

# AGRICULTURAL ASSISTANCE PROGRAM

The Agricultural Assistance Program provides funds for the new purchase, retrofit, repower, or add-on of previously unregulated equipment for agricultural sources. Unlike the Carl Moyer Memorial Air Quality Standards Attainment Program (Moyer Program), the Agricultural Assistance Program does not require the emission reductions achieved to be surplus. Therefore, these funds can be used to pay for compliance in certain categories. However, the Agricultural Assistance Program does follow the Moyer Program Guidelines for project selection and grant awards.

## A. Background

The Agricultural Assistance Program was created through provisions of Assembly Bill 923 (AB 923, Firebaugh) and went into effect on January 1, 2005. This legislation authorizes air pollution control and air quality management districts (air districts) to increase motor vehicle fees by up to an additional \$2. Air districts receiving the additional \$2 surcharge may use the funds to implement various incentive programs, one of which is the new purchase, retrofit, repower, or of previously unregulated equipment for agricultural sources (Agricultural Assistance Program).

The statutory provisions of AB 923 also require that Agricultural Assistance Program projects follow the Carl Moyer Guidelines. Air districts will follow the 2017 Moyer Program Guideline project criteria in Chapter 2, General Criteria; Chapter 3, Program Administration; and Chapter 5, Off-Road Equipment; except as specified in Section D of this chapter, with modifications to the surplus emission reductions requirements and cost-effectiveness methodology. Air district funds applied to the Agricultural Assistance Program do not count as air district match funds in the Moyer Program.

## B. Definition

“Agricultural source of air pollution,” for the purposes of AB 923 and the Agricultural Assistance Program, is defined in Health and Safety Code section 39011.5(a) as “a source or group of sources used in the production of crops or raising of fowl or animals located on contiguous property and under common ownership or control.”

Four categories of emission sources are identified as part of this definition:

1. Large confined animal facilities as defined in California Code of Regulations, title 17, section 86500.
2. Internal combustion engines, including portable and off-road engines, unless used to propel instruments of husbandry.
3. Sources subject to requirements of Title V, the federal Operating Permitting Program for major stationary sources.

4. Sources of emissions otherwise subject to air district regulation.

### **C. Projects Eligible for Funding**

Eligible project categories are found in Chapter 5: Off-Road Equipment, Section D: Project Criteria of the 2017 Moyer Program Guidelines.

Additionally, new purchases of electric motors are eligible. These projects are eligible for up to 20 percent of the project costs, with a maximum project life of ten years.

### **D. Project Criteria**

Two sets of criteria exist for agricultural assistance projects.

1. **Statutory Criteria.** The statutory provisions of AB 923 include requirements for Agricultural Assistance Program eligible projects:

- (A) Projects must involve the new purchase, retrofit, or repower of equipment.
- (B) Projects must reduce emissions from previously unregulated sources; that is, sources that are unregulated as of January 1, 2005 (the effective date of the legislation), but are subject to regulation at the time of the grant.
- (C) Projects must be operational and post-inspected within three years of rule adoption or before the compliance date of the rule, whichever is later.
- (D) The Air Resources Board (ARB) must determine that the applicable rule complies with Health and Safety Code sections 40913, 40914, and 41503.1 pertaining to air district's attainment plan measures. Air district's plans must be designed to achieve and maintain the State ambient air quality standards by the earliest practicable date through the use of all feasible measures. ARB routinely reviews air district's rules for compliance with these requirements and will treat agriculture-related rules the same way.

2. **Other Criteria.** Project criteria in Chapter 2, General Criteria; Chapter 5: Off-Road Equipment, and these sections of Chapter 3: Program Administration: Section S, Requirements for Project Applications; Section V, Minimum Contract Requirements; Section W, Project Pre-inspection; Section X, Project Post-inspections; and Section Y, Project Invoice and Payment, as well as other requirements of the 2017 Moyer Program Guidelines, are to be adhered to with the following exceptions:

- (A) The Agricultural Assistance Program may be used to fund projects from previously unregulated agricultural sources of air pollution for a minimum of three years from the adoption of an applicable rule or until the compliance date, whichever is later.

- (B) The cost-effectiveness of a project is based on total emission reductions over the life of the project, not surplus emission reductions.
- (C) Emission reductions in the Agricultural Assistance Program are not required to be surplus to regulations. The emission benefits of projects funded by the Agricultural Assistance Program are already counted in the emission benefits of individual local rules or State regulations.
- (D) Repower of Tier 2 engines to Tier 4 engines are eligible, as long as the compliance date of the rule has not occurred for the specific Tier 2 engine.

**E. Cost-Effectiveness of Total Reductions**

In order to ensure that the technologies and costs of projects funded by the Agricultural Assistance Program are generally comparable to those funded by the Moyer Program, Agricultural Assistance Program projects must meet a “cost-effectiveness of total reductions” criterion. Air districts may set more restrictive cost-effectiveness of total reductions limits when implementing local programs.

The cost-effectiveness (C/E) of total reductions is the annualized cost (AC) divided by the emission reductions (ER) as if no regulatory requirement existed:

$$C/E (\$/ton) = AC (\$/yr) \div ER (ton/yr)$$

For example, the cost-effectiveness of total reductions calculation for an agricultural irrigation pump repower would generally assume a project life of seven years, even if a local rule for agricultural use engines takes effect in two years or has already taken effect.

The annual emission reductions for each pollutant (oxides of nitrogen (NOx), reactive organic gases (ROG), and combustion particulate matter (PM)) are determined by calculating the annual emissions for the baseline technology and then subtracting from it the annual emissions of the reduced technology. Annual emissions may be calculated based on hours of operation. The formulas for calculating emissions are found in Appendix C of the 2017 Moyer Program Guidelines.

The weighted total emission reductions are estimated by taking the sum of the project’s annual emission reductions of NOx, ROG, and combustion PM using the following formula:

$$\text{Weighted Total Emission Reductions} = \text{NOx(tons/yr)} + \text{ROG(tons/yr)} + [\text{PM(tons/yr)} * 20]$$

The emission standards and load factors for off-road diesel engines and large SI engines in Appendix D of the 2017 Moyer Program Guidelines must be used for these calculations. The annualized cost is the amortization of the one-time incentive grant amount for the life of the project to yield an estimated annual cost. The capital

recovery factors used for the annualized calculation are provided in Appendix G of the 2017 Moyer Program Guidelines.

The incremental cost of a project is a percentage of new technology project costs. The percent of agricultural source engine project costs eligible for funding are in Chapter 5: Off-Road Equipment of the 2017 Moyer Program Guidelines or noted above in Section C.

General examples of calculating the cost-effectiveness of projects are provided in Appendix C of the 2017 Moyer Program Guidelines. The examples are of projects achieving surplus emission reductions. However the steps leading to the final formula are similar for both programs and may be used as a guide.

- F. NOTE.** The cost-effectiveness of total reductions cannot be directly compared to the cost-effectiveness of Moyer Program-eligible projects because it includes the total emission reductions associated with a project instead of only the surplus emission reductions.