

CHAPTER 4: ON-ROAD HEAVY-DUTY VEHICLES

This chapter describes the minimum criteria and requirements for Carl Moyer Memorial Air Quality Standards Attainment Program (Moyer Program) on-road heavy-duty vehicles. All projects must also conform to the requirements in Chapter 2: General Criteria and in Chapter 3: Program Administration. Participating air quality management districts or air pollution control districts (air districts) retain the authority to impose additional requirements in order to address local concerns.

A. Projects Eligible for Funding

The California Air Resources Board (CARB) has adopted many fleet rules that affect on-road heavy-duty vehicles. Various types of projects can be incentivized to provide surplus emission reductions from on-road heavy-duty vehicles. Table 4-1 summarizes project types and categories eligible for funding as well as whether those projects may be executed through contracts or the Voucher Incentive Program (VIP or Voucher). For more information on VIP, please see the VIP Guidelines at:

<https://www.arb.ca.gov/msprog/moyer/voucher/voucher.htm>.

Table 4-1 Summary of On-Road Heavy-Duty Projects

| Project Category | Replacement | *Repower/Conversion | Execution Path |
|--------------------------------|-------------|---------------------|---------------------|
| Heavy-Duty Trucks and Buses | Yes | Yes | Voucher or Contract |
| School Bus | Yes | Yes | Contract |
| Innovative Clean Transit Buses | Yes | Yes | Contract |
| Drayage Trucks | Yes | Yes | Voucher or Contract |
| Solid Waste Vehicles | Yes | Yes | Contract |
| Public Agency/Utility Vehicles | Yes | Yes | Contract |
| Emergency Vehicles | Yes | No | Contract |

*Retrofit projects may also be eligible for funding on a case-by-case basis.

- 1. Vehicle Project Types.** Projects must include commercially available technologies certified by CARB to be cleaner than the baseline engine (unless otherwise noted). Project types and applications include:

- (A) Vehicle Replacements: The replacement of an older, dirtier vehicle with a newer, cleaner one. These projects may be funded through contracts or the VIP.
- (B) Repowers: Repowers involve the replacement of an older, dirtier engine with a newer, cleaner one. Repowers may be funded in various applications. 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, repowers with diesel engines are rare project types for trucks. Repowers with alternative fuel engines may not have the same technological constraints and may become more prevalent. To ensure durability, certain projects may require prototype testing. However, if the project has been previously completed by the manufacturer, prototype testing is not required. Air districts that wish to fund repowers must receive prototype testing results. The testing must comply with the engine manufacturer quality assurance process that is equivalent to an Original Equipment Manufacturer (OEM) package. In these cases, a prototype vehicle (or vehicles) is thoroughly reviewed and tested to ensure that the installation meets OEM requirements, and the successful prototype installation is then replicated in other vehicles with the same chassis and engine combination. Air districts may approve repower projects that meet the OEM quality assurance process described above, subject to the following:
- (1) Moyer Program funding may not be used for any costs associated with the prototype vehicle or vehicles.
 - (2) Repower contracts may not be executed until the prototype testing specified by the engine manufacturer is successfully completed.
 - (3) Written documentation from the engine manufacturer confirming that the prototype was successful must be maintained in the project file.
 - (4) If the proposed repower has been done previously by the manufacturer on the same chassis/engine configuration, prototype testing is not required. The manufacturer must provide written confirmation that the previous work was performed successfully and met OEM requirements.
- (C) Conversions: Conversions involve the replacement or modification of the original engine or vehicle to include either a cleaner engine or other system that provides motive power and change of the fuel type used. Hybrid conversion systems using internal combustion engines must be certified according to "California Certification and Installation Procedures for Medium- and Heavy-Duty Vehicle Hybrid Conversion Systems." The baseline engine model year for hybrid conversions must be in compliance

with applicable regulations or beyond what is required. The conversion system manufacturer must provide written confirmation that the funded vehicle would not exceed the certified allowable limit. All zero-emission conversion systems must receive an exemption Executive Order per Vehicle Code section 27156. The conversion system manufacturer must certify that the converted vehicle adheres to all applicable local, State, and federal requirements including safety standards issued by National Highway Traffic Safety Administration (NHTSA) and California Highway Patrol (CHP).

2. Project Categories. Taking the above project types into consideration, the following categories may be eligible for funding:

- (A) Heavy-Duty Trucks and Buses: Heavy-duty diesel trucks and buses with gross vehicle weight ratings (GVWR) greater than 14,000 pounds (lbs.) are subject to multiple California statewide regulations (e.g., Truck and Bus Regulation). Replacement engines certified to the optional 0.02 grams per brake horsepower-hour (g/bhp-hr) nitrogen oxide (NOx) and 0.01 g/bhp-hr particulate matter (PM) standards or cleaner are eligible. Eligibility of replacement vehicles and maximum project life may be impacted by requirements set by applicable rules, regulations, or requirements. For more information, see section C.2.(A).
- (B) School Buses: School buses as defined in Vehicle Code Section 545 are subject to the Statewide Truck and Bus Regulation. The regulation requires school buses to be filtered unless operating under a CARB-issued low-mileage exemption and operating fewer than 1,000 miles per year. Project types include replacements, repowers, and conversions. Replacement engines certified to the 2010 emissions standards or cleaner are eligible. Eligibility of replacement vehicles and maximum project life may be impacted by requirements set by applicable rules, regulations, or requirements. For more information, see Section C.2.(B).
- (C) Innovative Clean Transit (ICT) Bus: Buses that are subject to the ICT regulation must be compliant with applicable regulatory requirements. Project types for surplus reductions include replacements and conversions. All transit projects must be certified to the zero-emission (ZE) standard. Eligibility of replacement vehicles and maximum project life may be impacted by requirements set by applicable rules, regulations, or requirements. For more information, see Section C.2.(C).
- (D) Drayage Trucks: Drayage trucks must be fully compliant with applicable regulatory requirements to be eligible for funding (i.e., Drayage Truck Regulation, Truck and Bus Regulation, and/or other applicable regulation). Replacement vehicles that are certified zero-emission vehicles or vehicles with engines certified to at least the optional 0.02 g/bhp-hr NOx and 0.01 g/bhp-hr PM standard or cleaner are eligible. Eligibility of replacement

vehicles and maximum project life may be impacted by requirements set by applicable rules, regulations, or requirements. For more information on drayage truck funding opportunities, see Section C.2.(D)

- (E) **Solid Waste Collection Vehicles (SWCV):** Vehicles must be fully compliant with applicable regulatory requirements to be eligible for funding. Replacement vehicles or repowered vehicles with engines certified to at least the optional 0.02 g/bhp-hr NOx and 0.01 g/bhp-hr PM standard or cleaner are eligible. Replacement vehicles certified to the zero-emission standard are also eligible. Eligibility of replacement or repowered vehicles and maximum project life may be impacted by requirements set by applicable rules, regulations, requirements. For more information, see Section C.2.(E).
- (F) **Public Agency and Utility Vehicles:** Vehicles with GVWR over 14,000 lbs. owned by a municipality or utility must be fully compliant with applicable regulatory requirements to be eligible for funding. Replacement vehicles that are certified to the zero-standard or vehicles with engines certified to at least the optional 0.02 g/bhp-hr NOx and 0.01 g/bhp-hr PM standard or cleaner are eligible. Eligibility of replacement vehicles and maximum project life may be impacted by requirements set by applicable rules, regulations, or requirements.
- (G) **Emergency Vehicles:** Emergency vehicles are not subject to in-use emissions regulations. Eligible vehicles also include prisoner transport buses. Project types mainly include replacements. Replacement vehicles that are certified to the zero-emission standard or vehicles with engines certified to the 0.2 g/bhp-hr NOx and 0.01 g/bhp-hr PM standard or cleaner are eligible. Eligibility of replacement vehicles and maximum project life may be impacted by requirements set by applicable rules or regulations. For more information, see Section C.2.(F).
- (H) **Case-by-Case Projects:** These projects do not fall under any previously described category or do not meet all of the requirements of the Guidelines but otherwise provide real, surplus, quantifiable, enforceable, cost-effective emission reduction benefits in California for the entire project life. These may include transport refrigeration units (TRU), auxiliary power units (APU), and vehicles with 8,501-14,000 lbs. GVWR. For more information, see Section C.2.(G).

3. Infrastructure Projects. See Chapter 10 for details regarding applicant eligibility and project types for infrastructure projects in support of on-road applications. This includes infrastructure such as battery charging and alternative fuel stations for light heavy-duty, medium heavy-duty, and heavy heavy-duty trucks. It also includes infrastructure for truck stop electrification, TRUs, transit vehicles, emergency vehicles, and school buses.

B. Determining Funding Amounts

The information contained in this section shall be used to determine the funding amount for which any given heavy-duty on-road project is eligible.

