

Chapter 7: OFF-ROAD COMPRESSION-IGNITION EQUIPMENT

This chapter describes the minimum criteria and requirements for Carl Moyer Program mobile, self-propelled, off-road compression-ignition (CI) projects such as construction and agricultural equipment. This chapter also describes criteria for non-agricultural portable equipment.

This chapter does not cover portable and stationary agricultural equipment (see Chapter 10). Criteria and requirements for the off-road equipment replacement category can be found in Chapter 9. Air districts may set more stringent requirements based upon local priorities.

A. Projects Eligible for Funding

The Air Resources Board (ARB) has adopted in-use fleet rules affecting off-road CI equipment: the Regulation for In-Use Off-Road Diesel-Fueled Fleets (Off-Road Regulation) and the Cargo Handling Equipment at Ports and Intermodal Rail Yards Regulation (CHE Regulation). Portable engines are regulated under the Portable Airborne Toxic Control Measure (ATCM). There are limited funding opportunities for equipment subject to these rules.

**Table 7-1
Summary of Off-Road CI Engine Funding Opportunities**

Equipment Type	Subject to ARB Fleet Rule	Moyer Funding Opportunities ¹
Mobile agricultural equipment	No	Funding opportunities exist for engine repowers and retrofits.
Cargo handling equipment at ports/ intermodal rail yards	Cargo Handling Equipment Regulation ²	Very limited opportunities.
Most other off-road equipment (e.g. construction, mining, rental, airport ground support and other industries)	Off-Road Regulation ³	Small fleets: Opportunities exist through Dec. 31, 2025, after which fleet must show 100% compliance with the regulation Medium fleets: Opportunities exist through Dec. 31, 2019, after which fleet must show 100% compliance with the regulation Large fleets: Opportunities exist through Dec. 31, 2016, after which fleet must show 100% compliance with the regulation. After Dec. 31, 2012, only filter-based projects eligible for funding
Portable diesel Engines	Portable Engine ATCM ⁴	Limited opportunities exist ahead of the fleet average requirements

Limited opportunities means a fleet's compliance status with the ARB regulation must be determined. Contact air district Moyer Program staff or consult fleet rule Carl Moyer Implementation Charts at: <http://www.arb.ca.gov/msprog/moyer/guidelines/supplemental-docs.htm> in addition to these guidelines.

² Regulation for Mobile Cargo Handling Equipment at Ports and Intermodal Rail Yards: <http://www.arb.ca.gov/ports/cargo/cargo.htm>

³ Regulation for In-Use Off-Road Diesel-Fueled Fleets <http://www.arb.ca.gov/msprog/ordiesel/ordiesel.htm>

⁴ Regulation for Portable engine ATCM: <http://www.arb.ca.gov/diesel/peatcm/peatcm.htm>

Project Types: Taking the above table into consideration, the following categories are eligible projects:

1. Repower of Existing Equipment
2. Retrofit Purchase
3. New Equipment Purchase: Requires case-by-case approval by ARB.
4. Equipment Replacement: Purchases of new or used CI equipment replacing an uncontrolled, fully functional CI piece of equipment may be eligible. For these projects, refer to Chapter 9 or the Off-Road Voucher Incentive Program.

Please see Section D (Project Criteria) for detailed minimum eligibility requirements for all off-road CI project categories.

B. Maximum Eligible Funding Amounts

Table 7-2 summarizes the maximum eligible funding for each project type. All projects are also subject to the cost-effectiveness threshold defined in Appendix G.

**Table 7-2
Maximum Percentage Eligible for
Carl Moyer Off-Road Compression-Ignition Projects**

Project	Maximum
Tier 1 Repower	75 percent
Tier 2 Repower	80 percent
Tier 3 and Tier 4 Repower	85 percent
Retrofit	100 percent

C. Engine Emission Standards

ARB and the United States Environmental Protection Agency (U.S. EPA) have adopted regulations for exhaust emission standards for new off-road engines and equipment. For reference, Tables 7-3 and 7-4 below summarize the hydrocarbon (HC), oxides of nitrogen (NOx), and particulate matter (PM) standards in grams per brake-horsepower-hour (g/bhp-hr) for Tier 1, 2, 3, and 4 engines. The actual standards, in grams per kilowatt-hour (g/kW-hr), may be found in California Code of Regulations, title 13, sections 2449, et seq.

