



**THE PORT
OF LOS ANGELES**
Executive Director's
Report to the

Board of Harbor Commissioners

DATE: OCTOBER 11, 2017

FROM: ENVIRONMENTAL MANAGEMENT

SUBJECT: RESOLUTION NO. _____ - APPROVAL OF A GRANT AGREEMENT WITH THE CALIFORNIA ENERGY COMMISSION FOR SUSTAINABLE FREIGHT TRANSPORTATION PROJECTS AND A MULTIPARTY AGREEMENT WITH EVERPORT TERMINAL SERVICES INC., BYD MOTORS INC., AND TAYLOR MACHINE WORKS, INC.

SUMMARY:

Staff requests that the Board of Harbor Commissioners (Board) accept and approve the California Energy Commission (CEC) Grant Agreement in the amount of \$4,524,000 to fund the Port of Los Angeles' Everport Advanced Cargo Handling Demonstration Project (Project), and approve the associated Multiparty Agreement among the City of Los Angeles Harbor Department (Harbor Department), Everport Terminal Services Inc. (Everport), BYD Motors Inc. (BYD), and Taylor Machine Works, Inc. (Taylor).

The CEC awarded the City of Los Angeles Harbor Department (Harbor Department) a grant in the amount of \$4,524,000 to fund the design, development, delivery, and 12-month demonstration of three pre-commercial battery electric zero emission (ZE) yard tractors and two pre-commercial battery electric ZE top handlers at Everport, the Project demonstration partner. The three ZE yard tractors will be automatically connected and charged by the first ever Electric Truck Smart Plug-In System, and the two ZE top handlers will utilize manual connection to the charging stations.

BYD will manufacture the ZE yard tractors and provide in-kind match funding in the amount of \$189,403. Taylor will manufacture the ZE top handlers and provide in-kind match funding in the amount of \$121,500. Everport will provide match funds in the amount of \$856,000 for labor to operate and maintain the cargo handling equipment. The Harbor Department will provide \$2,000,000 to design and construct the necessary electrical infrastructure to deliver power to all pieces of equipment. The Harbor Department will also provide administrative oversight for the Project, and act as fiduciary agent for reimbursement to Subrecipients (BYD and Taylor) for Project expenditures. The Harbor Department is financially responsible for \$2,000,000 for the design and construction of the electrical infrastructure to support this Project at the Everport terminal. Total project cost inclusive of the grant funds and partner costs is \$7,690,903.

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RECOMMENDATION:

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

1. Find 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 as determined by the Director of Environmental Management;
2. Accept and approve the Grant Agreement between the City of Los Angeles Harbor Department and the California Energy Commission, in the amount of \$4,524,000, for the Port of Los Angeles' Everport Advanced Cargo Handling Demonstration Project;
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 a Multiparty Agreement between City of Los Angeles Harbor Department, Everport Terminal Services Inc., BYD Motors Inc., and Taylor Machine Works, Inc. in the amount not-to-exceed \$4,524,000 for a term of three years;
5. Authorize the Executive Director to execute and the Board Secretary to attest to said Multiparty Agreement with Everport Terminal Services Inc., BYD Motors Inc., and Taylor Machine Works, Inc. for and on behalf of the Board; and
6. Adopt Resolution No. _____.

DISCUSSION:

Background/Context - On November 29, 2016, the CEC released a grant solicitation to implement and administer Sustainable Freight Transportation Projects (GFO-16-604). Nearly \$27,000,000 was made available statewide for all California seaports, marine terminal operators at California seaports, local air districts, and seaport tenants under the solicitation to 1) demonstrate pre-commercial on-road and off-road medium-duty and heavy-duty vehicle technologies; and 2) demonstrate intelligent transportation systems and technologies. Projects that proposed to enhance market acceptance and deployment of advanced vehicle technologies that would reduce greenhouse gas (GHG) emissions, reduce petroleum use, and benefit disadvantaged communities (DAC) were considered for funding. The project had to be in or near a DAC to receive funding.

The solicitation included a 25 percent minimum funding match requirement that could be fulfilled through in-kind services, equipment purchases, labor costs, alternative fuel costs, and electricity services during the term of the agreement. A minimum of 10 percent of the 25 percent match funding was required to come from the applicant. The Harbor

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Department and Everport met and decided to apply for this grant funding to add to the previous year's Advanced Yard Tractor Deployment Project, in which the Harbor Department was awarded approximately \$5 million from the CEC to demonstrate 25 near-zero and zero-emission yard tractors at the Everport terminal.