- 1. State Funding Limits.** Funding for an on-road heavy-duty project includes funds from all State sources including the Moyer Program. The maximum dollar amount or maximum percentage of eligible cost (Tables 4-2 through 4-7), as applicable, represents a funding cap, or the maximum funding available for the project. If the project is co-funded with other State funds, the funding cap represents the maximum amount of funds from all State sources that can be applied to the project. Federal, local, or other non-State grant funds can be used in addition to the funding caps stated in this chapter if the criteria for co-funded projects in Chapter 3, Section L are satisfied.
- 2. Cost-Effectiveness.** The maximum amount of funding available to a project is limited by a cost-effectiveness limit (see Appendix C), in addition to the funding caps specified below.
- 3. Maximum Funding Percentage.** For fleets with ten or fewer vehicles over 14,000 lbs. GVWR, the State funding amount cannot exceed 80 percent of the vehicle cost (excluding taxes and fees). For fleets with more than ten vehicles, the funding amount cannot exceed 50 percent of the vehicle cost (excluding taxes and fees). School buses, repowers, and emergency vehicles are not limited by maximum funding percentages based on fleet size. The funding caps that apply from these maximum percentages of eligible cost and maximum dollar amounts, as applicable, are summarized in Tables 4-2 through 4-7.

Table 4-2 State Funding Caps for Moyer School Bus Projects

| Project Type | Funding Cap |
|--|-------------|
| School Bus Diesel or Alternative Fuel Replacements | \$165,000 |
| School Bus Optional Low-NOx or Hybrid Replacements | \$220,000 |
| School Bus Zero-Emission Replacements | \$400,000 |
| School Bus Repowers | \$70,000 |
| School Bus Electric Conversions | \$400,000 |

Table 4-3 State Funding Caps for Exempt Vehicle Replacements (Certified to 0.20 g/bhp-hr NOx or cleaner standard)

| Weight Class | Funding Cap ^(a) |
|---|-----------------------------------|
| Heavy Heavy-Duty (HHD) GVWR > 33,000 lbs. | \$60,000 |
| Medium Heavy-Duty (MHD) GVWR 19,501-33,000 lbs. | \$40,000 |
| Light Heavy-Duty (LHD) GVWR 14,001-19,500 lbs. | \$30,000 |
| Emergency Vehicles GVWR > 14,000 lbs. | 80% of Cost |

^(a) No more than 80 percent of vehicle cost for fleets with ten or fewer vehicles, no more than 50 percent of vehicle cost for larger fleets except for emergency vehicles.

Table 4-4 State Funding Caps for Certified 0.1 NOx Standard or Cleaner Replacements

| 0.1 NOx Standard or Cleaner (g/bhp-hr) | HHD | MHD | LHD |
|---|------------|------------|------------|
| Optional 0.02 or cleaner | \$160,000 | \$120,000 | \$70,000 |
| 0.05 | \$80,000 | \$60,000 | \$50,000 |
| 0.1 | \$70,000 | \$50,000 | \$40,000 |

^(a) No more than 80 percent of vehicle cost for fleets with 10 or less vehicles, no more than 50 percent of vehicle cost for larger fleets except for emergency vehicles.

Table 4-5 State Funding Caps for Certified Optional 0.02 NOx Standard or Cleaner Repowers

| Vocation Type | Funding Caps |
|--|---------------------|
| Trucks and Buses not subject to the ICT Regulation | \$40,000 |

Table 4-6 State Funding Caps for Zero Emission Replacements or Conversions

| Weight Class/Vocation Type | Funding Caps ^(a) |
|----------------------------|-----------------------------|
| Transit Bus | \$80,000 |
| HHD Truck or Bus | \$410,000 |
| MHD Truck or Bus | \$180,000 |
| LHD Truck or Bus | \$170,000 |

^(a) No more than 80 percent of vehicle cost for fleets with 10 or less vehicles, no more than 50 percent of vehicle cost for larger fleets except for emergency vehicles.

Table 4-7 State Funding Caps for Hybrid Conversions

| Weight Class | Funding Caps ^(a) |
|--------------|-----------------------------|
| LHD | \$7,500 |
| MHD | \$10,000 |
| HHD | \$15,000 |

^(a) No more than 80 percent of system cost for fleets with 10 or less vehicles, no more than 50 percent of system cost for larger fleets except for emergency vehicles.

- 4. Project Life.** The minimum eligible project life for all projects is one year. The maximum eligible project life for each project type is summarized in Table 4-8.

Table 4-8 Maximum Project Lives for On-Road Vehicle Projects

| Project Type | Maximum Project Life |
|--------------------------|----------------------|
| Replacements | 7 Years |
| Transit Bus Replacements | 12 Years |
| Repowers | 7 Years |
| School Bus Replacements | 10 Years |
| Electric Conversions | 5 Years |
| Emergency Vehicles | 14 Years |
| Other On-Road Projects | 3 Years |

A longer project life may be approved on a case-by-case basis if applicants provide justifying documentation. The maximum project life does not consider regulatory requirements that may reduce the actual project life.

- 5. Annual Usage.** Grant amounts will be based on the minimum of two 12-month periods of California usage during the previous 30 months. Fleet averages cannot be used. If a fleet has reported the existing vehicle in the Truck Regulations Upload and Compliance Reporting System (TRUCRS), or other applicable CARB reporting database(s) (e.g., ARBER for Drayage Truck Registry information), to comply with State on-road regulation requirements or has records demonstrating compliance under a limited-usage compliance option (such as the NOx Exempt Area Extension, etc.) and the historical usage exceeds the limit, the usage limit for that compliance option must be used to determine the State grant amount instead. On-road calculations shall be based on historical annual mileage instead of fuel usage or engine hours due to the fact that the mileage-based exhaust emission factors are more robust. Applicants must submit conclusive documentation of the existing engine or vehicle's mileage such as logbooks, and maintenance records maintained for individual vehicles, or CHP inspection reports. In cases where only fuel use records are available, a fuel conversion factor request can be submitted by the air district to CARB. The applicant must provide at least two years of historical fuel usage documentation to the air district. Documentation must show specific usage of the existing vehicle and may include fuel logs, International Fuel Tax Association reports for single fleets, purchase receipts or ledger entries. The fuel use will be converted to mileage according to the vocation.
- 6. Calculating emissions.** Emission factors and deterioration rates in Appendix D, Tables D-1 through D-6 must be used to determine the emissions of the baseline engine and reduced engine or zero-emission vehicle; consequently, the engine or motor model year and applicable emission standard will determine the relevant emission factors. Emission reductions for hybrid conversion systems must be based on the projected reduced usage of the baseline engine in the converted vehicle compared to the original vehicle. This can be based on estimated usage reductions for the specific application or vocation type provided by the dealer, installer, or manufacturer. Calculations for new hybrid vehicles will incorporate the certified emission standard and may also include projected reduced engine usage relative to a non-hybrid equivalent provided by the dealer, installer, or manufacturer. The emission factors and deterioration rates contained in Appendix D are based on CARB mobile source emissions inventory model (EMFAC) values. Information on EMFAC is available at: <http://www.arb.ca.gov/msei/modeling.htm>.
- 7. Two-for-One Replacement Calculations.** Projects in which two old vehicles of similar design and function are replaced with one vehicle are eligible for Moyer Program grant funding. The two baseline vehicles must be in the same weight class (LHD, MHD, or HHD) but may be in different weight classes if there is a ten percent or less variation in GVWR. If the two baseline engines are not the same

model year, the newest engine model year must be used when calculating emission reductions. The maximum State funding amount must also be funded according to the lighter weight class of the two vehicles. The replacement vehicle's annual usage must be determined by adding the annual usage of both baseline vehicles together. The maximum annual usage that can count toward grant determinations for the two baseline vehicles is 30,000 miles each for a maximum total annual usage of 60,000 miles for the replacement vehicle. The replacement vehicle is eligible for only one grant based on the combined usage of the baseline vehicles.

8. Expenses Eligible for Funding. Moyer grant funding can only be used to pay for items essential to the operation of the vehicle. Electronic monitoring units – while they are not required by CARB – are an eligible expense if they are required by an air district. For replacements, eligible project costs include the cost of the cab and chassis including parts that are integrated into the vehicle. The cab and chassis cost may include but is not limited to the following:

- (A) The capital cost of the cab.
- (B) The capital cost of the chassis which may include but is not limited to:
 - (1) Engine or motor
 - (2) Transmission
 - (3) Suspension system
 - (4) Steering system
 - (5) Frame
 - (6) Electrical system
 - (7) Cooling System
 - (8) Fuel system
 - (9) Emission system

C. Project Criteria

1. General Criteria

- (A) **Fleet Size:** All fleet sizes are eligible for funding. The following criteria must be followed for each group:
 - (1) **Fleet Size 1-10:** To ensure smaller fleets have significant funding opportunities, air districts must reserve or prioritize funding for smaller fleets and should do so in a manner that works best with their programs. For example, air districts that issue on-road

solicitations may review applications from smaller fleets first and award those fleets that are eligible prior to awarding fleets with more than ten vehicles. Air districts that fund projects on a first-come, first-served basis may modify or remove the reserve to meet liquidation deadlines and demand after smaller fleets have had a certain amount of time to apply for funding as specified in the air district's Policies and Procedures. Reserve funds may be used for school bus projects at any time.

- (2) Fleet Size > 10: Fleets with more than ten vehicles must select advanced technologies meeting the certified optional 0.02 g/bhp NOx and 0.01 g/bhp-hr PM standard or cleaner, or zero-emission technologies, except for certain operating vocations and locations not required to meet the 0.2 g/bhp-hr NOx standard as defined by applicable rules, regulations, or requirements (e.g., school buses, log trucks, agricultural vehicles, emergency vehicles, and NOx Exempt Areas). Eligibility of replacement vehicles and maximum project life may be impacted by requirements set by applicable rules, regulations, or requirements.