Table 7-3
ARB and U.S. EPA Tier 1, 2, and 3 Exhaust Emission Standards for
New Off-Road Diesel Engines \geq 25 hp
(g/bhp-hr)

Maximum Rated Power hp (kW)	Tier	Model Year	NOx	HC	NOx+NMHC	PM
25 \leq hp<50 (19 \leq kW<37)	Tier 1	1999-2003 ^(a)	—	—	7.1	0.60
	Tier 2	2004-2007	—	—	5.6	0.45
50 \leq hp<75 (37 \leq kW<56)	Tier 1	1998-2003 ^(a)	6.9	—	—	—
	Tier 2	2004-2007	—	—	5.6	0.30
	Tier 3 ^(b)	2008-2011	—	—	3.5	0.30
75 \leq hp<100 (56 \leq kW<75)	Tier 1	1998-2003 ^(a)	6.9	—	—	—
	Tier 2	2004-2007	—	—	5.6	0.30
	Tier 3	2008-2011	—	—	3.5	0.30
100 \leq hp<175 (75 \leq kW<130)	Tier 1	1997-2002 ^(a)	6.9	—	—	—
	Tier 2	2003-2006	—	—	4.9	0.22
	Tier 3	2007-2011	—	—	3.0	0.22
175 \leq hp<300 (130 \leq kW<225)	Tier 1	1996-2002	6.9	1.0	—	0.40
	Tier 2	2003-2005	—	—	4.9	0.15
	Tier 3 ^(c)	2006-2010	—	—	3.0	0.15
300 \leq hp<600 (225 \leq kW<450)	Tier 1	1996-2000	6.9	1.0	—	0.40
	Tier 2	2001-2005	—	—	4.8	0.15
	Tier 3 ^(c)	2006-2010	—	—	3.0	0.15
600 \leq hp \leq 750 (450 \leq kW \leq 560)	Tier 1	1996-2001	6.9	1.0	—	0.40
	Tier 2	2002-2005	—	—	4.8	0.15
	Tier 3 ^(c)	2006-2010	—	—	3.0	0.15
hp>750 (kW>560)	Tier 1	2000-2005	6.9	1.0	—	0.40
	Tier 2	2006-2010	—	—	4.8	0.15

^(a) EPA model year. ARB model year for Tier 1 starts at 2000 for 25 hp \leq to <175 hp.

^(b) Engine families in this power category may meet the Tier 3 PM standard instead of the Tier 4 interim PM standard in exchange for introducing the final Tier 4 PM standard in 2012.

^(c) Caterpillar, Cummins, Detroit Diesel Corporation, and Volvo Truck Corporation agreed to comply with these standards by 2005.

**Table 7-4
ARB and U.S. EPA Tier 4 Exhaust Emission Standards for
New Off-Road Diesel Engines \geq 25 hp
(g/bhp-hr)**

Maximum Rated Power hp (kW)	Tier	Model Year	NOx	HC	NOx+NMHC	PM
25 \leq hp<50 (19 \leq kW<37)	Tier 4 Interim	2008-2012	—	—	5.6	0.22
	Tier 4 Final	2013 and later	—	—	3.5	0.02
50 \leq hp<75 (37 \leq kW<56)	Tier 4 Interim ^(a)	2008-2012	—	—	3.5	0.22
	Tier 4 Final	2013 and later	—	—	3.5	0.02
75 \leq hp<100 (56 \leq kW<75)	Tier 4 Phase-In	2012-2014	0.30	0.14	—	0.01
	Tier 4 Phase-Out		—	—	3.5	0.01
	Tier 4 Alternate NOx ^(b)		2.5	0.14	—	0.01
	Tier 4 Final	2015 and later	0.30	0.14	—	0.01
100 \leq hp<175 (75 \leq kW<130)	Tier 4 Phase-In	2012-2014	0.30	0.14	—	0.01
	Tier 4 Phase-Out		—	—	3.0	0.01
	Tier 4 Alternate NOx ^(b)		2.5	0.14	—	0.01
	Tier 4 Final	2015 and later	0.30	0.14	—	0.01
175 \leq hp<750 (130 \leq kW<560)	Tier 4 Phase-In	2011-2013	0.30	0.14	—	0.01
	Tier 4 Phase-Out		—	—	3.0	0.01
	Tier 4 Alternate NOx ^(b)		1.5	0.14	—	0.01
	Tier 4 Final	2014 and later	0.30	0.14	—	0.01
hp>750 (kW>560)	Tier 4 Interim	2011-2014	2.6	0.30	—	0.07
	Tier 4 Final	2015 and later	2.6	0.14	—	0.03

^(a) Engine families in this power category may meet the Tier 3 PM standard instead of the Tier 4 interim PM standard in exchange for introducing the final Tier 4 PM standard in 2012.