An informational memo containing information on the grant solicitation and the Harbor Department's proposed application was submitted to the Board on February 6, 2017. The Harbor Department submitted a grant application to the CEC on behalf of Everport on January 26, 2017. On February 22, 2017, the CEC notified the Harbor Department that the application was selected and received a preliminary grant award offer in the amount of \$4,524,000 (Transmittal 1). The Harbor Department received the grant package on May 6, 2017 (Transmittal 2). On May 10, 2017, CEC Commissioners approved the funding of the Project and instructed their staff to enter into agreement negotiations with the Harbor Department.

Port of Los Angeles' Everport Advanced Cargo Handling Demonstration Project – This Project assembles a strong team that will work together toward successful demonstration of two ZE top handlers and three ZE yard tractors manufactured by original engine manufacturers, Taylor and BYD respectively, at the Everport Terminal. This demonstration will show the performance of ZE top handlers and ZE yard tractors compared to their conventional diesel-fueled equipment. Beyond this core objective, this project provides an additional link for a complete “ZE pathway” for container goods movement that begins at a marine terminal and ends at a container's final destination. This ZE container movement pathway originates when a ship plugs into shore power at-berth. From there, a ZE crane moves the container off the ship to a ZE yard tractor (proposed for this Project), which transports the container across the terminal. Next a ZE top handler (proposed for this Project) will take the container from the yard tractor and place it onto a chassis that may be transported by a ZE or near ZE emission truck to its next destination. The ZE equipment that will be manufactured for this Project will build on previous and ongoing ZE technology demonstration efforts at Everport Terminal.

For purposes of this demonstration, the Project will evaluate the Electric Truck Smart Plug-In System, for charging the ZE yard tractors and the ZE top handlers will be manually charged.

Data loggers designed to capture information will be installed on each of the ZE top handlers and ZE 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 ZE top handlers and ZE yard tractors.

Pre-Commercial Zero Emission Vehicle Costs – One of the key purposes of the demonstration is to compare operating capabilities of this equipment with its diesel counterparts. This will be important in light of the significant difference in cost as shown in the table below. These costs, along with the demonstrated operating capabilities will

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eventually need to be competitive with the diesel counterparts for this equipment to achieve commercial viability.

Vehicle Type	Commercial Cost Diesel-Fueled Vehicle	Project Cost Battery-Electric Vehicle
Yard Tractor	\$120,000	\$300,000
Top Handler	\$600,000	\$1,827,000

Electrical Infrastructure Plan – The Project requires electrical infrastructure to deliver power to the ZE top handlers and ZE yard tractors, which includes the Electric Truck Smart Plug-In System. The cost to provide electrical infrastructure necessary to support the Project is approximately \$2,000,000. The electrical infrastructure will provide enough charging capacity to support an additional twenty-five ZE yard tractors for future projects. The expenditure to install the electrical infrastructure was approved at the Harbor Department's Project Development Committee (PDC) meeting on July 11, 2017.

Everport Partnership – The Harbor Department and Everport agreed to work together to apply for this Grant. Everport is an ideal partner for this Project because they utilize various types of cargo handling equipment to move containers throughout the facility and this Project builds upon an existing CEC grant award currently underway at the Everport terminal. The diesel powered yard tractors and top handlers at the Everport terminal comprise approximately 83 percent of their total cargo handling GHG emissions. Everport will demonstrate how the GHG reducing ZE cargo handling equipment can be introduced and utilized in conventional container terminals.

Everport met with various manufacturers and selected BYD and Taylor to develop the vehicles for this Project.

Multiparty Agreement – The Multiparty Agreement between the Harbor Department, BYD, Everport, and Taylor (Transmittal 3) to demonstrate the ZE top handlers and ZE yard tractors includes the same terms and conditions detailed in the CEC Grant Agreement. The Harbor Department, Everport, BYD, and Taylor will work collaboratively to ensure that all conditions and schedules are met in accordance with the CEC Grant Agreement.

Multiparty Agreement Responsibilities:

Harbor Department – The Harbor Department will provide administrative oversight for the Project and act as fiduciary agent for reimbursement to Subrecipients (BYD and Taylor) for Project expenditures. Additionally, the Harbor Department will provide \$2,000,000 for the necessary electrical infrastructure to deliver power to the charging units which includes the Electric Truck Smart Plug-In System. Since the Harbor Department is the applicant, a minimum 10 percent match funding is required. In the application, the Harbor Department agreed to contribute \$1,071,428 in match funding. The Harbor Department's contribution of \$2,000,000 to the Project is more than sufficient to cover the required

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match funding. When the Project is complete, the Harbor Department and vehicle manufacturers will work with the CEC for disposition instructions of the ZE equipment, with the goal of transferring the equipment to the operators if it is determined to meet minimum necessary operational needs for Everport. If at the end of this demonstration the equipment is deemed unsuccessful, the electrical infrastructure could be reused for other ZE equipment.