(B) Weight Class Range:

- (1) The replacement vehicle must be in the same weight class as the existing vehicle (either LHD, MHD, or HHD as defined in Appendix B). An MHD vehicle can replace an HHD vehicle if they both have the same axle configuration (e.g., an existing HHD vehicle with two axles can be replaced with an MHD vehicle with two axles) but the funding amount must be at the MHD funding level.
- (2) On-road heavy-duty vehicles (with GVWR over 14,000 lbs.) must be powered by an engine or motor certified to the applicable heavy-duty intended service class as shown on the engine or zero-emission vehicle certification Executive Order. However, the following cases may be allowed:
 - a. MHD engines or motors may be installed in HHD vehicles with GVWR up to 36,300 lbs. (ten percent higher than 33,000 lbs. GVWR) with written warranty verification by the engine and chassis manufacturer. A copy of the written warranty verification must be maintained in the air district project file.
 - b. HHD engines or motors may be installed in MHD vehicles if necessary for vocational purposes but only if the GVWR are within ten percent of the HHD intended service class (i.e., GVWR of 29,701 lbs. or greater).

- c. In cases of ZE replacement vehicles where the GVWR is not within 10 percent of the baseline engine's weight class and there is no zero-emission vehicle replacement available within 10 percent of the baseline vehicle's weight class that can perform the same or equivalent level of work of the baseline vehicle, the air district may approve the ZE replacement vehicle if all of the following requirements are met:
 - i. Confirmation that the intended use of the replacement vehicle would remain the same as that of the existing vehicle.
 - ii. Justification for the deviation in GVWR not being within 10 percent and a description of the weight difference between the battery electric powertrains of the existing and replacement vehicles (e.g., the zero-emission vehicle specification sheet).
 - iii. How the ZE replacement vehicle will safely accommodate the equivalent level and scope of work that the existing vehicle performs (e.g., a letter from the manufacturer or certified statement from the applicant confirming the replacement vehicle can safely operate in the same degree as the old vehicle without adversely impacting its durability).
 - iv. All other requirements within Section C.5 are met.
- (3) For school bus projects, air districts may allow zero-emission replacement vehicles to be in a different weight class than the existing vehicle, provided the following:
- a. The applicant certifies to the air district stating that the replacement vehicle must be in a different weight class to accommodate additional safety or other required operational features not present in the existing vehicle
 - b. The replacement vehicle will be capable of performing the same work as the existing vehicle, and
 - c. The applicant provides proof that the replacement vehicle will perform the same work as the existing vehicle.
- (C) At least 51 percent total annual usage must occur in California. Only usage in California can be used for on-road calculations.

(D) Compliance Check:

- (1) Before contract execution, participants must be pre-screened for regulatory compliance, outstanding violations, open cases, and previous project funding by supplying to the air district the registered owner's name, company name or Doing Business As (DBA), address, Vehicle Identification Number (VIN) of the vehicle being replaced/repowered/converted, and TRUCRS ID or Drayage Truck Registry (DTR) number or other applicable reporting database identifier, if applicable. VINs of vehicles not subject to in-use on-road rules, regulations or requirements, need not be submitted, but every vehicle in the fleet needs to be in compliance and have no outstanding violations in order to receive funding. The air district need not validate this information and will not be held liable if participants falsify this information. The air district shall email this information to its CARB Moyer Program liaison.
 - a. Except for school bus fleets, the fleet owner will report in TRUCRS, or any other applicable reporting database, vehicles that are subject to applicable CARB regulations. The fleet owner must also provide the air district with the following:
 - i. A copy of the TRUCRS Fleet List located on the Vehicle Info tab showing the compliance option each vehicle in the fleet is using, and
 - ii. A copy of the TRUCRS General Fleet and Compliance Information Summary showing compliance located on Compliance Status tab ("Meets Small Fleet Option" will specify "yes" if the fleet is using the Small Fleet option), and
 - iii. A copy of the Compliance Certificate printed from TRUCRS, or other reporting database, if applicable.
 - b. Owners of school bus fleets will report in TRUCRS vehicles subject to the Statewide Truck and Bus Regulation, but the fleet owner must only provide the air district with a copy of the TRUCRS Fleet List located on the Vehicle Info tab showing the compliance option each vehicle in the fleet is using.
 - c. For Vehicles subject to the Drayage Truck Regulation, a copy of the DTR Compliance Search Page printout showing VIN and compliance status.
 - d. Vehicles Subject to Other On-Road Regulations:

- i. Fleet information must be submitted by the air district to CARB's Moyer Program district liaison to check compliance with other regulations such as the Public Agency and Utility Regulation, when applicable. The fleet information needed for the compliance check may change with time.
- ii. To receive funding, a fleet owner/operator must be compliant with all federal, State, and local air quality rules, regulations, or requirements including the Periodic Smoke Inspection Program (PSIP). The application must include a statement of compliance in which the applicant must certify that they are in compliance at the time of application submittal. Air districts must also include the following language with a checkbox for the fleet owner/operator to indicate compliance:

I have read and understand that I am responsible for meeting the requirements of the PSIP. I am either currently in compliance with PSIP requirements or I have paid all penalties for non-compliance and continue to meet requirements since payment.

- e. A regulation index for statewide on-road regulations is available at <https://ww2.arb.ca.gov/road-heavy-duty-regulations-certification-programs>; and

<http://ww2.arb.ca.gov/sites/default/files/truckstop/truckstop.html>

- (2) The liaison will email the air district the result of the compliance check within ten business days. All compliance check documentation must be kept in the project file.
- (3) If the vehicle has already received funding and is still under contract, the air district will be notified and the project must be rejected.
- (4) If there is an open case or outstanding violation, or if the fleet is not in compliance, the air district shall inform the participant in writing that no disbursement may be made until the owner provides proof that the fleet has been brought into compliance and all fines have been paid. If the outstanding violation is based on problems with the baseline engine (e.g., gross polluter), then the violation must be cleared. The engine owner must pay the fine for each violation and submit documentation of violation correction with, or before submitting, the invoice.

- (5) *Compliance Check Tool*: A compliance check tool for the Truck and Bus Regulation is available on CARB's website located at: <https://www.arb.ca.gov/msprog/onrdiesel/tblookup.php>. To help with the initial review, air districts may check current compliance status by entering any part of the company name, TRUCRS ID, or Motor Carrier Number in the search field. Only fleets that have confirmed compliance requirements and printed their certificate will be listed. Applicants must still meet the requirements in Section C.1.(D)(1)a.
- (6) Other compliance tools issued by CARB may be used to meet the requirements of Section C.1.(D)(1) as they become available and are approved for use for the Moyer Program.
- (E) **Emission Reduction Technologies**: Emission reduction technologies must be certified or verified by CARB and must comply with durability and warranty requirements. A technology granted a conditional certification or verification by CARB is considered certified or verified.
- (F) **Obtaining Financing**: The participant may obtain financing to assist in the purchase of the emission reduction technology.
- (G) **Equipment Leasing is Not Allowed**: If financing is necessary, the equipment purchase must be financed with a conventional purchase loan.
- (H) **Surplus requirements are determined by the regulation to which a project is subject**. Any vehicle with an off-road engine that is subject to an on-road regulation must also comply with the on-road surplus requirements described in this chapter. For example, a yard truck with an off-road engine that is subject to the Statewide Truck and Bus Regulation must comply with all off-road eligibility and funding criteria described in Chapters 5, as well as all on-road surplus criteria described in this chapter.
- (I) **Engines operating under an extension not included in the applicable regulation, such as the Statewide Truck and Bus Regulation, or under program advisory are not eligible**. This includes extensions received under enforcement settlement agreements. Fleets with PM filter availability extensions and economic hardship extensions are eligible but PM reductions will not be funded. Fleet owners must submit documentation confirming extensions.
- (J) **The existing vehicle must be based in California as shown through vehicle registration**. Air districts have the option to limit eligibility to applicants that reside within the district's air basin or operate their vehicles within specified air basins.

2. Project Categories and Applicable Project Types

(A) Heavy-Duty Trucks and Buses (Non-drayage)

(1) Eligibility: Heavy-duty vehicles following the Engine Model Year Schedule or in compliance with applicable California regulations (e.g., Statewide Truck and Bus Regulation) may apply for funding. The following are compliance options that may be eligible for funding under the Truck and Bus Regulation until December 31, 2022:

- a. Small Fleet option
- b. Log Truck Phase-In option
- c. NOx Exempt Area extension
- d. Agricultural Vehicle extension

Other vehicles subject to the Statewide Truck and Bus Regulation such as heavy cranes and sweepers or other vehicles approved to use credits or extensions specified in the regulation may also be eligible.

Other vehicles subject to applicable California statewide regulations that are approved to use credits for NOx emissions or extensions to comply with meeting a compliance deadline or phase-in schedule specified in the rule, regulation, or requirement may not be eligible.

- (2) Replacement Projects: Replacement projects are executed through the contract or Voucher Incentive Program, including two-for-one replacements. This includes on-road vehicles subject to the Truck and Bus Regulation or other applicable California statewide rules, regulations, or requirements that are replaced with newer vehicles equipped with diesel or alternative fueled engines certified to the optional 0.02 g/bhp-hr NOx and 0.01 g/bhp-hr PM standards or cleaner, or vehicles certified to the zero-emission standard with a surplus funding period of one to three years. Voucher replacement projects are not eligible for case-by-case requests. If the air district wishes to fund a replacement using criteria that does not meet voucher requirements such as having a longer project life or a minimum California usage of 51 percent, the project must be executed under this chapter through a contract.
- (3) Repower and Conversion Projects: If the proposed repower has been done previously by the manufacturer on the same chassis/engine configuration, prototype testing is not necessary. The manufacturer must provide written confirmation that the

previous work was performed successfully and met OEM requirements. If it has not been done previously, prototype testing as described in Section A.1.(B) must be completed. Conversion systems must meet certification or aftermarket exemption requirements described in Section A.1.(C).

