

BOARD MEETING DATE April 2, 2021

AGENDA NO. 3

PROPOSAL: Amend Contract for Development of Battery Powered Locomotive Project

SYNOPSIS: In June 2016, the Board approved a contract with VeRail Technologies (VeRail) to develop a natural gas locomotive using U.S. EPA Clean Air Technology Initiative (CATI) funds. VeRail has since dissolved leaving \$90,825 in CATI funds unused. Subsequently, in 2017, the Board approved \$210,000 in CATI funds for a project with Rail Propulsion Systems (RPS) to develop a battery powered switcher locomotive. The U.S. EPA has since approved the reallocation of unused funds towards further enhancements to the RPS project. This action is to amend the contract with RPS to further the development of a battery electric switcher locomotive in an amount not to exceed \$90,825 of unused U.S. EPA CATI funds from the Clean Fuels Program Fund (31).

COMMITTEE: Technology, March 19, 2021; Recommended for Approval

RECOMMENDED ACTION:

Authorize the Executive Officer to amend the RPS contract to further enhance the battery electric switcher locomotive project to add \$90,825 of unused U.S. EPA CATI funds from the Clean Fuels Program Fund (31).

Wayne Natri
Executive Officer

MMM:NB:JI:JL

Background

The Clean Air Technology Initiative (CATI) fund was established by the U.S. EPA, CARB, San Joaquin Valley Air Pollution Control District and South Coast AQMD to identify and implement emission reduction projects where residents are

disproportionately affected by emissions of diesel exhaust from the goods movement corridors and from diesel activities at the Ports, warehouses and rail yards.

In June 2016, the Board recognized \$500,000 in CATI funds into the Clean Fuels Program Fund for a \$5.1 million project with VeRail technologies for development and demonstration of an ultra-low emission natural gas switcher locomotive. In 2019, VeRail dissolved as an entity and the technology was divided among other industrial ventures outside of the rail project, with remaining \$90,825 of CATI funds. In 2017, the Board recognized \$500,000 into the Clean Fuels Program Fund for two projects under the CATI-FY-2017 grant program. \$210,000 of the CATI-FY-17 funds was awarded to RPS for the development of a battery powered switcher locomotive.

RPS is a leading contributor to the proof of concept battery electric locomotive project technology. RPS has developed and is currently demonstrating the zero emission switcher locomotive in Anaheim, with project partners Coast Rail Services, EV Grid, VACON and Tractive Power to demonstrate this technology. The initial demonstration is nearly complete, highlighting the need for battery and controller enhancements to bring it closer to commercial use.

As a result of the discontinued project listed above, there is currently \$90,825 total remaining CATI funds, with U.S. EPA concurrence to reallocate the remaining funds to upgrade the RPS zero emission switcher locomotive.

Proposal

For the proposed project, with additional funding of \$90,825 from unused CATI funds, RPS plans the following: 1) upgrade the controls for in service Federal Railroad Administration requirements; 2) modify and add additional battery pack and rack system as well as electronic control systems; and 3) continue validation and durability testing to confirm the robustness of their design.

The optimized battery electric locomotive will replace an unregulated diesel locomotive in a typical switcher operation at the Coast Rail Services rail yard in Anaheim California.

Sole Source Justification

Section VIII.B.3 of the Procurement Policy and Procedure identifies four provisions by which sole source awards may be justified when contracts are funded in whole or in part by federal funds. This award is made under provision B.3.c: The awarding federal agency authorizes noncompetition proposals. U.S. EPA deemed the proposed award to RPS to be a sub-award and does not require a competitive solicitation.

Benefits to South Coast AQMD

The proposed project supports the implementation of zero emission off-road technology that will directly reduce NOx emissions from switcher locomotives. In addition, the development and successful deployment of these zero emission switcher locomotives will promote their acceptance by railroads and facilitate their deployment at rail yards in the South Coast Air Basin, as well as assist the South Coast AQMD to attain its clean air goals. The project is included in the *Technology Advancement Office Clean Fuels Program 2019 Plan Update* under the categories “Electric/Hybrid Technologies & Infrastructure” and “Emission Control Technologies.”

Resource Impacts

The contract with RPS will be amended upon approval of up to \$90,825 in unused U.S. EPA CATI funds. Total project cost will be revised to \$1,097,825 as detailed in the table below.

Funding Source	Original Funding Amount	Additional Funding	Total Project Amount
U.S. EPA	\$210,000	\$90,825	\$300,825
Rail Propulsion Systems (in-kind)	\$715,000	\$82,000	\$797,000
Total	\$925,000	\$172,825	\$1,097,825

Sufficient funds are available from the Clean Fuels Program Fund (31), 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.