

BOARD MEETING DATE: July 12, 2019

AGENDA NO. 6

PROPOSAL: Amend Awards for Alternative Fuel School Bus Replacement Program

SYNOPSIS: In May 2018, the Board approved awards to 42 school districts for replacement of pre-1994 diesel school buses with new, optional low NOx standard engine alternative fuel buses. Several awards were based on a propane-powered engine that was eventually not commercialized. The school districts that had selected that technology were presented with the currently available near-zero and zero technology options. For those school districts that selected a lower emitting bus option compared to the original award, additional grant funds would be needed to offset the higher cost of the buses. This action is to amend awards for 15 school districts to purchase cleaner technology buses in an amount not to exceed \$3,206,500 from the Carl Moyer Program AB 923 Special Revenue Fund (80).

COMMITTEE: Technology, June 21, 2019; Recommended for Approval

RECOMMENDED ACTIONS:

1. Amend awards for the following seven school districts to purchase cleaner technology school buses, either CNG or battery electric, adding an additional amount not to exceed \$3,106,500, assuming all school districts choose the battery-electric option, from the Carl Moyer Program AB 923 Special Revenue Fund (80), as follows:
 - a) Anaheim Elementary School District for 9 school buses augmenting the original award in an amount up to \$490,500;
 - b) Anaheim Union High School District for 15 school buses augmenting the original award in an amount up to \$817,500;
 - c) Garden Grove Unified School District for 15 school buses augmenting the original award in an amount up to \$817,500;
 - d) La Habra City School District for 1 school bus augmenting the original award in an amount up to \$54,500;
 - e) Ocean View School District for 10 school buses augmenting the original award in an amount up to \$545,000;

- f) Redlands Unified School District for 6 school buses augmenting the original award in an amount up to \$327,000; and
 - g) West Covina Unified School District for 1 school bus augmenting the original award in an amount up to \$54,500.
2. Amend awards for the following nine school districts that are opting for the cleanest propane buses, adding an additional amount not to exceed \$100,000 from the Carl Moyer Program AB 923 Special Revenue Fund (80), as follows:
- a) Baldwin Park Unified School District for 4 school buses augmenting the original award in an amount up to \$16,000;
 - b) Fullerton School District for 2 school buses augmenting the original award in an amount up to \$8,000;
 - c) Inglewood Unified School District for 4 school buses augmenting the original award in an amount up to \$16,000;
 - d) Newhall School District for 1 school bus augmenting the original award in an amount up to \$4,000;
 - e) Nuview Union School District for 3 school buses augmenting the original award in an amount up to \$12,000;
 - f) Savanna School District for 1 school bus augmenting the original award in an amount up to \$4,000;
 - g) Redlands Unified School District for 5 school buses augmenting the original award in an amount up to \$20,000;
 - h) Sulphur Springs Unified School District for 3 school buses augmenting the original award in an amount up to \$12,000; and
 - i) Westminster Unified School District for 2 school buses augmenting the original award in an amount up to \$8,000.

Wayne Natri
Executive Officer

MMM:NB:VAW:VY

Background

Since the commencement of the Lower-Emission School Bus Program in 2001, South Coast AQMD has provided over \$280 million in state and local funds for the replacement of over 1,600 highly polluting school buses with alternative fuel buses and retrofit of 3,400 newer diesel school buses with particulate traps.

In October 2017, the Board issued a Program Announcement to solicit applications for replacement of pre-1994 diesel school buses with alternative fuel school buses. In May 2018, the Board approved awards to 42 school districts to replace 206 pre-1994 diesel school buses with new, near-zero and optional low NOx standard engine alternative fuel buses. Of these school districts, 15 had selected a lower emission propane engine that

was ultimately not commercialized. The original awards for these 15 school districts provided \$10,291,000 in funding toward 82 new buses.

Over the past year, several lower emitting school bus options were commercialized, including propane buses from one supplier that meet the 0.02 g/bhp-hr, NO_x standard as well as battery electric buses from several suppliers.

The school districts were presented with the currently available near-zero and zero technology options. For those school districts that selected a lower emitting bus option compared to the original award, additional grant funds would be needed to offset the higher cost of the buses.

Proposal

Based on the feedback provided by the school districts, staff proposes to amend awards for 15 school districts that have opted to purchase 82 zero emissions, battery-electric school buses or propane/CNG buses certified to meet the near-zero, optional low NO_x standard of 0.02 g/bhp-hr. This action is to amend awards for these 15 school districts to purchase the cleaner technology buses by adding an additional \$3,206,500 to the initial award approved by the Board in May 2018 (see attached Table 3).

It is anticipated that CARB, through the Hybrid and Zero Emission Truck and Bus Voucher Incentive Project (HVIP), will cofund the purchase of the buses by providing \$220,000 for each electric school bus and \$45,000 for each CNG school bus meeting the optional low NO_x standard. The amended awards, in combination with the HVIP funds, will provide up to \$400,000 for each electric school bus, up to \$196,500 for a Type D CNG bus and \$129,500, which is an increase of \$4,000 per bus, for a Type C propane bus, meeting the optional low NO_x standard of 0.02 g/bhp-hr. Tables 1 and 2 specify the proposed increase for each school district for the propane option and the CNG or electric option, respectively. The amount of funds previously awarded by the South Coast AQMD for infrastructure and the minimum local match funds to be provided by the school districts will remain the same. School districts will still have to pay for any discretionary options they may choose to include on each bus and permanently destroy the older diesel buses by licensed dismantlers.