- (4) Other Project Types: Other project types may be eligible if approved through case-by-case and must be funded through contract.
- (5) Surplus: The existing vehicle must be in compliance with applicable required emission standards (e.g., an existing vehicle subject to the Truck and Bus Regulation must be in compliance with the regulation). The existing engine must be dismantled at least one full year before the existing vehicle is required to meet a certified optional 0.02 g/bhp-hr NO_x standard or zero-emission standard by any applicable rule, regulation, or requirement. The replacement vehicle must be delivered and post-inspected at least one full year before an upcoming compliance deadline to meet an emission standard required by an applicable rule, regulation, or requirement (e.g., replacing to a certified optional 0.02 g/bhp-hr NO_x and 0.01 g/bhp-hr PM standard with delivery and post-inspection at least one year prior to any local, statewide, or federal requirement to meet a certified optional 0.02 g/bhp-hr NO_x and 0.01 g/bhp-hr PM standard would be eligible).
- (6) Maximum State Funding Amounts: The maximum amount of State funding that can go toward the purchase of a replacement vehicle equipped with either a diesel or alternative fuel engine meeting the 0.20 g/bhp-hr NO_x and 0.01 g/bhp-hr PM standards is shown in Table 4-3. Maximum funding for optional advanced technology replacements certified to at least the optional 0.02 g/bhp-hr NO_x and 0.01 g/bhp-hr PM standards and Zero-Emission replacements are shown in Tables 4-4 and 4-6.
- (7) Log Truck Requirements: Log trucks using the Log Truck Phase-In option must have log bunks permanently attached at pre- and post-inspection. Vehicles taking the Log Truck Phase-In option are not eligible for two-for-one replacements as described in Section B.7.

(B) School Buses

- (1) General Eligibility: School buses are eligible for Moyer Program funding if they meet the general program criteria in Section C.1., as well as additional criteria in this subsection.
- (2) Eligible Applicants: Public school districts in California that own their own school buses are eligible for funding. Where a Joint Power Authority (JPA) has been formed by several public school districts and the JPA holds ownership of the school buses, then the JPA is also eligible for funding. Private transportation providers that own their own school buses and contract with public school districts to provide transportation services for public school children are also eligible for funding. Non-profit organizations, private schools, and other private companies are not eligible to receive funding for school bus projects.
- (3) Truck and Bus Regulation Compliance: School buses subject to the Truck and Bus Regulation are only eligible if they meet one of the following requirements:
 - a. The existing school bus must have an OEM diesel particulate filter (DPF) installed.
 - b. The existing school bus must be retrofitted with a DPF that reduces diesel PM emissions by at least 85 percent.
 - c. The existing school bus must be reported in TRUCRS under the Low-Use exemption.
- (4) Used Vehicle Eligibility: Used school buses are not eligible as replacements. The replacement vehicle for any project must be new.
- (5) Maximum State Funding Amounts: School bus projects have unique maximum grant amounts as summarized in Table 4-2, and also a unique cost-effectiveness limit of \$300,000/ton. This cost-effectiveness limit allows for funding amounts consistent with the Lower-Emission School Bus Program funding caps based on average school bus operating usage as determined by EMFAC. Individual vehicle usage that falls below the average may result in lower funding amounts.
- (6) Calculating Emissions: Zero-emission school bus projects (including replacements, repowers, and electric conversions) are eligible for NO_x, reactive organic gases (ROG), and PM emission reductions. All other school bus projects are eligible only for NO_x and ROG emission reductions. Air districts must use the emission

factors and deterioration rates in Table D-1 of Appendix D when determining emission reductions and grant amounts. If both the baseline and replacement vehicle have a GVWR greater than 33,000 lbs., and the Executive Orders of both the baseline and replacement engine or zero-emission vehicle list the intended service class as HHD, air districts may use the emission factors and deterioration rates in Table D-2. If an engine's or zero-emission vehicle's Executive Order only specifies that the engine or zero-emission vehicle is certified for use in vehicles with a GVWR greater than 14,000 lbs., then the intended service class must be assumed to be MHD.

- (7) CHP Safety Certification. All existing school buses must have a current CHP safety certification (CHP Form 292) at the time funding is awarded for the project (i.e., the school bus may not have a lapsed CHP safety certification), and it must be currently registered with the Department of Motor Vehicles (DMV).
- (8) School Bus Electric Conversion Projects. The baseline vehicle chassis must be ten years old or newer. CHP requires engineering plans, certified by a California licensed engineer, to be able to safety certify the school bus.

(C) Transit Vehicles

- (1) Eligibility: Buses subject to the ICT regulation that have achieved compliance with applicable regulatory requirements are eligible for surplus emission reduction funding. New regulation requirements may affect surplus and funding amounts in the future.
- (2) Replacement Projects: A replacement vehicle project must be certified to the ZE standard. Eligibility of replacement vehicles and maximum project life may be impacted by requirements set by applicable rules, regulations, or requirements.
- (3) Conversion Projects: Conversion systems must be to the certified ZE standard.
- (4) Maximum State Funding Amounts: The Federal Transit Administration (FTA) provides up to an 80 percent grant (Federal funding) for new urban bus purchases and repowers. Maximum State funding for transit projects has been specified to account for greater access to other funding resources. Funding caps for various project types are shown in Tables 4-4 through 4-6. If the Moyer Program grant is used to co-fund an eligible project, the sum of all grant funds received cannot exceed the total project cost.

Additional criteria on co-funding projects with a Moyer Program grant can be found in Chapter 3, Section L.

- (5) Applicable Emission Factors: Emission factor tables for buses subject to the ICT regulation (except for school buses) are included in Appendix D as Tables D-3 and D-4. Other buses subject to the ICT regulation must use the MHD or HHD emission factor tables, Tables D-1 and D-2. Cost-effectiveness calculations for buses subject to the ICT regulation do not include deterioration since those fleets are generally well-maintained per EMFAC. Deterioration must also not be included in the cost-effectiveness calculations for other buses subject to the ICT regulation.
- (6) Calculating Emission Reductions: Cost-effectiveness calculations can only include emission reductions from the 2007 or newer emission factors for up to a 12-year maximum project life. Transit Buses subject to the ICT regulation should only qualify for a project life that does not exceed surplus to the ICT regulation. No other additional emission reductions may be included. Zero emission projects can be funded for only NO_x, and ROG, and PM surplus emission reductions.

(D) Drayage Trucks

- (1) Eligibility: Drayage trucks as defined in California Code of Regulations, title 13, section 2027(c)(15), are eligible for Moyer Program funding for up to one year before the applicable compliance deadline.
- (2) Existing Engine: The existing vehicle must be compliant to all applicable rules, regulations, or requirements (e.g., Drayage Truck Regulation, Truck and Bus Regulation, etc.) to be eligible for funding.
- (3) Replacement Projects: Replacements may be funded through voucher or contract. The replacement vehicle may continue to perform drayage regulated activities (e.g., accessing the ports) during the contract or voucher period if not otherwise restricted by applicable regulation(s), rule(s), requirements, or advisories set by federal, state, or local authorities.
- (4) Repower and Conversion Projects: If the proposed repower has been done previously by the manufacturer on the same chassis/engine or motor configuration, prototype testing is not necessary. The manufacturer must provide written confirmation that the previous work was performed successfully and met OEM requirements. If it has not been done previously, prototype testing

as described in Section A.1.(B) must be completed. Conversion systems must meet certification or aftermarket exemption requirements described in Section A.1.(C).

- (5) Calculating Emission Reductions: Only NO_x and ROG emission reductions can be funded. PM emission reductions may be funded for zero-emission projects.
- (E) Solid Waste Collection Vehicles (SWCV such as Transfer Trucks and Refuse Trucks)
- (1) Eligibility: SWCV fleets that have achieved compliance with all applicable on-road rules, regulations or requirements (i.e., SWCV Regulation and the Truck and Bus Regulation) are eligible for funding. Surplus will be determined according to applicable on-road rules, regulations, and/or requirements. Eligibility of replacement vehicles and maximum project life may be impacted by requirements set by applicable rules, requirements, and/or regulations.
 - (2) Replacement Projects: A replacement engine for a replacement project must be CARB certified engine meeting emissions levels of optional 0.02 g/bhp-hr NO_x and 0.01 g/bhp-hr PM standards or cleaner.
 - (3) Repower and Conversion Projects: A replacement engine for a repower project must be CARB certified engine meeting emissions levels of optional 0.02 g/bhp-hr NO_x and 0.01 g/bhp-hr PM standards or cleaner. If the proposed repower has been done previously by the manufacturer on the same chassis/engine configuration, prototype testing is not necessary. The manufacturer must provide written confirmation that the previous work was performed successfully and met OEM requirements. If it has not been done previously, prototype testing as described in Section A.1.(B) must be completed. Conversion systems must meet certification or aftermarket exemption requirements described in Section A.1.(C).
 - (4) Applicable Emission Factors: Emission factor tables for refuse trucks are included in Appendix D as Tables D-5 and D-6. Transfer trucks use Tables D-1 and D-2.
 - (5) Calculating Emission Reductions: Only NO_x and ROG emission reductions can be funded. PM emission reductions may be funded for zero emission projects.

