

BOARD MEETING DATE: June 5, 2020

AGENDA NO. 3

PROPOSAL: Execute Contract for Commercial Experience Demonstration of Heavy-Duty Electric Trucks

SYNOPSIS: In July 2018, the Board approved more than \$13 million in funding with \$2.5 million in cost-share from U.S. EPA and the San Pedro Bay Ports for Daimler Trucks North America LLC (DTNA) to develop and demonstrate 20 heavy-duty electric trucks and fast charge infrastructure with two fleets in the South Coast region. In July 2019, the Board recognized \$4.177 million in U.S. EPA Targeted Airshed Grant funds and approved a \$4.01 million contract with DTNA for a second project to build and deploy 35 commercial-ready heavy-duty battery electric trucks and fast charge infrastructure for delivery fleets in the South Coast region. Currently, DTNA proposes to develop a Commercial Experience project to demonstrate heavy-duty battery electric trucks with 12-18 fleets to accelerate customer orders for commercial product. This action is to execute a contract with DTNA to demonstrate up to eight heavy-duty battery electric trucks and transportable fast-charging infrastructure in an amount not to exceed \$1,000,000 from the Clean Fuels Program Fund (31).

COMMITTEE: Technology, May 15, 2020; Recommended for Approval

RECOMMENDED ACTION:

Authorize the Chairman to execute a contract with DTNA to develop and demonstrate up to eight heavy-duty battery electric trucks and transportable fast-charging infrastructure in an amount not to exceed \$1,000,000 from the Clean Fuels Program Fund (31).

Wayne Nastri
Executive Officer

Background

Daimler Trucks North America LLC (DTNA), the world's leader in heavy-duty truck sales, and the South Coast AQMD are working collaboratively on two heavy-duty battery electric truck projects to develop, demonstrate and deploy Class 6 and Class 8 vehicles in the South Coast Air Basin. In July 2018, the Board approved more than \$13 million in funding with \$2.5 million in cost-share from U.S. EPA and the San Pedro Bay Ports for DTNA to develop and demonstrate 20 heavy-duty battery electric trucks and fast-charge infrastructure with two fleet operators in the South Coast Air Basin. This project, which is expected to continue throughout 2021, has resulted in the commissioning of fifteen Class 8 eCascadia models, five Class 6 eM2 trucks and more than 2.5 MW in total DC fast-charging infrastructure. The two demonstration partners under this project have collectively accrued over 100,000 miles on these vehicles.

In July 2019, the Board recognized \$4,177,083 in U.S. EPA Targeted Airshed Grant funds for DTNA to build and deploy 35 commercial-ready Class 6 and Class 8 battery electric trucks and fast-charge infrastructure for demonstration and long-term deployment by fleets in the South Coast region. This project includes anticipated cost-share of \$5 million from CARB's Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP) and \$240,000 from SCE's Charge Ready Transport funds. The vehicles to be developed and deployed by DTNA in this project represent DTNA's first commercial-ready heavy-duty battery electric vehicles, including refrigerated food transportation applications, and will continue to receive DTNA support following the demonstration efforts. The first of these commercial-ready vehicles is anticipated for deployment toward the end 2021. Fleet operators participating in this project are expected to continue operating these vehicles beyond the project term.

Proposal

DTNA currently proposes to develop a Commercial Experience (CX) project to build six Class 8 eCascadia and two Class 6 eM2 electric trucks and demonstrate them with 12-18 fleets as a part of DTNA's CX Fleet. The Bay Area AQMD is also participating in this project under a separate contract with DTNA, which will support the demonstration of these battery electric trucks in the Bay Area.

These eight battery electric trucks will be delivered to a select group of fleets participating in this project under separate contracts with DTNA, which will support the demonstration of these 12-18 DTNA customers, representing some of the largest trucking companies in North America, for short-term, real-world demonstrations lasting between two to nine months per demonstration. The CX Fleet project is intended to accelerate scaled volume orders of commercially viable zero emission trucks within the next two to three years. Several of the largest fleet operators in North America will be able to experience first-hand, the technical, operational and economic viability of zero emission trucks in their own daily operations.

Charging of the CX Fleet trucks will be accomplished using an innovative, skid-mounted, transportable DC fast-charging system with a minimum charging capacity of 62.5 kW. DTNA is working to secure up to \$500,000 from SCE and PG&E to assist in the cofunding of the innovative transportable heavy-duty DC chargers. DTNA expects that this transportable fast-charging approach will assist in the execution of the CX Fleet project concept and will showcase a new, pioneering way to facilitate early adoption of medium- and heavy-duty electric fleet vehicles.

Sole Source Justification

Section VIII.B.2 of the Procurement Policy and Procedure identifies four major provisions under which a sole source award may be justified. The request for a sole source award for this project is made under provision B.2.d.(1): Projects involving cost-sharing by multiple sponsors. This development and demonstration project will be cost-shared by Bay Area AQMD and DTNA. Additional cost-sharing is actively being sought, including cofunding from SCE and PG&E.

Benefits to South Coast AQMD

South Coast AQMD's Clean Fuels Program supports development and demonstration of zero emission electric transportation powered by batteries for goods movement technologies. The South Coast AQMD also supports a number of activities directed toward the commercialization of electric vehicles and associated infrastructure. This proposed project is included in the *Technology Advancement Office Clean Fuels Program 2020 Plan Update* under “Develop and Demonstrate Medium- and Heavy-Duty On-Road and Off-Road Battery Electric and Hybrid Technologies” and “Develop and Demonstrate Electric Charging Infrastructure.”

Resource Impacts

The total cost for the Daimler CX Project is approximately \$6.8 million. South Coast AQMD's contract with DTNA will not exceed \$1 million from the Clean Fuels Program Fund (31). Bay Area AQMD is expected to contribute \$322,500 through a direct contract with DTNA. The funding sources and partners for this project are identified in the following table:

Funding Source	Amount	Percent
DTNA	\$4,919,500	73
Bay Area AQMD	\$322,500	5
SCE and PG&E*	\$500,000	7
South Coast AQMD (<i>requested</i>)	\$1,000,000	15
Total	\$6,742,000	100

*Cofunding from SCE and PG&E are not yet confirmed; DTNA has committed to the full cofunding of \$5,419,500

Sufficient funds are available in the Clean Fuels Program Fund (31). The Clean Fuels Fund was established as a special revenue fund resulting from the state-mandated Clean Fuels Program. The Clean Fuels Program, under Health and Safety Code Sections 40448.5 and 40512 and Vehicle Code Section 9250.11, establishes mechanisms to collect revenues from mobile sources to support projects to increase the utilization of clean fuels, including the development of the necessary advanced enabling technologies. Funds collected from motor vehicles are restricted, by statute, to be used for projects and program activities related to mobile sources that support the objectives of the Clean Fuels Program.