^(b) The implementation schedule shown is the three-year alternate NOx approach. Other schedules are available.

D. Project Criteria

The minimum qualifications for off-road compression-ignition projects are listed below. All projects must also conform to the requirements in Chapter 2: General Criteria and in Chapter 3: Program Administration. Participating air districts retain the authority to impose additional requirements in order to address local concerns.

1. General Off-Road CI Equipment Project Criteria

- (A) Maximum project life:
- | | |
|------------------------------------|-----------|
| (1) Repower only (no retrofit) | 7 years |
| (2) Repower + retrofit | 5 years |
| (3) Retrofit | 5 years |
| (4) Farm equipment* (all projects) | 10 years* |

*Air districts are required to offer a 10 year project life for farm equipment; however, applicants may request a project life less than 10 years.

A longer project life may be granted case-by-case approval if an applicant provides justifying documentation. The maximum project life does not consider regulatory requirements that may shorten the eligible project life. Regulatory requirements may reduce actual project lives below these maximum values.

- (B) Engines greater than 25 horsepower on mobile and portable off-road equipment are eligible for funding.
- (C) Air Districts have discretion to use good engineering judgment to determine the project horsepower for an engine based on the engine label, manual, and engine records or other verifiable records. For projects in which the actual engine horsepower cannot be determined based on information listed above the engine horsepower can be estimated by the following formula: $\text{Engine hp} = \text{Power Take Off hp} \times 120 \text{ percent}$.
- (D) The certification emission standards and Tier designation for the engine must be determined from the Executive Order or U.S. EPA Certificate of Conformity (for federally preempted engines) issued for that engine. ARB Executive Orders for off-road engines may be found at <http://www.arb.ca.gov/msprog/offroad/cert/cert.php>.
- (E) Engines that are participating in the "Tier 4 Early Introduction Incentive for Engine Manufacturers" program, as detailed in California Code of Regulations, title 13, section 2423(b)(6), are eligible for Carl Moyer Program funding provided that they are certified to the final Tier 4 emission standards. The ARB Executive Order for these engines indicates that the engines are certified under this provision. The emission rates for these engines used to determine cost-effectiveness shall be

equivalent to the emission factors associated with Tier 3 engines. Air districts must retain this documentation in the project file.

- (F) Interim Tier 4 engines between 75 and 750 horsepower certified to the Phase-In, Phase-Out, and Alternate NOx standards as detailed in California Code of Regulations, title 13, section 2423(b)(1)(B), are eligible for funding. The appropriate emission factors for calculating emission reductions and cost-effectiveness are listed in Appendix D, Table D-12.
- (G) For equipment with baseline engines manufactured under the flexibility provision, detailed in California Code of Regulations, title 13, section 2423(d), baseline emission rates shall be determined by using the previous applicable Tier emission standard for that engine model year and horsepower rating. Alternatively, the baseline emission rates may be determined based upon the standard or Tier associated with the actual reference family listed on the emission control information label of the baseline equipment. The ARB Executive Order for these engines indicates that the engines are certified under the flexibility provision. Air districts must retain this documentation in the project file.
- (H) Notwithstanding section D.2.(C), interim Tier 4 (interim Tier 4, Tier 4 Phase-Out, Tier 4 Phase-in/Alternate NOx) and Tier 4 Final engines participating in the averaging, banking and trading program that are certified to family emission limits (FEL) higher than the applicable emission standards are eligible to participate in the Carl Moyer Program. The appropriate emission factor for calculating emission reductions and cost-effectiveness shall be equivalent to the emission factors associated with the Tier 3 for engines 50 to 750 horsepower and Tier 2 for engines less than 50 horsepower or greater than 750 horsepower.
- (I) Interim Tier 4 and Tier 4 engines participating in the averaging, banking and trading program that are certified to family emission limits (FEL) below the applicable emission standards are eligible to participate in the Carl Moyer Program. The appropriate emission factor for calculating emission reductions and cost-effectiveness shall be the emission factor associated with the applicable interim Tier 4 (interim Tier 4, Tier 4 Phase-Out, Tier 4 Phase-in/Alternate NOx) or Tier 4 Final emission standard.
- (J) New replacement engines manufactured under the “replacement engine” provisions of CCR, Title 13, Section 2423(j) and/or the provisions of 40 CFR 1068.240 are eligible for Carl Moyer Program funding.
- (K) The criteria of this chapter are applicable to portable off-road engines that are not covered by the definition of agricultural source under Health and Safety Code section 39011.5. However, portable equipment owned by agricultural service companies, rental companies, public agencies, and

