016/2017	\$ 150,000
FY 2017/2018	\$ 100,000
TOTAL	\$ 500,000

Funds in future fiscal years will be requested through the Harbor Department budget process.

ENVIRONMENTAL ASSESSMENT:

The proposed action is approval of a Grant Agreement and Cost Share Agreement to fund a demonstration project of energy and fuel-based efficiency improvements with enhanced data collection on four Maersk OGVs, which is an activity involving data collection, field testing and research which does not result in a serious or major disturbance to an environmental resource. As such, the Director of Environmental Management has determined that the proposed action is exempt from the requirements of CEQA in accordance with Article III Class 6(2) of the Los Angeles City CEQA Guidelines.

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CITY ATTORNEY:

The Office of the City Attorney has reviewed and approved the agreements as to form and legality.

TRANSMITTALS:

1. Grant Agreement with Maersk Agency U.S.A., Inc.
2. Master Cost Share Agreement No. 2546
3. Cost Share Agreement with the Port of Long Beach



CHRISTOPHER CANNON
Director of Environmental Management

FIS Approval: MA (initials)
CA Approval: MA (initials)

FOR 
MICHAEL DiBERNARDO
Deputy Executive Director

APPROVED:

FOR 
EUGENE D. SEROKA
Executive Director

CC/yo
AUTHOR: C. ATKINS
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