(F) Emergency Vehicles

- (1) Eligible Vehicles: Authorized emergency vehicles as described in the California Vehicle Code 165 including, but not limited to fire apparatus, pumpers, ladder trucks, and water tenders. Other MHD HHD diesel authorized emergency vehicles, such as prisoner buses, are also eligible for funding under this chapter.
- (2) Replacement Projects: Replacement vehicles with engines certified to the 0.2 g/bhp-hr NOx and 0.01 g/bhp-hr PM standard or cleaner are eligible. The older, replaced vehicle must be destroyed. A fire truck reuse option is also available on a case-by-case basis. The fire truck reuse option allows fire departments to give away the existing old vehicle and destroy another older vehicle in its place.
- (3) Eligible Costs: Eligible project costs include those parts specified in Section B.8. but excludes parts that are not bolted on and movable, such as the tank on the water tender. In addition, the following costs are eligible:
 - a. Tax and transport for eligible parts or costs.
 - b. Labor for installation of or modification to parts eligible for funding.

(G) Case-By-Case Projects

- (1) On-road heavy-duty diesel vehicles with GVWR of 8,501-14,000 lbs. may be considered for Moyer Program funding on a case-by-case basis.
- (2) Transport Refrigeration Units (TRUs): TRU projects are eligible for limited funding opportunities, but emission benefits are generally low because many older TRUs have already been replaced to meet regulatory requirements.
 - a. Funding opportunities may exist for zero emission replacement projects only.
 - b. Alternative technologies such as pure cryogenic systems are not required to be verified, but CARB must review and approve such systems in writing on a case-by-case basis.
 - c. The participant shall install an hour-meter or other means to measure usage on the TRU to track operating hours, and shall provide this information to CARB or the air district upon request.
 - d. The maximum State funding percentage is 50 percent.

- (3) Auxiliary Power Units (APUs): Limited funding will be available for APUs, and only for projects approved through case-by-case. APUs are subject to the Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling, California Code of Regulations, title 13, section 2485.
- (4) Cost-effectiveness calculations for projects with power take-off (PTO) will be considered by CARB on a case-by-case basis. Hours of PTO operation must be documented through hour meter records or data from the emission control module.
- (5) Case-by-case projects must receive approval from CARB prior to contract execution. These projects must follow the requirements as described in Chapter 3, Section U.

3. Participant Requirements

- (A) Ownership: The participant must currently be the sole owner of the existing vehicle, documented through a copy of the existing vehicle title. The title must show no active lienholders. The title need not be a California title. In addition, the participant must have owned and operated the vehicle throughout the previous 24 months. If the title does not show sole ownership for the previous 24 months, the applicant must be listed as one of the owners or shown as a registered owner on registration documentation for the previous 24 months. If the existing vehicle title is not available, then all three of the following must be used as alternative documentation until a duplicate title is received from the California DMV:
 - (1) A copy of the current and valid vehicle registration,
 - (2) A copy of the DMV Vehicle Registration Record (printout), and
 - (3) A copy of the DMV receipt for duplicate title request. A copy of the duplicate title must be received by the air district before contract execution.

If it is unclear whether a vehicle is owned or leased by a participant, the air district will determine whether the vehicle is eligible.

- (B) Usage Documentation and Self-Certification for California Minimum Usage: Documentation and self-certification must cover each of two 12-month periods in the previous 30 months. Any gap between the two 12-month periods may be permitted for usage consideration if reasoning and supporting documentation demonstrating the need for the gap are provided for air district evaluation. Covering the two 12-month periods, the participant must:

- (1) Submit conclusive documentation (logbooks, maintenance records, tax records, etc.) of annual miles traveled in California, and
 - (2) Certify that at least 51 percent of total usage has been in California.
- (C) Military Service Provision: If an applicant has been on active military duty at any time during the previous 24 months, documentation prior to deployment and covering the same length of time as the deployment period may be used to meet the title, registration, usage, and operation in California requirements as described in Sections C.3.(A)-(B) and C.4.(C). The applicant must submit a copy of DD Form 214, Certificate of Release or Discharge from Active Duty to verify military service during the deployment period.
- (D) Participants may only apply to one air district at a time for each project.
- (E) Participants must submit an application for funding consideration.
- (F) Participants must provide the air district with the full contact information of the seller/dealer of the replacement vehicle, or the business that performs the conversion or repower.
- (G) The participant must be the sole registered owner of the replacement engine or vehicle for the duration of the contract term. Throughout the contract term (project life), the participant must annually:
- (1) Provide registration and proof of insurance to the air district.
 - (2) Provide reports that include items specified by the air district which may include miles driven in the air district and in California, and details regarding maintenance and servicing.
 - (3) Operate the engine/vehicle within California for at least the percentage of time specified in the contract.
- (H) Report accident or loss of vehicle: If the replacement engine/vehicle is in an accident or is stolen, the accident or theft must be reported to the air district within 10 business days. The participant must provide the police report, a letter from the insurance company regarding the accident or theft, and other information requested by the air district. The participant must repair the vehicle and return it to operation, if possible. If the vehicle is totaled, the participant and the air district staff must come to an agreement regarding any requirements that still need to be met. If the participant will continue the business, efforts should be made to obtain a substitute vehicle that can take over the terms of the contract. The substitute vehicle must be at least as clean as the original Moyer Program funded vehicle, be in the same weight class, and cannot have more miles than would have been accumulated based on the mileage used to

determine the funding amount, or no more than 600,000 miles for HHD vehicles, 350,000 miles for MHD vehicles, and 250,000 miles for LHD vehicles.

- (I) Any change of ownership, change in registration status, or change of mailing address during the contract term must be reported to the air district within 10 business days.

4. Existing Engine and Vehicle Requirements

- (A) The existing vehicle must currently operate on diesel fuel or alternative fuel such as compressed natural gas.
- (B) The existing vehicle must have an engine model year that is 6 or more years of age prior to the current calendar year, except if it is a school bus or log truck which may be powered by an engine of any model year. The maximum chassis age for all-electric conversions must be no more than ten years old.
- (C) The existing vehicle must either be: 1) currently registered and have been registered in California for the past 24 months supported by documentation showing no lapses (except for seasonal vehicles and those eligible under the military service provision); or 2) must have been registered in California for the previous eight consecutive months with supporting documentation supplemented by alternate documentation showing California operation for the past 24 months. California International Registration Plan (IRP) documents are acceptable. Out of State IRP or registration is not eligible. The existing vehicle must be based in California.
- (D) If the existing vehicle operates seasonally, then the existing vehicle may be eligible to participate if it has been registered in California for three to six continuous months per 12-month period for the previous 24 months. DMV partial year registration documentation for each period the vehicle was registered must be included with the application.
- (E) The participant must provide proof of insurance for the old vehicle for the previous 24 months.
- (F) The existing vehicle must meet the criteria for either an LHD vehicle, MHD vehicle, or an HHD vehicle, as defined below:
 - (1) LHD vehicles must have a manufacturer GVWR of 14,001-19,500 lbs.
 - (2) MHD vehicles must have a manufacturer GVWR of 19,501-33,000 lbs.

- (3) HHD vehicles must have a manufacturer GVWR of 33,001 lbs. or greater.
 - (4) GVWR may be documented with a photo of the vehicle manufacturer tag or a copy of the manufacturer build sheet. Air districts may request CARB approval of alternate GVWR documentation on a case-by-case basis.
- (G) Engine Verification:
- (1) The air district file must include a copy of the existing engine Executive Order. If an Executive Order is not available, the air district may request approval of alternative documentation on a case-by-case basis.
 - (2) If the old vehicle engine tag is missing, then verification of the engine information can be satisfied with the engine serial number. The participant must provide verification of the engine make, model, model year, engine serial number, and horsepower from the manufacturer. The participant may also verify the horsepower with the results of a dynamometer test. The dynamometer test will take into account a 15 percent loss in actual horsepower, accounting for transmission loss. Verification can include a letter or a printout from an engine manufacturer or dealership. On a case-by-case basis, CARB may approve other means of obtaining the information.
- (H) The existing vehicle must be in operational or roadworthy condition, as determined through a CHP Biennial Inspection of Terminals (BIT) or equivalent air district-approved inspection. If the air district does not conduct a pre-inspection, the following methods may be used:
- (1) The vehicle owner may submit a completed CHP 90-Day Safety Inspection Form documenting an inspection that occurred within 90 days of the application date; or
 - (2) An air district approved contractor may conduct the inspection of the old vehicle and provide pictures verifying that the vehicle is in operational condition.
- (I) Glider Kits: Glider kits are replacement chassis and cabs for on-road heavy-duty vehicles. Glider kits are generally identified with a VIN starting with the letters "GL." In situations where the model years of the glider kit vehicle's chassis and engine differ, approval determination shall be made using the model year of the engine. Existing glider kit vehicles are eligible to participate but the replacement vehicle has to be a complete Original Equipment Manufacturer vehicle; i.e., the replacement vehicle cannot be a glider kit.

