



DATE: DECEMBER 15, 2016

FROM: ENVIRONMENTAL MANAGEMENT AND GOODS MOVEMENT

SUBJECT: RESOLUTION NO. _____ - APPROVAL OF 1) A GRANT AGREEMENT WITH THE CALIFORNIA ENERGY COMMISSION FOR THE FREIGHT TRANSPORTATION PROJECTS AT CALIFORNIA SEAPORTS, 2) A SUB-RECIPIENT AGREEMENT WITH EVERPORT TERMINAL SERVICES, 3) A SUB-RECIPIENT AGREEMENT WITH PRODUCTIVITY APEX, INC. AND 4) A FUNDING AGREEMENT WITH THE LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY

SUMMARY:

Staff requests that the Board of Harbor Commissioners (Board) accept and approve the California Energy Commission (CEC) Grant Agreement in the amount of \$5,833,000 to fund the Advanced Yard Tractor Deployment and *Eco-FRATIS* Drayage Truck Efficiency Project (Project), approve Funding Agreement with the Los Angeles County Metropolitan Transportation Authority (METRO), approve a Sub-Recipient Agreement (in the amount of \$4,863,000) with Everport Terminal Services (Everport) for the Yard Tractor component, approve a Sub-Recipient Agreement with Productivity Apex, Inc. (PAI) (in the amount of \$1,210,000) for the *Eco-FRATIS* component.

The CEC awarded the City of Los Angeles Harbor Department (Harbor Department) a grant in the amount of \$5,833,000 to fund the Project. The first component of the CEC grant is for the Advanced Yard Tractor Deployment (Yard Tractor component) that will fund the purchase and demonstration of five zero emission yard tractors and 20 liquefied natural gas (near-zero-emission) yard tractors, in the amount of \$4,863,000. All 25 yard tractors will be deployed at the Port of Los Angeles (Port) Everport container terminal. The second component of the CEC grant is for the *Eco-FRATIS* Drayage Truck Efficiency Project (*Eco-FRATIS* component), in the amount of \$970,000. This component will fund Intelligent Transportation Systems (ITS) technology for drayage trucks, which improves mobility and reduces emissions. METRO is also contributing \$240,000 for the *Eco-FRATIS* component. The Harbor Department's financial responsibility is limited to staff time to manage the grant which is expected to be minimal.

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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) in accordance with Article III, Class 6 of the Los Angeles City CEQA Guidelines;
2. Accept and approve the Grant Agreement between the City of Los Angeles Harbor Department and the California Energy Commission, in the amount of \$5,833,000, for the Advanced Yard Tractor Deployment and *Eco-FRATIS* Drayage Truck Efficiency Project, including the replacement pages in Transmittal 3;
3. Authorize the Executive Director to execute and the Board Secretary to attest to said Grant Agreement with the California Energy Commission for and on behalf of the Board;
4. Approve the Sub-Recipient Agreement between the City of Los Angeles Harbor Department and Everport Terminal Services to implement the Advanced Yard Tractor Deployment, in the amount not-to-exceed of \$4,863,000 and a term of three years;
5. Authorize the Executive Director to execute and the Board Secretary to attest to said Sub-Recipient Agreement with Everport Terminal Services for and on behalf of the Board;
6. Approve the Sub-Recipient Agreement with Productivity Apex, Inc. to develop, integrate, and manage the *Eco-FRATIS* Truck Drayage Efficiency Project, in the amount of \$1,210,000 and a term of three years;
7. Authorize the Executive Director to execute and the Board Secretary to attest to said Sub-Recipient Agreement with Productivity Apex, Inc. for and on behalf of the Board;
8. Approve the Funding Agreement with the Los Angeles County Metropolitan Transportation Authority to develop and integrate the *Eco-FRATIS* Truck Drayage Efficiency Project, in the amount of \$240,000 and a term of three years;
9. Authorize the Executive Director to execute and the Board Secretary to attest to said Funding Agreement with the Los Angeles County Metropolitan Transportation Authority for and on behalf of the Board;

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10. Approve the budgetary transfer of \$5,093,000 from the Unappropriated Balance to the "State Pass Through Non-Operating Expenses" Account 89097 in Center 6000 and Program 000 for the grant funding associated with this CEC request;
11. Direct the Board Secretary to transmit the Resolution to the Mayor for approval pursuant to Section 343(b) of the City Charter;
12. Direct the Board Secretary to notify the City Clerk of such transfer pursuant to Section 343(d) of the City Charter at the time such transfer is made; and
13. Adopt Resolution No. _____.

DISCUSSION:

Background/Context - On January 7, 2016, the CEC released a grant solicitation to implement and administer Alternative and Renewable Fuel and Vehicle Technology for Freight Transportation Projects at California Seaports (GFO-15-604). Nearly \$17 million was made available for this solicitation to deploy prototypes, construction, infrastructure, emission testing, and practical demonstration of near-zero and zero emission technologies with a high potential to be commercialized. The grant was to be awarded in or near disadvantaged communities. There was also a twenty-five percent funding match requirement that could be fulfilled through in-kind services, cash, equipment purchases, electrical services, and fueling infrastructure.