non-agricultural service companies meet the definition of farm equipment per this chapter and are subject to the eligibility criteria outlined in Chapter 10.

- (L) Cost-effectiveness calculations must use the hour-based formula as discussed in Appendix C. Fuel usage may only be used with case-by-case approval from ARB. If using the fuel based formula, usage must be based on two years historical fuel usage documentation specific for the equipment being funded. Documentation may include fuel logs, purchase receipts, or ledger entries.
- (M) Future annual hours of equipment operation for determining emission reductions must be based upon readings from an installed and fully operational hour meter. If equipment does not have a functioning hour meter at the time of the project, the hour meter must be installed, repaired, and/or replaced. If during the project life the hour meter fails for any reason, the hour meter must be repaired or replaced as soon as possible at the owner's cost. If case-by-case approval was provided by ARB to use fuel usage for determining emission reductions, then future annual fuel usage must be based on fuel logs, purchase receipts, or ledger entries specific to the funded equipment.
- (N) Project load factors for calculating emission reductions and cost-effectiveness are listed in Appendix D, Table D-10. Load factors shall be selected by first choosing the equipment category (i.e., Airport GSE, Mobile Agriculture, Construction, etc.), then by selecting the equipment type within the category. This is consistent with how the equipment category and load factor inputs are selected in CARL.

2. Repower

A repower is the replacement of the existing engine with a newer emission-certified engine instead of rebuilding the existing engine to its original specifications. These are commonly diesel-to-diesel repowers and significant NO_x and PM benefits are achieved due to the higher emission levels of the engine being replaced.

- (A) Funding is not available for projects where a spark-ignition engine (i.e., natural gas, gasoline, etc.) is replaced with a diesel engine.
- (B) Equipment manufactured under the "Flexibility Provisions for Equipment Manufacturers" as detailed in California Code of Regulations, title 13, section 2423(d), are ineligible for Carl Moyer Program funding as a replacement engine.
- (C) Engines eligible for repowers must meet the current applicable standard or Tier. If repowering with an engine meeting the current applicable standard

is technically infeasible, unsafe, or not available when the air district commits to the proposed project, the replacement engine must meet the most practicable previously applicable emission standard. For purposes of this section, air district's commitment to a proposed project shall be consistent with that stated in their policies and procedures manual. The air district shall determine eligibility of a repower project using an engine certified to a previous emission standard using the criteria listed below:

- (1) At the applicant's request, confirmation of availability of an engine meeting the most recent emission standards or Tier may be limited to the same manufacturer as the existing engine.
- (2) If the air district and the applicant do not execute a contract for the project within six months of project commitment, then the air district must recheck for the availability of engines meeting the current standard.
- (3) Documentation that engines meeting the current applicable standards are unavailable must be provided to the air district. Acceptable documentation that engines meeting the most recent emission standards are unavailable include:
 - a. Verifiable information from the engine manufacturer, engine distributor, and/or engine dealer regarding the unavailability of engines meeting the current emission standards or Tier.
 - b. Confirmation (a written declaration by the air district is acceptable) that engines from a specific manufacturer meeting the current emission standards or Tier are not certified (Executive Order is not available on ARB website). Executive Orders for off-road engines may be found at <http://www.arb.ca.gov/msprog/offroad/cert/cert.php>.
 - c. A written statement of reason(s) provided by the engine manufacturer verifying that a particular piece of equipment cannot accommodate an engine meeting current standards without major modifications or safety risks. The letter must include information on the equipment being repowered, the engine being replaced, the reason why an engine meeting the currently applicable standard cannot be used (including applicable supporting documentation), and the proposed replacement engine. Air districts must retain the written statement of reasons in the project files.
 - d. The engine manufacturer has provided ARB with sufficient information on engine and/or equipment models for which repowers are available, and engine and/or equipment models for which repowers are not available or feasible. Engine manufacturers who are interested in pursuing this option should contact ARB. ARB staff will maintain a list

of such engines and/or equipment models and make that list available to air district staff.

