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 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 Carl 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 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 four specific programs:

1. Projects funded through the Carl Moyer Program.

2. The new purchase, retrofit, repower, or previously unregulated equipment for agricultural sources.

3. Purchase of new school buses or the repower or retrofit of emissions control equipment for existing school buses pursuant to the Lower-Emission School Bus Program adopted by the Board.

4. An accelerated vehicle retirement or repair program.

5. Onboard natural gas tank replacements in existing school buses or the enhancement of deteriorating natural gas fueling dispensers of fueling infrastructure pursuant to the Lower-Emission School Bus Program adopted by the Board.

6. Alternative fuel and electric infrastructure projects solicited and selected through a competitive bid process.

The Agricultural Assistance Program was created to implement the second program listed above.

The statutory provisions of AB 923 also require that Agricultural Assistance Program projects follow the Carl Moyer Guidelines. Project criteria in Chapter 3: Administration and Chapter 10: Portable and Stationary Agricultural Sources chapters of the 2011 Carl Moyer Program Guidelines are to be followed (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 Carl 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 10: Portable and Stationary Agricultural Sources, Section C: Project Criteria of the 2011 Carl Moyer Program Guidelines.

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) 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 10: Portable and Stationary Agricultural Sources, and these sections of Chapter 3: Program Administration; project application, contract, inspections, and payment as well as other Guideline requirements of the 2011 Carl 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.

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 Carl 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 of total reductions is the annualized cost divided by the emission reductions as if no regulatory requirement existed:

$$\text{Cost-Effectiveness (\$/ton)} = \frac{\text{Annualized Cost (\$/yr)}}{\text{Weighted Emission Reductions if no Regulatory Requirement Existed (tons/yr)}}$$

For example, the cost-effectiveness of total reductions calculation for an agricultural irrigation pump engine 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 or fuel consumption. The formulas for calculating emissions are found in Appendix C of the 2011 Carl 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:

Weighted Total Emission Reductions = NOx reductions (tons/yr) +
ROG reductions (tons/yr) + 20*[combustion PM reductions (tons/yr)]

The emission standards and load factors for off-road diesel engines and large SI engines in Appendix D of the 2011 Carl 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 2011 Carl 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 10: Portable and Stationary Agricultural Sources of the 2011 Carl Moyer Program Guidelines.

General examples of calculating the cost-effectiveness of projects are provided in Appendix C of the 2011 Carl 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.

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