Attachment A
Modifications to the Originally Proposed Changes (Mail-Out #MSC 15-25)
for the Carl Moyer Program Guidelines

This document contains only modifications to the proposed guidelines changes contained in Mail-Out #MSC 15-25, shown in Attachments I and II: http://www.arb.ca.gov/msprog/mailouts/msc1525/msc1525.pdf. If a section is excluded from this document, no modifications have occurred to the guidelines. Modifications shown as double-underlined text representing new language, ~~double-strikeout~~ depicting deleted language, or plain text portraying no changes.

PART 1: PROGRAM OVERVIEW AND PROJECT CRITERIA

Chapter 3: PROGRAM ADMINISTRATION

R. Yearly Report, Section R.4.(B)

(B) Air districts not claiming SIP credit for AB 923 $2 MV Fee projects must report fund expenditures for each of the ~~seven~~ six allowed uses identified in Section H.1., but are not required to report project-by-project details. However, ARB recommends that air districts make project information publicly available in the interest of transparency.

Chapter 4: ON-ROAD HEAVY-DUTY VEHICLES

A. Projects Eligible for Funding, Section A.7

7. Electric Conversion: the replacement of a fossil-fueled engine and drivetrain with an all-electric motor and drivetrain.

B. Maximum Eligible Funding Amounts, Table 4-2

Table 4-2 summarizes the maximum eligible funding for each project type. All projects are also subject to the cost-effectiveness threshold defined in Appendix G~~.~~, except for school bus projects which are subject to a unique cost-effectiveness limit as stated in Section E of this chapter.

Table 4-2
Maximum Funding Amounts for Carl Moyer On-Road Vehicle Projects

Project Type		Maximum
Non-School Bus Projects	New Vehicle Purchase	25 percent
	Repower	$30,000
	Retrofit: Highest Level particulate matter (PM)+ NOx	$20,000
	Retrofit: 2007 Engine Standard Equivalent*	$10,000
	TRU Retrofit	100 percent
	Idling Reduction Retrofit	100 percent
School Bus Projects	New Zero Emission School Bus Purchase or Electric Conversion	$400,000
	School Bus Repower ~~or Alt. Fuel Conversion~~	$70,000
	School Bus Retrofit	$20,000

* Including ARB verified selective catalytic reduction retrofits

D. Project Criteria, Section D.1(A)(4)

(4) Repower ~~or Alt. Fuel Conversion~~ Only (No Retrofit) — 7 years

D. Project Criteria, Section D.3 and D.3(A)

3. New Purchase or Electric Conversion

New purchase projects must be 30 percent cleaner than the current NOx emissions standard. Based on the 2010 NOx standard of 0.20 g/bhp-hr, engines that are certified to a NOx standard of 0.14 g/bhp-hr or lower and a PM standard of 0.01 g/bhp-hr or lower are eligible for new purchase funding. Vehicles with engines certified to a family emissions limit (FEL) are not eligible for new purchase funding. A school bus for an electric conversion project must be ten years old or newer. In the case of conversion of a school bus the CHP requires engineering plans, certified by a California licensed engineer, to be able to safety certify the school bus. All-electric school bus conversions using technologies that have already been demonstrated on school buses and that have engineering plans are eligible for funding. The maximum grant amount is 25 percent of the new purchase cost, with the exception of electric school bus purchase projects. ~~Grants~~ The maximum grant amount for new electric school bus purchase or electric conversion projects shall not exceed the lesser of the following:

(A) A ~~funding~~ cost cap of $400,000 established pursuant to the Lower-Emission School Bus Program (LESBP) (Health & Safety Code § 44299.90);

D. Project Criteria, Section D.4

4. Repower ~~or School Bus Alt. Fuel Conversion~~

A replacement engine for a repower project must be an ARB certified engine meeting emissions levels of 0.20 g/bhp-hr NOx and 0.01 g/bhp-hr PM or lower for school bus repower projects, or 0.50 g/bhp-hr NOx and 0.01 g/bhp-hr PM or lower for other repower projects. The maximum grant amount for school bus repower ~~or alt. fuel conversion~~ projects shall not exceed the ~~funding~~ cost cap of $70,000 established pursuant to the LESBP (Health & Safety Code § 44299.90). The maximum grant amount for other repower projects is $30,000.

However, due to technological constraints presented with the limited feasibility of newer engines with advanced emissions control equipment fitting into older chassis and maintaining durability, single vehicle repower~~,~~ ~~alt. fuel conversion~~, and electric conversion projects are not eligible for Moyer funding, except as described below.

E. Funding Eligibility for Projects Subject to In-Use Regulations, Section E.4(A) and (B)

4. School Buses

(A) School buses are eligible for Carl Moyer Program funding if they meet the general program criteria above. School bus projects do not have a fleet size limit, and can be funded up to the maximum grant amounts shown in Table 4-2. ~~Conventional diesel or alternative fuel~~ Internal combustion engine school buses are eligible only for NOx and ROG reductions. Zero emission school bus projects including new purchases, replacements, repowers, and electric ~~or alt. fuel~~ conversions are eligible for NOx, ROG, and PM reductions.

(B) The cost-effectiveness ~~values~~ limit for school bus projects ~~are~~ is $276,230/ton. This cost-effectiveness limit allows consistency with the LESBP cost cap for typical zero-emission school bus replacement projects. ~~$896,000/ton for zero emission school bus new purchase or electric conversion projects, or alt. fuel conversion projects. These~~ This cost-effectiveness ~~estimates values are~~ is based on average school bus operating usage from a limited number of previously-funded Carl Moyer school bus projects and the LESBP cost caps. This cost-effectiveness limit may reduce some school bus project grants to be lower than the LESBP cost caps.

