IV. Project Criteria

These criteria provide the minimum requirements for Carl Moyer Program agricultural source projects. Agricultural source projects must also conform to general criteria of Chapter 2, as well as the project application, contract, reporting, and other requirements as described in Part III: Program Administration. Participating districts retain the authority to impose additional or more restrictive requirements to address local concerns.

(a) General Agricultural Sources Project Criteria

(1) The maximum project life for agricultural use engine projects is as follows:
(A) Diesel engines 7 years
(B) Spark-ignited engines 7 years
(C) Electric motors 10 years
A longer project life may receive case-by-case approval if applicants provide justifying documentation. The maximum project life does not consider regulatory requirements and may be shorter.
(2) Projects must have a minimum project life of three years, with the exception of engines subject to the agricultural engine requirements in the Stationary Diesel Engine ATCM.
(3) An engine must be rated at greater than 25 hp, which is equivalent to an electric motor greater than 19 kW.
(4) Emission reduction technologies must be certified/verified by the ARB and must comply with durability and warranty requirements. For the purposes of the Carl Moyer Program, a technology granted a conditional certification/verification by ARB is considered certified/verified. If the emission reduction technology is not certified or verified, it may be approved by the ARB on a case-by-case basis.
(5) Costs for necessary peripheral equipment associated with electric motor projects (e.g. control panel, motor leads, service pole with guy wire, and connecting electric line from the meter) may be included in the grant award amount.
(A) Variable frequency devices are eligible for funding if the applicant provides justification for adjustable water needs.
(B) Reduced voltage starting (“soft start”) technology is eligible for funding if required by the electric service provider.
(6) District match funds may be used for infrastructure purchase and installation (e.g. line extension for electric motor projects).
(7) District match funds may be used to offset the higher cost of electricity relative to diesel fuel, if applicable. In this case, the fuel cost difference will be accounted for when calculating the cost-effectiveness of the project.
(8) Cost-effectiveness calculations must use the hour based formula as discussed 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 of historical fuel usage documentation specific for the equipment being funded. Documentation may include fuel logs, purchase receipts or ledger entries.

(9) Future annual hours of equipment operation for determining emission reductions must be based only on readings from an installed and fully operational hourmeter. If equipment does not have functioning hour meter at the time of the project, the meter must be repaired 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.
(10) All case-by-case projects must receive approval from ARB prior to funding. These projects must follow the requirements described in Part III, Section 28.

(b) Repower
A repower is the replacement of the in-use engine with an electric motor or a new, current model year engine instead of rebuilding the existing engine to its original specifications.
(1) A repower of an uncontrolled or emission certified (1996+ model year) engine must be with one of the following:
(A) A new electric motor.
(B) A new off-road diesel engine certified to the current applicable emission standards.
(C) A new off-road spark-ignited (SI) engine certified to the current applicable emission standards.
(D) A new SI engine that exceeds local district emission requirements and is subject to and complies with local district permitting, monitoring, record keeping and reporting requirements.
(2) Diesel engines greater than 50 hp must be registered (or permitted) in a local air district to be eligible for repower projects.
(3) SI engines cannot be replaced with diesel engines.
(4) A repower of an emissions-controlled SI engine with a new SI engine that meets or exceeds local district emission requirements and is subject to and complies with local district permitting, monitoring, record keeping and reporting requirements, must use an engine that provides a NOx emission reduction of at least 15% from the baseline engine NOx emissions.
(5) An uncontrolled engine subject to the Stationary Diesel Engine ATCM may use a project life for a repower project with a new diesel engine as follows:

Horsepower range Project Life
< 100 hp
3 year project life through 12/31/08
2 year project life through 12/31/09
1 year project life through 12/31/10

100-750 hp
2 year project life through 12/31/08
1 year project life through 12/31/09

> 750 hp
6 year project life through 12/31/08
5 year project life through 12/31/09
4 year project life through 12/31/10
3 year project life through 12/31/11
2 year project life through 12/31/12
1 year project life through 12/31/13

(6) For more information on eligibility of stationary diesel in-use agricultural engines, please see the Stationary Diesel In-Use Agricultural Engine Carl Moyer Program Implementation Chart available through your local district or at http://www.arb.ca.gov/msprog/moyer/guidelines/supplemental-docs.htm.
(7) Engines > 750 hp are not eligible for Tier 2 repower projects.
(8) Uncontrolled portable engines owned by rental companies are not eligible for Carl Moyer Program funding due to the Portable Equipment ATCM compliance date.
(9) The percent of repower costs eligible for Carl Moyer Program funding are:
(A) Tier 3 and 4 repower – 85 percent
(B) Certified SI engine repower – 85 percent
(C) Electric motor repower – 85 percent
(10) Electric motors may replace diesel or spark-ignited engines. The applicant must have documentation of payment to the local utility company for power installation. This requirement of documentation also applies to new installations.
(11) Off-road diesel engines must be certified for sale in California and must comply with durability and warranty requirements.
(12) The use of a non-certified SI engine shall be subject to approval by ARB staff.
(A) Non-certified SI engines shall be required to include currently available emission control components such as closed-loop fuel control systems, and three-way catalysts.
(B) Non-certified SI engines shall be subject to source testing with an ARB-approved testing procedure, such as ARB Test Method 100, following local district requirements. Source testing shall be conducted upon installation.
(C) Non-certified SI engines must be emission tested using a portable analyzer every 1,000 hours of operation and at least annually, or following local district monitoring requirements, whichever is most stringent. The emission tests shall measure NOx and hydrocarbon emissions. An alternative monitoring schedule may be used upon approval by ARB staff.
(D) The costs associated with source testing and monitoring requirements for non-certified SI engines are not eligible for funding.
(13) All engines replaced as part of a repower project must be destroyed and rendered useless, consistent with the requirements of Part III, Section 31(c).

(c) New Purchase
A new purchase is an engine or motor that is not replacing an existing engine.
(1) Engine purchases for new 2008 or later model year non-mobile agricultural equipment can only be electric motors.
(2) Carl Moyer Program funding may be used for up to 20 percent of the costs associated with a new purchase.

(d) Retrofit
A retrofit is a modification to an engine and/or fuel system such that the specifications of the retrofitted engine are not the same as the original engine. More information on retrofits, including a list of currently verified retrofits, may be found at http://www.arb.ca.gov/diesel/verdev/verdev.htm.
(1) A retrofit of an uncontrolled diesel engine that reduces NOx must be with a retrofit kit that is verified to reduce NOx or NOx+NMHC emissions to the applicable current off-road engine Tier standard or less for a given engine size.
(2) A retrofit of an uncontrolled SI engine that reduces NOx must be with a retrofit kit that is verified to reduce NOx+NMHC emissions to the currently applicable standard for off-road large spark-ignited engines.
(3) A retrofit of an emission-certified (1996+ model year) off-road diesel engine that reduces NOx must be with a retrofit kit that is verified to reduce NOx or NOx+NMHC emissions by at least 15 percent from the applicable NOx or NOx+NMHC emission standard.
(4) Retrofit projects that control PM must use the highest level ARB-verified technology available for the engine being retrofitted.
(5) Only ARB-verified retrofits are eligible for funding.
(6) The cost of the retrofit, filters, and maintenance of the retrofit device needed during the project life may be paid for with incentive funds provided it meets the cost-effectiveness limit.
(7) Retrofit projects are eligible for up to 100 percent reimbursement using Carl Moyer Program funds.

(e) Non-Engine Agricultural Use Projects
(1) Non-engine agricultural use projects are subject to ARB staff approval on a case-by-case basis.