- (J) Existing Vehicle Body Components: The body of the existing vehicle does not play a part in the participation in the program. Program funds can only be used to purchase the new vehicle, not external body components or parts used for a particular vocation (e.g., dump body). The common practice for vehicle owners to remove non-emission related body components from the existing vehicle and place them on the replacement vehicle is still permissible as long as the components do not exist on the replacement vehicle and are not a part of the paid components for the replacement vehicle.
- (K) Operation of Existing Vehicle After Approval: If the existing vehicle is in an accident or has an engine failure after receiving approval from the air district but prior to replacement, then the existing vehicle will still be eligible for receiving funds from the program as long as all other on-road requirements have been met.

5. Replacement Engine and Vehicle Requirements

- (A) Emission Standards: Replacement vehicles with engines certified to an optional 0.02 g/bhp-hr NOx and 0.01 g/bhp-hr PM emission standard or cleaner are eligible for funding (unless noted otherwise). New zero emission vehicles must have CARB-issued executive order confirming the vehicle does not emit any vehicle exhaust emissions or fuel-based evaporative emissions. If the baseline engine model year is 2010 or newer, the replacement engine must at least be certified to a NOx standard level of optional 0.02 g/bhp-hr NOx or lower (unless noted otherwise). Replacement vehicles with engines certified to the 0.2 g/bhp-hr NOx and 0.01 g/bhp-hr PM emission standard or cleaner for vehicle categories not subject to on-road in-use regulation(s), rule(s), or requirement(s) (e.g., emergency vehicles) may be eligible. During the contract or voucher period, the replacement engine or vehicle must not be used to meet a compliance deadline set by an applicable rule, regulation, or requirement.
- (B) Engine class: The engine's primary intended service class must match the replacement vehicle's weight class (i.e., an MHD diesel engine is used in a vehicle with a GVWR of 19,501- 33,000 lbs. and an HHD diesel engine is used in a vehicle with a GVWR greater than 33,000 lbs.). As an exception, an HHD engine may be installed in an MHD vehicle if necessary for vocational purposes, but only if the GVWR is within 10 percent of the engine's intended service class (i.e., GVWR of 29,701 lbs. or greater). Also, an MHD engine may be installed in an HHD vehicle, but only if the GVWR is within 10 percent of the engine's intended service class (i.e., GVWR of 36,300 lbs. or less). In cases of ZE replacement vehicles where the GVWR is not within 10 percent of the baseline engine's intended service class and there is no zero-emission vehicle replacement available within 10 percent of the baseline vehicle's intended

service class that can perform the same or equivalent level of work of the baseline vehicle, the air district may approve the ZE replacement vehicle if all of the following requirements are met:

- (1) Confirmation that the intended use of the replacement vehicle would remain the same as that of the existing vehicle.
- (2) Justification for the deviation in GVWR not being within 10 percent and a description of the weight difference between the battery electric powertrains of the existing and replacement vehicles (e.g., the zero-emission vehicle specification sheet).
- (3) How the ZE replacement vehicle will safely accommodate the equivalent level and scope of work that the existing vehicle performs (e.g., a letter from the manufacturer or certified statement from the applicant confirming the replacement vehicle can safely operate in the same degree as the old vehicle without adversely impacting its durability).
- (4) All other requirements within Section C.5 are met.

Changes must be requested and approved prior to the purchase of the replacement vehicle.

- (C) Mileage: A used HHD replacement vehicle must have less than 500,000 miles, a used MHD replacement vehicle must have less than 250,000 miles, and a used LHD replacement vehicle must have less than 150,000 miles with odometer verification to occur at the post-inspection.
- (D) All-Electric Range: Electric vehicles and hybrid vehicles (new or converted) must demonstrate an all-electric range of at least 35 miles. Those with fast charge capability must demonstrate an all-electric range of at least 20 miles. If a vehicle is not certified to meet this range, it may only be approved for funding following CARB evaluation of demonstration test data verifying that minimum all-electric range requirements are met. If demonstration data has already been submitted to another CARB funding program and approved, demonstration requirements may be waived.
- (E) Horsepower: The replacement engine or ZE vehicle horsepower must be no more than 25 percent greater than the existing engine horsepower. In limited situations, such as the non-availability of the original horsepower range for the specific application, the air district may approve a greater than 25 percent increase in horsepower.
- (F) Weight Class: Except for school buses as described in Section C.1.(B)(3) and ZE replacements, the replacement vehicle must be in the same weight class as the existing vehicle (either LHD, MHD, or HHD). An MHD vehicle can replace an HHD vehicle, or vice versa, if they both have the

same axle configuration and the replacement will not carry more load than the existing vehicle while performing the same work (e.g., an existing HHD vehicle with two axles can be replaced with an MHD vehicle with two axles, or an MHD vehicle can be replaced with an HHD vehicle if both have the same number of axles, carry the same load, and perform the same work). The funding amount for this change must be at the MHD funding level. In the case of ZE replacements, differing weight classes to the existing vehicle may be eligible if Sections C.5(B), C.5(G), and all requirements of Section C.5 are met and approved by the air district.

- (G) Body and Axle Configuration: The replacement vehicle must have the same axle and body configuration as the existing vehicle. The air district may allow slight changes based on the latest technology. In the case of ZE replacement vehicles differing from the existing vehicle's axle and/or body configuration, the following must be provided when possible:
 - (1) Confirmation that the intended use of the replacement vehicle would remain the same as that of the existing vehicle.
 - (2) Justification for the deviation in GVWR not being within 10 percent and a description of the weight difference between the battery electric powertrains of the existing and replacement vehicles (e.g., the zero-emission vehicle specification sheet).
 - (3) How the ZE replacement vehicle will safely accommodate the equivalent level and scope of work that the existing vehicle performs (e.g., a letter from the manufacturer or certified statement from the applicant confirming the replacement vehicle can safely operate in the same degree as the old vehicle without adversely impacting its durability).
 - (4) All other requirements within Section C.5 are met.
 - (5) Changes must be requested and approved prior to the purchase of the replacement vehicle.
- (H) Title: The replacement vehicle must have a clean title prior to purchase. The replacement vehicle must not have a salvage title and must not have been in an accident, repaired, and became available for resale.
- (I) California Registration: The replacement vehicle must be registered in California or in the California IRP.
- (J) The participant must maintain insurance coverage for the replaced/repowered/converted vehicle as required by law for the duration of the project life. The participant is encouraged to have replacement value insurance coverage to ensure complete repair or replacement in the event of major damage to the vehicle. If the vehicle is not repaired and

replaced during the project life, the applicant must return prorated funds. See Section C.6.(1)(3).

- (K) Warranty requirements: The following warranty requirements apply:
- (1) Except for school buses, hybrids, and zero-emission vehicles, all participants must purchase a major component engine warranty for the replacement new or used vehicle or repowered engine. The warranty must cover parts and labor. If the purchase of a new or used replacement vehicle is in accordance with currently required warranty periods or warranty requirements for newer engine model years as specified in the Heavy-Duty Low NOx Omnibus Regulation then separate supplemental warranty is not required. However, it is recommended that the highest grade warranty be purchased in order to avoid expensive repairs in the future.
 - (2) Electric vehicles, hybrid vehicles, and conversion systems must have a minimum warranty period of 3 years or 50,000 miles. The warranty must cover the engine (if applicable) or motor, drivetrain, battery or energy storage, and parts and labor (including any part on the converted vehicle or engine that is damaged by the hybrid conversion system).
 - (3) For ZE school buses, the vendor warranty must provide protection for a minimum of 60 months or 75,000 miles, whichever comes first, and provide full warranty coverage of, at a minimum, zero-emission or all-electric motor, drive train, batteries/energy storage system(s), and parts and labor. Warranties must be fully transferrable to subsequent school bus purchasers for the full warranty coverage period. Warranties must cover the following for the full warranty period (unless otherwise denoted):
 - a. Extended Motor, Drivetrain (including Battery), and Zero-Emission Components: Provide warranty coverage against defects in material and workmanship for the motor, transmission, rear axle, and electric or zero-emission system components including the battery. Gaskets and seals are not required to be included under the warranty coverage.
 - b. Frame Rails, Cross Members, and Cab: For new school buses, coverage extends to structural cracks in the frame caused by defects in material workmanship and against corrosion perforation of the cab. For school bus conversions, the all-electric school bus vendor is only responsible for damage or corrosion tied to, or resulting from, their workmanship on, or handling of, these parts.

- c. **Battery Degradation Warranty:** Provide warranty coverage against battery degradation below 80 percent of capacity.
- (4) No Moyer Program funds will be issued for maintenance or repairs related to the operation of the vehicle. The participant takes sole responsibility for ensuring that the vehicle is in operational condition throughout the agreement period.
- (L) **Engine and Emission Control Modifications:** Emission controls on the replacement vehicle engine cannot be modified except as permitted by law. Unauthorized modification to engine performance including, but not limited to, changes in horsepower, emission characteristics, engine emission components (not including repairs with like-original equipment manufacturers replacement parts), and modifications to the engine's emission control function or the electronic monitoring unit are not allowed.
- (M) **Service:** At least one California service provider approved by the manufacturer must be available to repair and service the engine/vehicle.