Chapter 5: ON-ROAD HEAVY-DUTY VEHICLES FLEET MODERNIZATION

B. Maximum Eligible Funding Amounts, Table 5-1

Table 5-1 summarizes the maximum eligible funding for each fleet modernization project. All projects are also subject to the cost-effectiveness threshold defined in Appendix G~~.~~, except for school bus projects which are subject to a unique cost-effectiveness limit as stated in Chapter 4: On-Road Heavy-Duty Vehicles.

Table 5-1
Maximum Funding Amounts for Fleet Modernization Projects

Oxides of Nitrogen (NOx) Family Emission Limit or NOx emission standard[1] grams per brake horsepower hour (g/bhp-hr)	Maximum[2]
0.20 g/bhp-hr (Heavy Heavy-Duty (HHD))	$60,000
0.50 g/bhp-hr (HHD)	$50,000
1.20 g/bhp-hr (HHD)	$40,000
0.20 g/bhp-hr (Medium Heavy-Duty (MHD))	$40,000
0.50 g/bhp-hr (MHD)	$30,000
1.20 g/bhp-hr (MHD)	$25,000
0.20 g/bhp-hr (Light Heavy Duty (LHD))	$30,000
0.50 g/bhp-hr LHD	$20,000
1.20 g/bhp-hr LHD	$15,000
0.20 g/bhp-hr New ~~Diesel or Alternative Fuel~~ Internal Combustion Engine School Bus	$165,000
New Zero Emission School Bus	$400,000
New School Bus Certified to Optional Low-NOx Standards	$220,000
New Hybrid School Bus	$220,000

[1] Applies to new or used vehicles unless otherwise noted.
[2] For fleets of three or fewer vehicles, the funding amount cannot exceed 80 percent (80%) of vehicle value for used replacement vehicle or 80% of invoice for new replacement vehicle. For fleets with more than three vehicles, the funding amount cannot exceed 50 percent (50%) of the vehicle value for used replacement vehicles or 50% of the invoice for new replacement vehicles. This limit does not apply to school bus projects. For fleets of any size, funding for school bus projects cannot exceed 100 percent (100%) invoice.

C. Project Criteria, Section C.5(C),(D) and (E)

(C) ~~Except for school buses, the~~ The grant amount will be the lesser of the following:

(1) The cost-effective value of the project based on the weighted emission benefits (school bus projects will use the cost-effectiveness limit provided in Chapter 4: On-Road Heavy-Duty Vehicles);

~~(D) Grants for school bus projects shall not exceed the amounts shown in Table 5-1. The cost-effectiveness values for school bus replacement projects are $232,000/ton for conventional diesel or alternative fuel school buses, and $409,000/ton for zero-emission school buses. These cost-effectiveness estimates are based on average school bus operating usage from a limited number of previously-funded Carl Moyer school bus projects.~~

~~(E)~~ (D) The replacement of two old, like trucks with one replacement truck is eligible for funding. Each old truck and the replacement truck must comply with all of the applicable guidelines. To determine cost-effectiveness, the annual emissions of the two old trucks are determined using emissions factors that correspond to the model year of each truck. The usage of the two old trucks is summed to establish projected replacement truck usage. The maximum allowable combined mileage is 60,000 miles per year (or 30,000 miles per truck per year). Replacement trucks are eligible for only one grant based on the combined usage – the amount of the grant award is not doubled.

APPENDICES

Appendix C: COST-EFFECTIVENESS CALCULATION METHODOLOGY

B. General Cost-Effectiveness Calculations, Section B.11

11. Calculation for projects exceeding the Cost-Effectiveness Limit

For projects that have exceeded the weighted cost-effectiveness limit, the calculation methodology below must be applied in order to ensure final grant amounts meet the cost-effectiveness limit requirement. ~~School~~ Note that school bus projects are ~~solely~~ subject to cost caps and the separate cost-effectiveness limit provided in Chapter 4. ~~, and will not use the calculation methodology below~~. The maximum grant amount is determined by multiplying the maximum allowed cost-effectiveness limit by the estimated annual emission reductions and dividing by the capital recovery factor in the C-18 formula below.

C. List of Formulas, Formula C-4

Formula C-4: Incremental Cost for School Bus Fleet Modernization Projects ($)

~~When the replacement school bus is not new, use the N.A.D.A value, where the N.A.D.A value is the retail value of the used school bus * 100 percent~~

~~When the replacement school bus is new, use~~ Dollar value on the invoice of the new school bus * 100 percent

Appendix G: COST-EFFECTIVENESS LIMIT AND CAPITAL RECOVERY FACTORS

Table G-2e

Discount Rate Factor (Available for use ~~beginning~~ April 1, 2015 through December 31, 2015)

Average Monthly rate - 2014													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average
3 year	0.78%	0.69%	0.82%	0.88%	0.83%	0.90%	0.97%	0.93%	1.05%	0.88%	0.96%	1.06%	0.90%
5 year	1.65%	1.52%	1.64%	1.70%	1.68%	1.68%	1.70%	1.63%	1.77%	1.55%	1.62%	1.64%	1.64%
7 year	2.29%	2.15%	2.23%	2.27%	2.19%	2.19%	2.17%	2.08%	2.22%	1.98%	2.03%	1.98%	2.14%
10 year	2.86%	2.71%	2.72%	2.71%	2.60%	2.60%	2.54%	2.42%	2.53%	2.30%	2.33%	2.21%	2.54%
Overall average for January – December 2014													**1.81%**