

BOARD MEETING DATE: March 1, 2013

AGENDA NO. 6

PROPOSAL: Execute Contract for School Bus Retrofit Project

SYNOPSIS: The Board awarded a contract to Chaffey Joint Union High School District (Chaffey) to retrofit 19 diesel-powered school buses with Cleaire Horizon Diesel Particulate Filters (DPFs) under the Lower Emission School Bus Program. One year following the DPF installations, all of the buses equipped with hydraulic electronic unit injector (HEUI) engines began to exhibit engine problems due to high backpressure caused by plugged DPFs and frequent engine injector seal failures. This action is to execute a contract with Chaffey to retrofit two diesel school buses powered by HEUI engines with an alternative DPF technology at a cost not to exceed \$30,000 from the Clean Fuels Fund (31).

COMMITTEE: Technology, February 15, 2013, Recommended for Approval

**RECOMMENDED ACTIONS:**

Authorize the Executive Officer to execute a contract with Chaffey Joint Union High School District to retrofit two diesel school buses powered by HEUI engines with a diesel particulate filter in an amount not to exceed \$30,000 from the Clean Fuels Fund (31).

Barry R. Wallerstein, D.Env.  
Executive Officer

CSL:HH:RP:AAO:RC

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**Background**

In 2006, the Board awarded a contract to Chaffey Joint Union High School District (Chaffey) to retrofit 19 diesel school buses with Cleaire Horizon diesel particulate filters (DPF) under the Lower Emission School Bus Program. On May 12, 2012, Chaffey reported that one year following the DPF installations, all of the retrofitted buses powered by HEUI engines began to exhibit frequent injector seal failures and other engine-related problems due to high backpressure caused by undersized or plugged DPFs. Because the HEUI system uses high pressure engine oil to control the injection

of diesel fuel into the engine, a faulty injector seal will allow engine oil to flow-back to the fuel tank and contaminate the diesel fuel. Contaminated diesel fuel burned in an engine produces excessive soot and ash which accumulates in the filter and eventually plugs the DPF. High backpressure may aggravate injector seal failures. Chaffey believes that the Horizon DPF is not suitable for school buses powered by HEUI engines and requested financial assistance to replace the Horizon DPFs on all the buses with alternative DPFs for school bus applications.

For the past six months, SCAQMD and CARB staff have worked with Chaffey to assess causes and find remedies to the engine problems. As a result of this effort, an alternative DPF technology that has been used for non-school bus diesel vehicles powered by HEUI engines has been identified. Prior to replacing the Horizon DPFs on all the buses, staff proposes to replace Horizon DPFs on only two buses with the alternative DPF technology and assess the technology's performance for six months. After the six-month assessment, staff may recommend Board consideration of cofunding the retrofit of the remaining school buses.

### **Proposal**

This action is to execute a sole source contract with Chaffey Joint Union High School District to retrofit two diesel school buses powered by HEUI engines with a DPF in an amount not to exceed \$30,000. The scope of the project includes procurement and installation of the alternative DPF technology on two diesel school buses powered by HEUI engines to assess the performance of the technology for six months.

### **Benefits to SCAQMD**

This project will ensure continued emission reduction benefit of DPF retrofits under the Lower-Emission School Bus Program.

### **Sole Source Justification**

Section VIII.B.2 of the Procurement Policy and Procedure identifies provisions by which a sole source award may be justified. The request for a sole source award is made under provision B.2.d-: Other circumstances exist which in the determination of the Executive Officer require such waiver in the best interest of the SCAQMD, B.2.c(3): the contractor has ownership of key assets required for project performance, and B.2.d(1): projects involving cost sharing by multiple sponsors.

Chaffey has ownership of the school buses and will select, install, and evaluate the alternative DPF as part of its duties of maintaining and operating the school buses. In addition, the proposed project is cost-shared by Chaffey as shown in the following section.

**Resource Impacts**

The total project cost is estimated to be \$45,000, of which SCAQMD's cost-share shall not exceed \$30,000 from the Clean Fuels Fund (31). Chaffey will provide the remaining \$15,000 in in-kind contribution.

Sufficient funds are available from the Clean Fuels 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