6. Air District Requirements

- (A) Requirements described in Chapter 3: Program Administration must be met unless otherwise stated in this chapter.
- (B) Air districts must include the on-road category as a funding option in the air district's Moyer Program Policies and Procedures Manual before funding on-road projects. The Policies and Procedures must include the administrative tools that are needed to manage on-road projects, including memoranda of understanding (MOU) or agreements with vehicle dealerships/providers (if applicable) and dismantlers, reimbursement procedures, inspections, monitoring and enforcement, contract development, etc. Air districts are not required to submit the initial Policies and Procedures to CARB for approval, but it must be available upon request.
- (C) Air districts may fund on-road projects through a regional program administered by one designated air district. The designated air district may be located within the region or may be a large air district located outside the region.
- (D) Air districts are responsible for ensuring all Moyer Program requirements are met. Air districts are encouraged but not required to have agreements or MOUs with vehicle dealerships and dismantlers. However, if the participating air district does not currently have a contract with a dismantler, it must provide written verification that all dismantler requirements and obligations outlined in Section C.8 were met prior to

scrappage. Agreements or MOUs, should contain, at a minimum, the program requirements (including, but not limited to, the requirement that the dealer delivers the existing vehicle to a qualified dismantler within 60 calendar days of the date that the old vehicle was turned in to the dealer by the applicant) that are expected of each entity and the repercussions for noncompliance with the terms of the agreement or MOU for each entity. Air districts that fund projects through both VIP and this chapter can have one agreement with each dealer and dismantler for both programs as long as the dealer and dismantler agree to follow requirements of each program. State funds must not be provided by the air district for any dismantler or material costs, including hazardous waste abatement fees, labor costs, fines, permits, or other charges resulting from destruction or disposal.

- (E) Reimbursement: To ensure that an application package is complete, the following items must be included and complete prior to reimbursement:
- (1) Signed and complete application and fully executed contract.
 - (2) Documentation showing that the existing vehicle is roadworthy. This includes documentation showing that the old vehicle has passed a CHP BIT inspection in the past 90 days or conduct an equivalent vehicle inspection and sign as appropriate. If documentation is provided by a dealership, the air district reserves the right to audit the dealership's record of inspection.
 - (3) Invoices of the purchase and all work performed. If work was performed on the replacement vehicle, the invoices must include all engine or motor, transmission, engine horsepower derating, body and other work performed on the replacement vehicle.
 - (4) Digital photographs of the existing vehicle and the replacement vehicle or engine. If a contractor conducts any inspections, the air district will specify the required digital format. Reimbursement will not be processed until all photographs are received and verified by the air district. All photographs must be clear, and all VIN and engine or motor serial numbers must be legible.
 - a. Photographs of the old vehicle must include the following views:
 - i. Right Side - hood down.
 - ii. Front - hood down.
 - iii. Left Side – hood down.
 - iv. Rear.
 - v. VIN Tag – inside vehicle or on frame rail.

- vi. Engine serial number and engine information, if available (make, model year, engine family) - either tag or stamp on block.
 - vii. License plate.
 - viii. Left and right side of engine.
- b. Photographs of the replacement engine or vehicle must include the following views:
- i. At least one side of the vehicle.
 - ii. VIN Tag – inside vehicle or on frame rail.
 - iii. Engine serial number and engine information – tag (or primary motive power components).
 - iv. License plate.
 - v. Odometer reading.
 - vi. Left and right side of engine (or primary motive power components).
 - vii. Modifications (if any).
- (5) Dealer/Provider/Installer/Air District certification that the old engine and/or vehicle will be delivered to a qualified dismantler within 60 calendar days of receipt of the old engine or vehicle. The certification must include the make, model, year, VIN, engine make, engine serial number, and the date the engine or vehicle is expected to be delivered to the dismantler. The location of the dismantler yard where the engine/vehicle will be destroyed must also be provided. Reimbursement of the incentive grant award will be withheld until the air district can verify the existing vehicle is delivered and accepted by the dismantler in accordance with guideline requirements.
- (6) Documentation of replacement vehicle warranty and registration (if applicable).
- (7) Proof of Project Financing: The financing package will enable the air district to determine the reimbursement costs that may be accrued in case the participant defaults on the contracted performance requirements. Proof of project financing can be a document showing the lender and the amount loaned, which at a minimum is a copy of the check given to the dealer equal to the portion of the project that was not Moyer Program funded. Proof of project financing is always required unless the grantee paid cash for the portion of the project that was not Moyer Program funded.

- (8) For replacements, dealerships must possess pre-inspection documentation of the existing and replacement vehicles prior to releasing the replacement vehicle to the participant. If the air district or authorized third party conducts the inspections, the dealership must receive approval from the district before releasing the replacement vehicle. Upon request of the air district, CARB may waive inspection requirements.
 - (9) Proof of sale after the application and all required documentation have been approved by the air district.
 - (10) Copy of Title of Existing Vehicle. For replacement projects, the title must be signed and dated by the applicant.
- (F) A third party (e.g., engine/ZE vehicle dealer or distributor) may complete an application or part of an application on an owner's behalf only if the vehicle owner signs and agrees to the application. Applications must include a signature section for third parties. The third party signature section must include signature and date lines, and sections for the third party to disclose how much they are being paid, if anything, to complete the application and the source of funds used to pay them. To make the Moyer Program accessible to all potential applicants, including those that cannot afford to hire third party assistance, air districts are encouraged to provide assistance to applicants.
- (G) Air districts must ensure the vehicle and engine are scrapped within 60 calendar days of the dismantler's receipt of the vehicle. This must be confirmed through post-inspection by the air district or an air district approved contractor. The destruction of the old vehicle and engine must be properly documented in accordance with the Moyer Program requirements. If there is a delay in destruction of the old vehicle, the air district must document the communication and reasoning for the delay from the dismantler in their project file while working with the dismantler to ensure the vehicle is destroyed according to guideline requirements as soon as is feasible.
- (H) Inspections: The following inspections must be performed for each funded engine/vehicle (exceptions are allowed for public fleets and transit agencies as specified in Chapter 3) as shown in Table 4-9:

Table 4-9 Required Inspections for On-Road Projects

| Inspection Type | Purpose(s) | Timing |
|----------------------|---|---|
| Pre-inspection | Verify existing vehicle is in operational condition. Verify existing vehicle application information. | After application is submitted to air district but prior to approving the application. |
| Post-inspection | Verify replacement vehicle meets emission standard. Verify application information. | Before replacement engine/vehicle is delivered, and prior to payment being issued. |
| Dismantle inspection | Verify engine destruction (see Section C. 8.(C)(4)). Verify that frame rails are completely severed. Obtain copy of REG 42 form filed with DMV. | After engine and frame rail destruction. Within 60 days after dismantler receipt. If dismantler takes photos, they must be provided to the air district within 10 business days of dismantling. |

Documentation requirements are specified in Chapter 3, Section W. and X. Air districts may enter into a contract, written agreement, or memorandum of understanding with a contractor to perform project inspections (pre-inspections, post-inspections, or dismantle inspections). If an air district chooses to use contractors to perform inspections, air district staff must conduct and document at least one inspection on each project without the use of a contractor. Air districts must ensure all inspection requirements are met and shall retain legal responsibility for full compliance with the inspection provisions of these Guidelines, regardless of the use of contractors. With approval by CARB, air districts may use a remote inspection protocol in lieu of physical inspections. Air districts that do not conduct 100 percent of required inspections themselves must audit 5 percent of each type of inspection (pre, post, pre-dismantle, and dismantle). Audits should be done randomly and occur throughout the implementation timeline of the air district. If applicable, the dismantler inspection may be performed using an authorized remote inspection protocol.

- (I) Remote Inspections: An authorized remote inspection will allow the air district inspector to witness a “live” streaming video taken by the applicant, dealership, or other individual with video capability.
 - (1) A remote inspection protocol must include the following:
 - a. A complete view of the entire vehicle or equipment (including front, back and side views, and license plate as applicable
 - b. Label showing the VIN and GVWR, as applicable
 - c. Location and current reading of the odometer or hour meter
 - d. Verification that the engine or vehicle is operational (with a start-up) and that the engine or vehicle is working as described in the application
 - e. A view of the engine or motor with unique identifier (ESN or other identification number)
 - (2) The air district inspector will also make a note of any identifiable markings on the vehicle (if any). These markings cannot be used in lieu of a VIN, ESN, or other unique identification number or engine tag.
 - (3) Consistent with current inspection procedures, engines without a visible and legible serial number must be uniquely identified by having the engine block stamped with a unique identification number or alternative permanent marking, such as an engine tag.
 - (4) All requirements from (C)(6)(E) must be met.
- (J) Recovery of Moyer Program Grant Funds: The air district must establish a mechanism to assure the participants fulfill all contractual obligations, including owning and operating the funded vehicle for the project life. The air district will determine noticing requirements and the method to achieve fund recovery. Air districts may consider the following options:
 - (1) List the air district as co-lien holder on the title of the funded vehicle for the term of the agreement. The participant must submit a completed Uniform Commercial Code-1 Financing Statement Form to the California Secretary of State, with a copy sent to the air district, within 30 days of the project sale. The financing statement must have the air district as the secured party and the vehicle should be listed as collateral.