- (D) Notwithstanding Section D.2.(C), repower to Tier 1 is eligible for funding only in the following cases:
 - (1) In a fleet meeting the small fleet definition or a fleet meeting the captive attainment area fleet definition of the Off-Road Regulation until January 1, 2016. After this date, Tier 1 engines cannot be installed and are no longer eligible.
 - (2) Equipment specifically exempted from the performance requirements of the Off-Road Regulation, California Code of Regulations, title 13, section 2449(e).
 - (3) Equipment that is not subject to the Off-Road Regulation.
- (E) Notwithstanding Section D.2.(C), repower to a Tier 2 is eligible for funding only in the following cases:
 - (1) In a fleet meeting the large or medium fleet definition of the Off-Road Regulation until January 1, 2018. After this date, Tier 2 engines cannot be installed and are no longer eligible.
 - (2) In a fleet meeting the small fleet definition or a fleet meeting the captive attainment area fleet definition of the Off-Road Regulation until January 1, 2023. After this date, Tier 2 engines cannot be installed and are no longer eligible.
 - (3) Equipment specifically exempted from the performance requirements of the Off-Road Regulation, California Code of Regulations, title 13, section 2449(e).
 - (4) Equipment that is not subject to the Off-Road Regulation.
- (F) For repower plus retrofit projects, the cost of datalogging the replacement engine can be included in the total project cost.
- (G) If an ARB-verified retrofit is available for the replacement engine at the time an air district reviews the application for eligibility, the applicant must install the highest level verified retrofit, as discussed in Section D.3.(A) of this chapter.
 - (1) If the additional cost of the retrofit causes the cost-effectiveness to be above the cost-effectiveness limit as defined in Appendix G, then the retrofit is not required.

- (2) If documentation can be provided to the air district or ARB that the retrofit is not technically feasible, available, or safe, then the retrofit is not required. Documentation of retrofit unavailability for mobile cargo handling equipment must follow the process set out in the Regulation for Mobile Cargo Handling Equipment at Ports and Intermodal Rail Yards, California Code of Regulations, title 13, section 2479 (f)(2). Documentation for a retrofit that impairs the safe operation of a vehicle must follow the process set out in the Off-Road Regulation, California Code of Regulations, title 13, section 2449(e)(8). A determination that a retrofit is not required due to safety concerns must be made prior to the retrofit installation phase of a project.
- (3) If offered by an air district, an applicant may opt-out of the default retrofit requirement. Applicants must sign a waiver acknowledging that due to current or future regulations, the applicant may be required to install a retrofit on the funded equipment at their own cost. Air districts have the option to not offer this additional flexibility and are encouraged to evaluate individual projects based on the near-source health impacts. Large fleets subject to the Off-Road Regulation have additional requirements per section E.4.(D) below.
- (4) Equipment that has been issued an exemption from retrofit installation from specific manufacturers may be found at:
<http://www.arb.ca.gov/msprog/moyer/retrofit/exemptions.htm>.
- (H) For repower projects with new off-road compression-ignition engines equipped with original engine manufacturer aftertreatment devices, addition of a retrofit is ineligible due to issues with engine warranty and anti-tampering provisions.
- (I) All engines replaced as part of an off-road repower project must be destroyed and rendered useless, in accordance with the requirements of Chapter 3: Program Administration, Section BB.4.

3. Retrofit

Retrofit is the installation of an ARB-verified diesel emission control system on an existing engine. Examples include, but are not limited to, particulate filters and diesel oxidation catalysts. More information on retrofits may be found at <http://www.arb.ca.gov/diesel/verdev/verdev.htm>.

- (A) Retrofit projects that control PM must use the highest level technically feasible technology available for the equipment being retrofitted. ARB considers the retrofit device that achieves the highest level of PM

reductions (Level 3 - 85 percent) and the highest level of NOx reductions to be the highest level retrofit.

(B) The cost of the retrofit, filters, and maintenance of the retrofit device needed during the project life is eligible for incentive funding, provided its inclusion in the project cost still is within the weighted cost-effectiveness limit. The datalogging cost of a retrofit-only project cannot be included in the eligible project cost.