A memo was submitted to the Board, on March 21, 2016, containing information on the grant solicitation and the Harbor Department's planned application. On March 24, 2016, the Harbor Department submitted a grant application to the CEC on behalf of Everport and PAI, who developed the project concepts. On May 19, 2016, the CEC notified the Harbor Department that the application was selected and received a preliminary grant award offer in the amount of \$5,833,000 (Transmittal 1). On June 14, 2016, CEC Commissioners approved the funding of the Project and instructed their staff to enter into agreement negotiations with the Harbor Department. The Harbor Department received the grant package on August 14, 2016 (Transmittal 2). The minor CEC agreement alterations as requested by Harbor Department staff, approved by CEC staff, and specifically contained in Transmittal 3, are incorporated accordingly into the final agreement.

The two projects associated with the grant award are described below.

Yard Tractor Component - The Yard Tractor component will demonstrate two types of cutting edge, low-emitting, greenhouse gas (GHG) reducing terminal yard tractors

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together at Everport under the same duty cycle. In addition, this demonstration will show the performance of near-zero and zero emission yard tractors compared to their conventional diesel-fueled counterparts, including range and maintenance intervals. This project will demonstrate five yard tractors that will be equipped with BYD Motors' zero emission propulsion technology. Four of the yard tractors will be newly built and one will be a retrofit of an existing Balqon yard tractor. In addition, twenty yard tractors from Capacity will be equipped with the Cummins Westport near-zero emission engines (0.02 grams of nitrogen oxides/brake horsepower-hour). In order to further reduce GHGs, the near-zero emission yard tractors will be fueled with renewable natural gas provided by Clean Energy via a temporary fueling system.

Data loggers designed to capture information will be installed on each of the yard tractors. A comprehensive final report will be prepared at the end of the demonstration to assess the various elements of this project component, including operational efficiency and viability of the near-zero and zero emission yard tractors.

Everport Yard Tractor Component Partnership – The Harbor Department and Everport agreed to work together to apply for this Project. Everport is an ideal partner for this Project because they utilize different types of cargo handling equipment. The yard tractors at Everport comprise fifty-seven percent of the total cargo-handling GHG emissions. A quarter of Everport's diesel yard tractor fleet will be replaced with near-zero and zero emission yard tractors. Everport will demonstrate how near-zero and zero emission cargo handling equipment can be introduced and utilized in conventional container terminals.

Everport met with various manufacturers and technology vendors to support this Project:

- BYD Motors – to provide five battery electric yard tractors.
- Capacity Trucks – to provide twenty near-zero emission yard tractors.
- Harbor Diesel and Equipment, Inc. - authorized Capacity Trucks dealer.
- Clean Energy – to provide the renewable natural gas to fuel the twenty Capacity Trucks yard tractors utilizing mobile fueling equipment.

Finally, the proximity of the Port of Angeles to disadvantaged communities helps Everport meet CEC's criteria as a disadvantaged community and therefore satisfies the requirements of the grant opportunity.

Everport Yard Tractor Component Sub-Recipient Grant Agreement - The Sub-Recipient Grant Agreement between the Harbor Department and Everport (Transmittal 4) to demonstrate the near-zero and zero emission yard tractors includes the same terms

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and conditions detailed in the CEC Grant Agreement. The Harbor Department and Everport will work collaboratively to ensure that all conditions and schedules are met in accordance with the CEC Grant Agreement.

Eco-FRATIS Component - The *Eco-FRATIS* component entails demonstrating ITS technology with 100 drayage trucks in order to enhance drayage operations to/from the Ports of Los Angeles and Long Beach (POLA/POLB). The Harbor Department has partnered with the following entities: PAI (primary technology developer/integrator); University of California, Riverside - Center for Environmental Research and Technology (UCR); InfoMagnus; and Harbor Trucking Association, as well as METRO METRO which added support to *Eco-FRATIS* component by committing a hard match funding amount of \$240,000. The expected data will document project benefits including GHG, criteria pollutant emission, and fuel use reductions.

The technologies that will be integrated for the *Eco-FRATIS* component include:

- Freight Advanced Traveler Information System (FRATIS) deployment, which includes a suite of applications developed and currently being demonstrated in POLA/POLB by PAI on behalf of the United States Department of Transportation (USDOT).
- Harbor Trucking Association (HTA)/InfoMagnus *Geostamp* application, which entails the provision of real-time truck travel and terminal turn times via an automated mobile smart device application.
- University of California Riverside's *Eco-Drive* application, which entails using traffic signal timing information to optimize acceleration/deceleration of trucks.