- (2) If the funded vehicle is sold during the project life, the new owner must assume the obligations under the participant's contract with the air district and comply with the terms and conditions of the contract. The air district must approve the change in ownership prior to the sale.
- (3) The grant recipient may return funds according to the following prorated formula:

$$\begin{aligned}
 & \text{Recapture Amount (\$)} = \\
 & \text{Funding Amount(\$)} - \frac{\text{Elapsed Portion of Project Life(Yrs)} * \text{Funding Amount(\$)}}{\text{Project Life(Yrs)}}
 \end{aligned}$$

- (K) Air districts and CARB reserve the right to deny funding to applicants that have previously received funds and did not meet the terms and conditions of the funding agreement.
- (L) Projects may be reviewed through a solicitation process or first-come, first-served as described in the air district's Policies and Procedures.
- (M) Air districts must perform compliance checks (see section C.1.(D)).
- (N) Air districts must provide training, as described in Section C.7.(A)(3) and C.8.(B)(2), and additional training in a timely manner whenever there have been substantive Moyer Program revisions.

7. Dealership/Installer Requirements

- (A) Dealerships and installers must certify that they meet the following minimum qualifications and will continue to meet these qualifications throughout participation in the Program:
 - (1) Dealership/Installer has had a valid business license issued in California for a minimum of the last two years.
 - (2) Dealership has had a valid vehicle dealership license with DMV for a minimum of the last two years. The installer is authorized by the manufacturer.
 - (3) Dealership/Installer maintains a minimum of one employee that has successfully completed the training by the air district regarding terms, conditions, and requirements of the Program. If a participating dealership maintains more than one location for truck sales, then each location must have at least one employee trained. If a dealership is participating within the Program, the dealership

must work with the air district to understand and meet the terms, conditions, and requirements of the Program.

- (4) Dealership/Installer agrees to allow the air district or CARB to inspect vehicles or audit program records covered under the Moyer Program Guidelines during normal business hours.
- (B) Vehicle dealers must:
- (1) Provide basic information to vehicle owners about the Moyer Program.
 - (2) Help participants complete the application, if necessary. It is important to make sure that all information is filled out correctly and that the participant understands the meaning of the program and the contract. Once complete, the dealer may submit the application package to the air district according to the agreement or MOU, if applicable.
- (C) Dealerships and installers must adhere to agreements or MOUs established with the air district, if applicable.
- (D) Dealerships and installers must submit all supporting documentation required under the Guidelines and, if applicable, air district agreement for each project. Once all dealership/installer requirements have been met, reimbursement will be issued to the dealer/installer according to the agreement or MOU, when applicable.
- (E) Dealerships and installers must possess pre-inspection documentation of the existing and replacement engines/vehicles prior to releasing the replacement engine/vehicle to the participant. If the agreement or MOU specifies that the air district or other third party will perform any inspections, the dealership/installer must receive air district approval before releasing the replacement engine/vehicle to the participant. Upon request of the air district, CARB may waive inspection requirements.
- (F) For replacements, the existing vehicle must remain in similar condition as found in the pre-inspection until receipt and acceptance by the dismantler. The dealer or air district authorized third party must not deliver the existing vehicle to the dismantler if it is deemed unroadworthy or if parts were stripped from the existing vehicle (except for parts essential to vocation that will be installed on the replacement vehicle). Reimbursement to the dealer or release of funds to the grantee will be withheld until the air district can verify the existing vehicle is delivered and accepted by the dismantler in accordance with guideline requirements.
- (G) The dealer, installer, or third party authorized by the air district, must deliver the existing engine/vehicle to a qualified dismantler within 60

calendar days of receipt or delivery of the replacement engine/vehicle to the grantee. The dealer, installer, or authorized third party must immediately notify the air district of the location and date of delivery of the existing engine/vehicle to the dismantler. The participating dismantler may also pick up the existing engine/vehicle.

- (H) Use of Engine or Vehicle Pending Destruction: The dealer/installer may not use or permit the use of, the engines or vehicles, except use necessary to move it for destruction or storage.
- (I) For electric or hybrid vehicles (new or converted), the dealership/installer/manufacturer must provide the air district with a copy of the owner's manual and other materials that will be provided to the purchaser/participant. The owner's manual and other materials must at least include the following information:
 - (1) A brief description of the vehicle/conversion system, including major components and their theory of operation and proper operating procedures;
 - (2) Battery maintenance best practices and charging procedures and protocols, if applicable;
 - (3) A listing of necessary service intervals and service requirements that differ from the base vehicle's or engine's original manufacturer's, if applicable;
 - (4) A statement that the hybrid converted vehicle is subject to all in-use vehicle inspection and maintenance programs applicable to its size, type, and class;
 - (5) The name, physical address, e-mail address, phone number, and website, if available, of the manufacturer and authorized installer, as well as a list of the names, addresses, and phone numbers of the major dealers who supply parts for, or service the vehicle;
 - (6) All information necessary for the proper and safe operation of the vehicle, including information on safe handling of the battery or energy storage system, and emergency procedures to follow in the event of battery leakage or other malfunctions that may affect the safety of the vehicle operator, emergency personnel, or laboratory personnel;
 - (7) The product warranty statement.

8. Dismantler Requirements

- (A) If the existing engine or vehicle is replaced or removed, it must be dismantled. This requirement has been established to ensure that emission reductions are real, preventing the engine from continuing to emit high levels of pollutants. Destruction of the existing vehicle chassis and engine permanently removes the old, high emitting vehicle from service. The existing vehicle and engine specified in the application (or engine only for repower and conversion projects) must be dismantled and may not be substituted with a different vehicle.
- (B) To participate in the Program, dismantlers must:
 - (1) Enter into an agreement with the air district.
 - (2) Have at least one active employee who received training by the air district on the requirements of the Moyer Program. If a dismantler has more than one location, then the dismantler must have at least one active employee trained by the air district at each location that will be accepting engines/vehicles for the Moyer Program. If a dismantler is participating within the Program, the dismantler must work with the air district to understand and meet the requirements of the Program.
 - (3) Be licensed by DMV as a dismantler for at least the previous two years.
 - (4) Have had a valid business license issued in California for a minimum of the last two years.
 - (5) Possess a current, valid California Environmental Protection Agency Hazardous Materials Generators Permit.
 - (6) Be in compliance with all local, State, and federal laws and regulations.
- (C) The dismantler must do the following for each engine/vehicle:
 - (1) If upon receipt, the existing vehicle is deemed unroadworthy or if parts were stripped (see Section C.7.(F)), the dismantler must reject the existing vehicle. Excepted from rejection are cases when parts removed are essential to vocation that will be installed on the replacement vehicle (see Section C.4.(J)).
 - (2) Dismantle the old vehicle in accordance with Moyer Program Guidelines within 60 calendar days of receipt and acceptance of the existing vehicle. Upon dismantler request, the air district may approve an extension. If there is a delay in destruction of the old

vehicle, the air district must document the communication and reasoning for the delay from the dismantler in their project file while working with the dismantler to ensure the vehicle is destroyed according to guideline requirements as soon as is feasible.

- (3) Destroy and render useless the existing vehicle and/or engine. At a minimum, the destruction must include the following:
 - a. Both frame rails must be completely severed between the front and rear axles.
 - b. A hole must be put in the engine block with a diameter of at least three inches at the narrowest point. The hole must be irregularly shaped (i.e., no symmetrical squares or circles). A section of the oil pan flange must be removed as part of the hole or have a line cut through it that connects to the hole.
- (4) If the vehicle is to be scrapped, the dismantler must completely sever the frame rails of the old vehicle to ensure that the vehicle will not be used again.
- (5) Air district staff or the dismantler must take photographs of the destroyed engine and severed frame rails. Dismantler photographs of the destroyed engine block and severed frame rails must be provided to the air district within ten (10) business days of dismantling the vehicle. The following picture views must be taken:
 - a. Front, right, and left side of vehicle with hood down including license plate if available (vehicle scrap).
 - b. VIN tag (vehicle scrap).
 - c. Engine serial number either stamped on the block or on the tag (engine or vehicle scrap).
 - d. Left and right side of destroyed engine block either in-frame or out of frame (engine or vehicle scrap).
 - e. Hole in engine block (engine or vehicle scrap).
 - f. Completely severed frame rails (vehicle scrap).
 - g. Odometer Reading (vehicle scrap).
- (6) Prepare and submit to DMV either a "Non-Repairable Vehicle Certificate" using an "Application for Salvage Certificate or Non-Repairable Vehicle Certificate" (REG 488C), or a Notice of Acquisition/Report of Vehicle To Be Dismantled (REG 42) ensuring

the VIN can never be registered again in California. Within 90 calendar days of the dismantle inspection date, the dismantler must provide verification to the air district that the existing vehicle has been registered with DMV as non-revivable with a type transaction code (TTC) L10 or C26 on the DMV Reconciliation transaction receipt or other DMV documentation that satisfies this requirement.

- (7) Upon request of the air district, CARB may approve an alternative disposition for the old engine/vehicle.
- (D) As specified in California Code of Regulations, title 13, section 2706(i)(3)(G), no party shall advertise, sell, lease, or offer for sale or lease, a used verified diesel emission control strategy.
- (E) Dismantler Inspection: Once the air district is notified, a dismantler inspection will be scheduled and photos documenting the destruction of the engine will be taken in accordance with the Guidelines. The dismantler shall not move the vehicle off of their property or part out a vehicle until a dismantler inspection by the air district or a designated contractor has been performed and given approval by the air district. If applicable, the dismantle inspection may be performed using an approved remote inspection protocol.
- (F) Use of Engine or Vehicle Pending Destruction: The dismantler may not use or permit the use of, the engines or vehicles, except use necessary to move it for destruction or storage.