(C) Off-road compression ignition engines equipped with original engine manufacturer aftertreatment devices are ineligible for retrofit funding due to issues with engine warranty and anti-tampering provisions.

4. New Purchase: New purchase of equipment with engines meeting the Blue Sky Standards, certified on-road engines, and electric motors will be considered by the air district and ARB on a case-by-case basis. These projects are seldom technically feasible or practical and very few have been funded up to this time.

E. Projects Subject to the Regulation for In-Use Off-Road Diesel-Fueled Fleets

1. Fleets must be in compliance with the Off-Road Regulation in order to be eligible for and receive funding.

(A) Applicants must submit information regarding fleet size and compliance status. All documentation submitted must be signed and dated by the applicant and include language certifying that the fleet list provided is accurate and complete. Air districts are not required to validate submitted information and will not be held liable if fleet owners falsify fleet information.

(1) The following information must be submitted at the time of application:

- a. The Diesel Off-Road On-line Reporting System (DOORS) ID of the fleet.
- b. The DOORS Equipment Identification Number (EIN) of the funded equipment.
- c. Fleet size information (total horsepower) as reported to DOORS.
 1. Prior to 1/1/2014, large fleets are not required to show compliance with the Off-Road Regulation.
 2. Prior to 1/1/2017, medium fleets are not required to show compliance with the Off-Road Regulation.
 3. Prior to 1/1/2019, small fleets are not required to show compliance with the Off-Road Regulation.

(2) Applicants are not required to submit information on exempted equipment. Information on exempted off-road equipment can be found in the Off-Road Regulation (California Code of Regulations, title 13, § 2449).

2. No emission reductions achieved from a funded project can count towards a fleet's regulatory requirements for the duration of the project life.
3. Eligibility for a project is based on the best available control technology (BACT) requirements of the Regulation for In-Use Off-Road Diesel-Fueled Fleets.
 - (A) Any equipment funded through the Moyer program and that is still under contract must be deducted from the amount of equipment eligible for funding. For instance, a fleet that is eligible for funding to reduce emissions for 50 percent of its horsepower, but that has already received funding in previous years to reduce emissions from 20 percent of its horsepower, is only eligible for funding to reduce emissions from 30 percent of its horsepower.
 - (B) Equipment funded through the Moyer program must be included in the fleet's total horsepower from which the BACT requirements of the regulation are calculated.
4. Large Fleets
 - (A) Eligible projects for large fleets, as defined in the Off-Road Regulation must provide at least 3 years of surplus emission reductions to the regulation, with a corresponding minimum project life of at least 3 years.
 - (B) Projects must be installed and in operation at least 3 years before the BACT requirements become effective for the funded equipment.
 - (C) The first compliance date for large fleets in the Off-Road Regulation is January 1, 2014. The final compliance date is January 1, 2023. Funding for large fleets is available through December 31, 2016.
 - (D) Eligible projects for large fleets must include a particulate matter filter beginning January 1, 2013, for engines 75 horsepower and greater and January 1, 2014, for engines less than 75 horsepower. The retrofit waiver option in section D.2.(G)(3) is no longer available to projects involving large fleets after the dates specified above.
 - (1) Eligibility shall be determined at the time the air district commits to the proposed project. For purposes of this section, an air district's commitment to a project shall be consistent with that stated in its policies and procedures.
 - (2) If the air district and the applicant do not have an executed contract within six months of project commitment, then the project must include a particulate matter filter in order to be eligible. Alternatively, engines which

are certified to the Tier 4 final particulate matter standard or which are certified to an FEL at or below the Tier 4 final particulate matter standard numerical level remain eligible after the dates in E.4.(D) above.

(E) Large fleets may have additional requirements per subsection E.7. below.

5. Medium Fleets

(A) Eligible projects for medium fleets, as defined in the Off-Road Regulation, must provide at least 3 years of surplus emission reductions to the regulation, with a corresponding minimum project life of at least 3 years.

(B) Projects must be installed and in operation at least 3 years before the BACT requirements become effective for the funded equipment.

(C) The first compliance date for medium fleets, as defined in the Off-Road Regulation, is January 1, 2017. The final compliance date is January 1, 2023. Funding for these fleets is available through December 31, 2019.