Everport – Everport will be responsible for operating and maintaining the ZE equipment throughout a 12-month demonstration at their facility. Everport will satisfy their commitment of \$856,000 in match funding through the cost of labor to operate and maintain the equipment. Additionally, Everport will pay for the electricity costs associated with charging the ZE equipment.

BYD – BYD will receive grant funding in the amount of \$870,000 to design, build, and deliver three pre-commercial ZE yard tractors for demonstration at Everport. Additionally, BYD will provide \$189,403 for in-kind match for labor and travel. The Harbor Department and BYD will work collaboratively to ensure that all conditions and schedules are met in accordance with the CEC Grant Agreement. BYD will own the ZE yard tractors until the CEC provides disposition instructions for the ZE equipment at the end of the Project. If at the end of this demonstration the equipment is deemed successful, upon approval from the CEC, it is BYD's intent to transfer ownership to Everport.

Taylor – Taylor will receive grant funding in the amount of \$3,654,000 to design, build, and deliver two pre-commercial ZE top handlers for demonstration at the Everport terminal. Additionally, Taylor will provide \$121,500 for in-kind match for labor and travel. The Harbor Department and Taylor will work collaboratively to ensure that all conditions and schedules are met in accordance with the CEC Grant Agreement. Taylor will own the ZE top handlers until the CEC provides disposition instructions for the ZE equipment at the end of the Project. If at the end of this demonstration the equipment is deemed successful, upon approval from the CEC, it is Taylor's intent to transfer ownership to Everport.

ENVIRONMENTAL ASSESSMENT:

The proposed action is approval of a Grant Agreement with the CEC to fund a demonstration project to develop and demonstrate five pieces of zero-emission cargo handling equipment. The approval of the agreement is considered an administrative activity and the demonstration project involves data collection, field testing and research which would 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 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.

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FINANCIAL IMPACT:

Staff requests that the Board accept and approve the CEC Grant Agreement in the amount of \$4,524,000 to fund the Project, and approve a Multiparty Agreement with BYD, Everport, and Taylor for the implementation of the Project. The table below summarizes the costs and funds for the overall project.

Project Partner	Vehicle Type	# Units	CEC Funds	Partner Funds	TOTAL
BYD	Yard Tractor	3	\$870,000	\$189,403	\$1,059,403
Taylor	Top Handler	2	\$3,654,000	\$121,500	\$3,775,500
Everport			0	\$856,000	\$856,000
Harbor Department			0	\$2,000,000	\$2,000,000
TOTAL			\$4,524,000	\$3,166,903	\$7,690,903

The Harbor Department applied for the grant on behalf of Everport. The Harbor Department will function as the grant administrator and will pass the funds to BYD and Taylor. No funds will be passed to Everport. Additionally, Everport will pay for the electricity costs associated with charging the ZE equipment. Grant funds in the amount of \$4,524,000 will be distributed to subrecipients as follows:

FY2017/18	\$	0
FY2018/19	\$	4,071,600
FY2019/20	\$	0
FY2020/21	\$	452,400
TOTAL	\$	4,524,000

The Harbor Department's financial responsibility includes \$2,000,000 for the development of the electrical infrastructure. These costs will be paid out of the Capital Improvement Program Work Order 25453 – B. 226-236 Advanced Cargo Handling Demonstration in FY2019/20.

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MULTIPARTY AGREEMENT

CITY ATTORNEY:

The Office of the City Attorney has reviewed and approved the Grant Agreement and the Multiparty Agreement as to form and legality.

TRANSMITTALS:

1. Notice of Award
2. Grant Agreement with the California Energy Commission
3. Multiparty Agreement with Everport Terminal Services Inc., BYD Motors Inc., and Taylor Machine Works, Inc.

FIS Approval: MB (initials)
CA Approval: MB (initials)


CHRISTOPHER CANNON
Director of Environmental Management


MICHAEL DiBERNARDO
Deputy Executive Director

APPROVED:


FOR
EUGENE D. SEROKA
Executive Director

CC:yo
AUTHOR: C. ATKINS

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