


BOARD MEETING DATE: October 7, 2016

AGENDA NO. 3

PROPOSAL: Recognize Revenue, Transfer Funds, and Execute Contract to Develop and Demonstrate Fuel Cell Heavy-Duty Truck 

SYNOPSIS: On December 5, 2014, the Board recognized revenue from the DOE for the Zero Emission Cargo Transport project to develop and demonstrate zero emission drayage trucks. International Rectifier, one of the technology providers, has decided not to continue with the project, and staff and DOE have invited Hydrogenics USA Inc. to join the project and develop a fuel cell range-extended drayage truck. These actions are to recognize revenue from the Ports' Technology Advancement Program (TAP) up to \$283,495, transfer \$283,495 as a temporary loan from the Clean Fuels Fund to the Advanced Technology Goods Movement Fund, and execute a contract with Hydrogenics USA Inc. to develop a fuel cell range-extended drayage truck in an amount not to exceed \$1,109,279, comprising the \$283,495 from the Ports' TAP and \$825,784 from DOE funds previously awarded to International Rectifier.

COMMITTEE: Technology, September 16, 2016; Recommended for Approval

RECOMMENDED ACTIONS:

1. Recognize, upon receipt, up to \$283,495 from the Ports' Technology Advancement Program into the Advanced Technology Goods Movement Fund (61) for development and demonstration of zero emission drayage trucks;
2. Transfer \$283,495 as a temporary loan from the Clean Fuels Fund (31) into the Advanced Technology Goods Movement Fund (61); and
3. Authorize the Chairman to execute a contract with Hydrogenics USA Inc. to develop a fuel cell range-extended drayage truck in an amount not to exceed \$1,109,279 from the Advanced Technology Goods Movement Fund (61), comprising \$283,495 from the Ports' TAP funding and \$825,784 from DOE funds previously awarded to International Rectifier.

Wayne Natri
Acting Executive Officer

Background

On June 11, 2014, SCAQMD submitted a proposal under DOE's Zero Emission Cargo Transport (ZECT) Demonstration Funding Opportunity Announcement. The proposal consisted of two technologies for goods movement operations between the Ports of Los Angeles and Long Beach near dock rail yards and warehouses: 1) development and demonstration of zero emission fuel cell range extended electric drayage trucks; and 2) development and demonstration of hybrid electric drayage trucks. On August 21, 2014, the DOE notified SCAQMD that the project proposal to develop and demonstrate zero emission drayage trucks had been selected for an award of \$10,000,000. On December 5, 2014, the Board recognized revenue from the DOE for the ZECT project and to develop and demonstrate zero emission drayage trucks.

International Rectifier had planned to develop one plug-in hybrid-electric truck and an ultra-fast charger for use in or near the ports as part of the project. In August 2016 Infineon Technologies AG and International Rectifier Corporation announced that Infineon would acquire International Rectifier. After the acquisition, Infineon declined to continue developing the truck as part of the ZECT project. The departure of International Rectifier left \$825,784 in stranded DOE funds.

Proposal

Hydrogenics USA Inc proposes to build and demonstrate a fuel cell range-extended Class 8 truck for the ZECT project. The truck design and development effort is fully funded under a CEC truck project while the electric drive system design of the truck will be duplicated for the ZECT Project. The fuel cell drayage truck will be demonstrated for 24 months in the Ports of Los Angeles and Long Beach. Hydrogenics will provide necessary support throughout the demonstration period, quarterly performance reports to SCAQMD and a final report at the end of the project. The project is expected to be three years in duration, including one year of truck production and two years of demonstration. These actions are to recognize up to \$283,495 from the Ports' TAP and execute a contract with Hydrogenics USA Inc. to develop a fuel cell range-extended drayage truck for an amount not to exceed \$1,109,279, comprising of \$283,495 from the Port's TAP and \$825,784 in DOE funds.

Sole Source Justification

Section VIII.B.3. of the Procurement Policy and Procedure identifies provisions under which a sole source award may be justified when funded in whole or in part with federal funds. The request for a sole source award for this project is made under the provisions B.3.c: the awarding federal agency authorizes noncompetitive proposals. Further, the Procurement Policy and Procedure identifies four provisions for the justification of a sole source award when non-federal funds are being awarded. This award is justified under paragraph B.2.d.: Other circumstances exist which in the determination of the Executive Officer require such waiver in the best interest of the SCAQMD.

Specifically, these circumstances are: B.2.d.(1) Projects involving cost-sharing by multiple sponsors. Hydrogenics was approved by DOE for this zero emission cargo

transport demonstration project and have extensive knowledge and experience in advanced electric, fuel cell and hybrid vehicle technologies that are needed to successfully complete this project. This demonstration project will be cost-shared by the CEC, the Ports of Los Angeles and Long Beach’s TAP and Hydrogenics, as discussed in the Resource Impacts section.

Benefits to SCAQMD

Projects to support implementation of various clean fuel vehicle incentive programs are included in the *Technology Advancement Office Clean Fuels Program 2016 Plan Update* under the categories of “Electric/Hybrid Technologies & Infrastructure” and “Hydrogen and Fuel Cell Technologies and Infrastructure”. This project is to develop and demonstrate zero emission drayage trucks with fuel cell range-extended technologies for goods movement operations. Successful demonstration of such projects will contribute to the attainment of clean air standards in the South Coast Air Basin by eliminating PM and NOx emissions from replaced diesel drayage trucks.

Resource Impacts

The Ports’ TAP funds of \$283,495 will be recognized into the Advanced Technology Goods Movement Fund (61). The DOE funds of \$825,784 from the Advanced Technology Goods Movement Fund (61) are being reallocated to the Hydrogenics project with DOE’s approval. The contract with Hydrogenics will not exceed \$1,109,279.

The total cost for this proposed project is \$2,433,553, comprised of the following project partner contributions:

Project Partner	Funding Amount	Percent
CEC	\$983,858	40
*DOE	\$825,784	34
Hydrogenics (<i>in-kind</i>)	\$340,416	14
*Ports’ TAP	\$283,495	12
Total	\$2,433,553	100%

*revenue totaling \$1,109,279 received as pass-through