BOARD MEETING DATE: June 4, 2021 AGENDA NO. 4

PROPOSAL: Recognize Revenue and Execute Contract for Class 8 Fuel Cell Truck Demonstration

SYNOPSIS: South Coast AQMD has been awarded $500,000 from U.S. EPA to develop and demonstrate two class 8 hydrogen fuel cell trucks with Hyundai Motor Company. These actions are to recognize revenue, upon receipt, of $500,000 from the U.S. EPA FY21 Clean Air Technology Initiative Program into the Clean Fuels Program Fund (31) and execute a contract with Hyundai Motor Company in an amount not to exceed $500,000 from the Clean Fuels Program Fund (31).

COMMITTEE: Technology, May 21, 2021; Recommended for Approval

RECOMMENDED ACTIONS:

1. Recognize revenue, upon receipt, of $500,000 from the U.S. EPA FY21 Clean Air Technology Initiative Program into the Clean Fuels Program Fund (31); and
2. Authorize the Chairman to execute a contract with Hyundai Motor Company to develop and demonstrate two class 8 hydrogen fuel cell trucks in an amount not to exceed $500,000 from the Clean Fuels Fund (31).

Wayne Nastri
Executive Officer

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Background

In the United States, 40 percent of Class 8 trucks travel between 250 and 750 average miles per workday (261 days per year), representing 70 percent of total tractor trailer mileage. Fuel-cell technology is an attractive solution for this sector because of hydrogen's high energy storage density and fast refueling times, enabling longer range and higher vehicle utilization. Hyundai Motor Company (HMC) is in the process of delivering 50 Class 8 fuel cell trucks to fleets for operation in the Swiss Alps where they

will replace pre-commercial versions that have been in operation there for over a year. The project that HMC is proposing in the South Coast Air Basin will demonstrate advancements in fuel cell technology (over the current Hyundai European truck, and other OEM prototypes) in the United States with a redesigned Class 8 day-cab tractor.

Proposal
For this project, HMC is proposing to demonstrate two day-cab tractors with their fleet partner and their commercial operations in existing goods movement routes to validate fuel cell technology's ability to meet the real-world needs of long-haul freight movement in the United States. The first phase of the project will focus on deployment preparation where FirstElement Fuel, the project partner responsible for infrastructure, will retrofit existing fueling stations. HMC engineers will convert the XCIENT 6x2 base vehicle into a day cab, cab-over Class 8 tractor. Final vehicle assembly will occur in Jeon-Ju, Korea. At the end of this first budget period, HMC will deliver two Class 8 fuel cell trucks to the fleet's Riverside facility.

The trucks will be demonstrated for 12 months in a variety of routes to fully utilize up to 500-mile range. This deployment will allow the project team to gain valuable insight through real world operations in a range of driving conditions including significant grades and climates including extreme heat, cold and snow conditions. During the demonstration, truck maintenance will be supported by Ryder System, Inc.

This action is to authorize the Chairman to recognize revenue, upon receipt, of $500,000 from the U.S. EPA FY21 Clean Air Technology Initiative Program into the Clean Fuels Program Fund (31) and execute a contract with HMC in an amount not to exceed $500,000 from the Clean Fuels Program Fund (31).

Sole Source Justification
Section VIII.B.3 of the Procurement Policy and Procedure identifies four major provisions under which contracts funded in whole or in part with federal funds may be made as a sole source award. This request for sole source award is made under provision B.3.c, which states the awarding federal agency authorizes noncompetitive proposals; the project is being funded by U.S. EPA. Sole source is also justified under B.2.c.(2) because the project involves the use of proprietary technology and B.2.c.(3) because the desired service is only available from the sole source based on ownership of key assets required for project performance.

Benefits to South Coast AQMD
Projects to support development and demonstration of zero emissions drayage truck technologies are included in the Technology Advancement Office Clean Fuels Program 2021 Plan Update under the categories of "Hydrogen and Fuel Cell Technologies and Infrastructure." This project is to develop and demonstrate zero emissions fuel cell drayage truck 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 U.S. EPA FY21 Clean Air Technology Initiative Program awarded $500,000 to develop and demonstrate two class 8 hydrogen fuel cell trucks with HMC. The proposed project budget of $2,832,566 includes $500,000 from U.S. EPA and $2,332,566 in cost-share from HMC.

Proposed Partners	Funding Amount	% of Project
HMC (cost share)	$2,332,566	83
U.S. EPA	$500,000	17
Total	**$2,832,566**	**100**