

DATE: SEPTEMBER 27, 2023

FROM: ENVIRONMENTAL MANAGEMENT

SUBJECT: RESOLUTION NO. _____ - APPROVAL OF MEMORANDUM OF UNDERSTANDING AMONG THE CITY OF LOS ANGELES HARBOR DEPARTMENT, THE PORT OF LONG BEACH, AND THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT TO FUND AN OCEAN GOING VESSEL EMISSIONS REDUCTION TECHNOLOGY ADVANCEMENT PROGRAM PROJECT

SUMMARY:

Staff requests approval of the proposed Memorandum of Understanding (MOU) among the City of Los Angeles Harbor Department (Harbor Department), the Port of Long Beach (POLB), and the South Coast Air Quality Management Department (SCAQMD) to fund a Clean Air Action Plan (CAAP) Technology Advancement Program (TAP) project to retrofit two ocean-going vessels (OGVs) with low-pressure exhaust gas recirculation (LP-EGR) and a multiple fuel conversion system (OGV Retrofit Project). The total cost of the OGV Retrofit Project is \$20,871,400, primarily funded by an \$11,414,700 grant SCAQMD received from the United States Environmental Protection Agency (EPA). TAP funding in the amount of \$600,000 will be split equally between the Harbor Department and POLB, for a total of \$300,000 from each port. SCAQMD and their partners Mediterranean Shipping Company (MSC) and Wärtsilä will be responsible for the remaining costs as part of the retrofit and demonstration of the OGVs.

RECOMMENDATION:

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

1. Find that the Director of Environmental Management has determined that the proposed action is administratively and categorically exempt from the requirements of the California Environmental Quality Act (CEQA) under Article II Section 2(f) and Article III Class 6(2) of the Los Angeles City CEQA Guidelines;
2. Approve the Memorandum of Understanding among the City of Los Angeles Harbor Department, the Port of Long Beach, and the South Coast Air Quality Management District for the OGV Retrofit Project;
3. Authorize the Executive Director to execute and Board Secretary to attest to said agreement for and on behalf of the Board of Harbor Commissioners; and
4. Adopt Resolution No. _____

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SUBJECT: MOU WITH SCAQMD AND POLB FOR AN OCEAN GOING VESSEL EMISSIONS REDUCTION RETROFIT TECHNOLOGY ADVANCEMENT PROGRAM PROJECT

DISCUSSION:

Background/Context – On November 20, 2006, during a joint meeting between the Los Angeles and the Long Beach Boards of Harbor Commissioners, the 2006 San Pedro Bay Ports CAAP was adopted. A significant initiative of the CAAP is the TAP, which is the catalyst for identifying, evaluating, and demonstrating new and emerging emissions reduction technologies applicable to the port industry, which can be utilized in future updates to the CAAP as new control measures, alternatives to existing measures, or as additional mitigation options for new projects. A TAP Advisory Committee (TAC) comprised of EPA, the California Air Resources Board (CARB), the California Energy Commission (CEC) and SCAQMD, along with the Harbor Department and POLB, meet regularly to review and recommend projects for funding.

Project Description – SCAQMD and project partners Wärtsilä and Mediterranean Shipping Company (MSC) will retrofit and demonstrate two emissions reduction systems on two different MSC ships. The first vessel will be retrofitted with LP-EGR. EGR is the process by which a portion of the exhaust gases is redirected to the intake side of the engine and re-enters the cylinders. The recirculated exhaust gases reduce the oxygen (O₂) content and increase the concentration of carbon dioxide (CO₂) in the incoming air. As a result, peak combustion temperature reduces significantly due to reduced O₂ in the combustion air, reducing oxides of nitrogen (NO_x) formation by an estimated 70 percent while in use. The installation of a patent-pending particulate filter at the exhaust of an oxides of sulfur (SO_x) scrubber is included in the design to protect the EGR cooler and provide an estimated 90 percent particulate matter (PM) reduction.

The second vessel will be retrofitted with a multiple fuel flexible injection platform with a gas supply system. The vessel will initially operate on diesel, liquefied natural gas (LNG), and ammonia, but it will be capable of running multiple fuel types with minor modifications. Standard fuel storage tanks and pipes that are commercially available will be used to make the retrofit more adaptable. This retrofit does not require major changes to the existing engine and the patent-protected technology significantly reduces methane slip. Overall emissions reductions are estimated to achieve 70% reductions in NO_x and 25 percent in CO₂. Both ships will undergo in-use emissions testing to determine the actual benefits during real operations.

MOU – SCAQMD submitted the OGV Retrofit Project to the TAC to request cost-share participation from POLA. The proposed MOU describes the specific task items the Harbor Department and POLB will fund as the OGV Retrofit Project proceeds (Transmittal 1).

The entire cost of the OGV Retrofit Project will be \$20,871,400. The total amount of funding to be provided through the TAP is \$600,000, split equally by the Harbor Department and POLB, for a total contribution of \$300,000 each. SCAQMD has secured

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a grant award from the EPA for \$11,414,700. SCAQMD, MSC, and Wärtsilä will provide the remaining costs. POLB has approved the proposed MOU.

ENVIRONMENTAL ASSESSMENT:

The proposed action is an approval of an MOU among the Harbor Department, POLB, and SCAQMD to fund the OGV Retrofit Project, which is an administrative activity for basic data collection, field testing and research. Therefore, the Director of Environmental Management has determined that the proposed action is administratively and categorically exempt from the requirements of CEQA in accordance with Article II Section 2(f) and Article III Class 6(2) of the Los Angeles City CEQA Guidelines.

FINANCIAL IMPACT:

The proposed action is to approve an MOU with POLB and SCAQMD for funding of the OGV Retrofit Project. The total cost of the OGV Retrofit Project is \$20,871,400 and TAP funding in the amount of \$600,000 will be split equally between the Harbor Department and POLB. The Harbor Department will pay \$300,000 (50%) of the total TAP funding directly to SCAQMD. It is anticipated that funds will be expended in Fiscal Year 2023/24.

Funds in the amount of \$300,000 are available in Account 59965 (Customer Environmental Subsidies & Incentives), Center 0330, and Program 000.

CITY ATTORNEY:

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

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TRANSMITTALS:

1. Memorandum of Understanding with the Port of Long Beach and South Coast Air Quality Management District

FIS Approval: MB

CA Approval: SO



CHRISTOPHER CANNON
Director of Environmental Management

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MICHAEL DIBERNARDO
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APPROVED:

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Executive Director

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