Benefits to South Coast AQMD

The successful implementation of the Lower-Emission School Bus Replacement Program will reduce NO_x and PM, providing a less polluting mode of transportation for school children. In addition, it will reduce air pollution in low-income, high-diesel and high-PM₁₀ exposure areas as well as advance the objectives of the Environmental Justice and Children's Health Initiatives adopted by the Board. Specifically, the 0.02 g/bhp-hr CNG/propane buses are near-zero technologies that reduce NO_x emissions by approximately 60-90% over the 0.05 g/bhp-hr option originally chosen by school districts, and the electric bus option is zero emission technology.

Resource Impacts

Total additional funding for the amended awards will not exceed \$3,206,500 from the Carl Moyer Program AB 923 Special Revenue Fund (80).

Attachments

Table 1-Proposed Amended Awards-Propane Option

Table 2-Proposed Amended Awards-CNG or Electric Option

Table 3-Amended Awards for Pre-1994 School Bus Replacements

Table 1
Proposed Amended Awards –Propane Option

School District	No. of Buses	Additional Funds
Baldwin Park USD	4	\$16,000
Fullerton SD	2	\$8,000
Inglewood USD	4	\$16,000
Newhall SD	1	\$4,000
Nuview Union SD	3	\$12,000
Redlands USD	5	\$20,000
Savanna SD	1	\$4,000
Sulphur Springs USD	3	\$12,000
Westminster USD	2	\$8,000
TOTAL	25	\$100,000

Table 2
Proposed Amended Awards – CNG or Electric Option

School District	No. of Buses	Additional Funds (CNG Option)	Additional Funds (Electric Option)
Anaheim Elementary SD	9	\$234,000	\$490,500
Anaheim Union HSD	15	\$390,000	\$817,500
Garden Grove USD	15	\$390,000	\$817,500
La Habra City SD	1	\$26,000	\$54,500
Ocean View SD	10	\$260,000	\$545,000
Redlands USD	6	\$156,000	\$327,000
West Covina USD	1	\$26,000	\$54,500
TOTAL	57	\$1,482,000	\$3,106,500

Table 3
Amended Awards for Pre-1994 School Bus Replacements

School District	Initial Bus Awards			Recommended Number of Buses	Maximum Allowable Funding			Anticipated HVIP Funds		Maximum Additional AB 923 Funding Needed ³
	Number of Buses	Fuel Type	AB 923 Funds (Up to \$125,500/Propane Bus) ¹		Propane \$129,500/Bus (Total)	CNG \$196,500/Bus (Total)	Electric \$400,000/Bus (Total)	CNG	Electric	
								(\$45,000/Bus)	(\$220,000/Bus)	
Anaheim Elementary SD	9	Propane	\$1,129,500	9		\$1,768,500	\$3,600,000	\$405,000	\$1,980,000	\$490,500
Anaheim Union HSD	15	Propane	\$1,882,500	15		\$2,947,500	\$6,000,000	\$675,000	\$3,300,000	\$817,500
Baldwin Park USD	4	Propane	\$502,000	4	\$518,000	-	-	-	-	\$16,000
Fullerton SD	2	Propane	\$251,000	2	\$259,000	-	-	-	-	\$8,000
Garden Grove USD	15	Propane	\$1,882,500	15		\$2,947,500	\$6,000,000	\$675,000	\$3,300,000	\$817,500
Inglewood USD	4	Propane	\$502,000	4	\$518,000	-	-	-	-	\$16,000
La Habra City SD	1	Propane	\$125,500	1		\$196,500	\$400,000	\$45,000	\$220,000	\$54,500
Newhall SD	1	Propane	\$125,500	1	\$129,500	-	-	-	-	\$4,000
Nuvview Union SD	3	Propane	\$376,500	3	\$388,500	-	-	-	-	\$12,000
Ocean View SD	10	Propane	\$1,255,000	10		\$1,965,000	\$4,000,000	\$450,000	\$2,200,000	\$545,000
Redlands USD	11	Propane	\$1,380,500	11 ²	\$647,500	\$1,179,000	\$2,400,000	\$270,000	\$1,320,000	\$347,000
Savanna SD	1	Propane	\$125,500	1	\$129,500	-	-	-	-	\$4,000
Sulphur Springs USD	3	Propane	\$376,500	3	\$388,500	-	-	-	-	\$12,000
Westminster USD	2	Propane	\$251,000	2	\$259,000	-	-	-	-	\$8,000
West Covina USD	1	Propane	\$125,500	1		\$196,500	\$400,000	\$45,000	\$220,000	\$54,500
Total			\$10,291,000	82	-	-	-	\$2,565,000	\$12,540,000	\$3,206,500

¹Includes fire suppression at \$4,500/bus

²Redlands USD selected 5 propane and 6 CNG buses

³Additional funding based on electric school bus option