Eco-FRATIS Component Selection – This CEC project complements and expands the USDOT FRATIS that is currently being demonstrated in POLA/POLB. The FRATIS system was initially developed and demonstrated in 2014 at the POLA Yusen Container Terminal with 50 trucks. A second phase with 200 more trucks serving POLA/POLB is currently being developed, and will be demonstrated in 2017. For both of these phases, USDOT retained PAI via a competitively solicited grant. PAI approached the Harbor Department about submitting an application for the CEC grant. The HTA selected InfoMagnus via a competitive request for proposals to develop and deploy the *Geostamp* system. The UCR *ECO-Drive* system was developed and tested via a United States Department of Energy competitively solicited grant. Therefore, the Harbor Department deemed it prudent, appropriate, and cost-effective to submit an application with PAI, InfoMagnus, and UCR. The Harbor Department seeks approval of a Sub-Recipient Agreement with PAI, in the amount of \$1,210,000 (Transmittal 5), which will be fully reimbursed with CEC grant and METRO funds.

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ENVIRONMENTAL ASSESSMENT:

The proposed action is approval of agreements for testing and demonstration of near-zero and zero emission yard tractors and ITS technology for drayage trucks to improve mobility and reduce emissions. As an activity involving data collection, research and resource evaluation which does not result in a serious major disturbance to an environmental resource, the Director of Environmental Management has determined that the proposed action is exempt from the California Environmental Quality Act (CEQA) in accordance with Article III, Class 6 of the Los Angeles City CEQA Guidelines.

FINANCIAL IMPACT:

Staff requests that the Board accept and approve the CEC Grant Agreement in the amount of \$5,833,000 to fund the Project, approve a Funding Agreement with METRO, approve a Sub-Recipient Agreement with Everport for the implementation of the Yard Tractor component, and approve the Sub-Recipient Agreement with PAI for the Eco-FRATIS component. The table below summarizes the costs and funds for the overall project.

Component	Subcontractor	CEC Funds	Match By Subcontractor	METRO Funding	TOTAL
Yard Tractor	Capacity Trucks	\$3,363,000	\$1,999,000		\$5,362,000
	BYD Motors, Inc.	\$1,500,000	\$375,000		\$1,875,000
Eco-FRATIS	PAI	\$513,998	\$114,781	\$205,000	\$833,779
	UCR	\$359,855	\$90,138		\$449,993
	InfoMagnus	\$96,147	\$37,628	\$35,000	\$168,775
		\$5,833,000	\$2,616,547	\$240,000	\$8,689,547

The Harbor Department applied for the grant on behalf of Everport and PAI. As such, the Harbor Department will function as the grant administrator and will pass the funds to these sub-recipients. The CEC grant does not allow for in-house administration costs associated with the Project. The Harbor Department's financial responsibility is limited to staff time to manage the grant which is expected to be minimal.

Everport will provide \$1,875,000 (through BYD Motors and Capacity Trucks) as cash and in-kind support. Clean Energy will provide \$499,000 (through Capacity Trucks) for the use of Liquefied Natural Gas (LNG) mobile fueling equipment (Transmittal 6). The remaining \$482,547 of matching funds will be provided in the form of in-kind labor for

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PAI (\$114,781), UCR (\$90,138), InfoMagnus (\$37,628), and a grant from METRO (\$240,000) (Transmittal 7).

Board approval of the METRO funding agreement (Transmittal 8) is also requested. The METRO Planning and Programming Committee will be approving the funding agreement at their meeting on November 17, followed by their full Board in December 2016. The METRO funds will be disbursed to the Harbor Department, on a reimbursement basis, similar to other Harbor Department transportation projects funded by METRO.

	CEC Environmental	CEC Goods Movement	METRO Cash
FY 16/17	\$4,763,000	\$270,000	\$60,000
FY 17/18	\$50,000	\$650,000	\$160,000
FY 18/19	\$50,000	\$50,000	\$20,000
TOTAL	\$4,863,000	\$970,000	\$240,000

The transfer of funds from the Unappropriated Balance to the Adopted Non-Operating Expense Budget will increase the FY 16/17 Adopted Non-Operating Expense Budget by \$5,093,000 however an equal amount of funding will be received by the Port as state pass-through grant revenue in Account 76084, State Pass Through Revenue.

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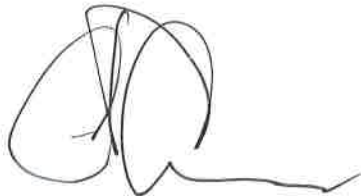
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CITY ATTORNEY:

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

TRANSMITTALS:

1. Notice of Award
2. Grant Agreement with the California Energy Commission
3. Grant Agreement - Replacement Pages
4. Sub-Recipient Agreement with Everport Terminal Services
5. Sub-Recipient Agreement with Productivity Apex, Inc.
6. Letters of Commitment for the Advanced Yard Tractor Deployment
7. Letters of Commitment for the *Eco-FRATIS* Drayage Truck Efficiency Project
8. Funding Agreement with the Los Angeles County Metropolitan Transportation Authority



CHRISTOPHER CANNON
Director of Environmental Management




KERRY CARTWRIGHT, P.E.
Director of Goods Movement

APPROVED:



EUGENE D. SEROKA
Executive Director

FIS Approval:  (initials)
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