6. Small Fleets (includes Captive Attainment Area Fleets)

(A) Eligible projects for small fleets, as defined in the Off-Road Regulation, must provide at least 2 years of surplus emission reductions to the regulation, with a corresponding minimum project life of at least 2 years.

(B) Projects must be installed and in operation at least 2 years before the BACT requirements become effective for the funded equipment.

(C) The first compliance date for small fleets, as defined in the Off-Road Regulation, is January 1, 2019. The final compliance date is January 1, 2028. Funding for these fleets is available through December 31, 2025.

7. Surplus Off-Road Opt-In for NOx (SOON) Program

(A) Fleets located in air districts that have opted into the SOON program and that are subject to the SOON provisions, are eligible for funding in accordance with the Off-Road Regulation (California Code of Regulations, title 13, §2449.2) and must meet the applicable criteria in section A, B, C, and or D above.

(B) Projects funded under SOON are not subject to Section E of this chapter, except for the requirements of this subsection E.7.

8. For more information on eligibility of off-road diesel equipment, please see the Regulation for In-Use Off-Road Diesel-Fueled Fleets Carl Moyer Program Implementation Chart available at <http://www.arb.ca.gov/msprog/moyer/guidelines/supplemental-docs.htm>.

F. Projects Subject to the Regulation for Cargo Handling Equipment at Ports and Intermodal Rail Yards

1. Eligible projects must provide at least 3 years of surplus emission reductions to the regulation, with a corresponding minimum project life of at least 3 years. Much of the applicable cargo handling equipment must already be in compliance with the regulation. Therefore, very limited funding opportunities exist.
2. For more information on eligibility of cargo handling equipment, please see the Regulation for Cargo Handling Equipment at Ports and Intermodal Rail Yards Carl Moyer Program Implementation Chart available at <http://www.arb.ca.gov/msprog/moyer/guidelines/supplemental-docs.htm>.

G. Projects Subject to the Portable Engine ATCM

1. Portable engines under this chapter are subject to the Portable Engine ATCM and must be surplus to the Portable Engine ATCM in order to be eligible. Funding is available for achieving reductions required by the regulation at least three years prior to regulatory compliance deadlines and for reductions not required by the regulation. The first compliance deadline for engines subject to the Portable Engine ATCM was January 1, 2010; therefore only limited funding opportunities exist for projects in advance of the fleet average compliance deadlines specified in the regulation.
2. Diesel engines regulated under the Portable Engine ATCM must be registered (or permitted) in an air district to be eligible for repower project unless documentation from the air district is included in the project file stating that a registration (or permit) is not required to operate in their district.
3. Uncontrolled engines subject to the Portable Engine ATCM are not eligible for repowers.
4. An existing Tier 1 or Tier 2 engine subject to the Portable Engine ATCM and subject to SBx2_3 may use a 10 year project life and may be eligible for funding up to the compliance date of an applicable in-use rule.
5. Portable equipment with a Tier 2 engine repowered with a Tier 3 engine must also be equipped with a verified retrofit in order to be eligible for funding.
6. Retrofit projects for engines regulated under the Portable Engine ATCM that control particulate matter (PM) must use the highest level technically feasible

technology available for the equipment being retrofitted. ARB considers the retrofit device that achieves the highest level of PM reductions (level 3 – 85 percent) and the highest level of NOx reductions to be the highest level retrofit.

7. For more information on eligibility of engines used in portable equipment, please see the Portable Engine Airborne Toxic Control Measure Implementation Chart available at: <http://www.arb.ca.gov/msprog/moyer/guidelines/supplemental-docs.htm>

H. Projects Subject to the Statewide Truck and Bus Regulation

This regulation impacts the eligibility of all on-road heavy-duty diesel-fueled and alternative diesel-fueled vehicles operated in California with a manufacturer's gross vehicle weight rating greater than 14,000 pounds. Although this regulation primarily affects vehicles with on-road engines, some vehicles with off-road engines are also covered. Any application for Carl Moyer Program funding to replace a vehicle with an off-road engine that is subject to an on-road regulation must comply with the applicable surplus requirements described in Chapter 4. For example, a yard truck with an off-road engine that is subject to the Statewide Truck and Bus Regulation (including yard trucks used primarily in agricultural operations) must meet the applicable on-road surplus requirements described in Chapter 4, Section E, and must also comply with all off-road project criteria described in this chapter.