

3CE Program Design and Implementation Guide Agriculture Electrification Grant Program 2.0

1. Program Concept

In order to reduce GHG emissions and increase electrification across 3CE service area, the program will provide financial assistance to the Agricultural (Ag) sector for replacement of fossil fuel powered equipment and purchase of new electric equipment including farm tools, irrigation pumps, vehicles, and other equipment. The program will be implemented via a competitive grant process. An application will be filed with 3CE including project/equipment details. Recipients of the award will receive up to 80% of the total project cost, not to exceed \$20,000¹.

2. Target Market

Commercial 3CE ag customers that utilize agricultural equipment powered by fossil fuels. Replacement of older equipment may yield more significant emissions (both GHG as well as particulate) reductions.

3. Recipient Eligibility

- 3.1.** Must be a current 3CE customer in good standing
- 3.2.** Commercial agriculture business on an approved ag electricity rate schedule

4. Project/Equipment Eligibility

- 4.1.** Incentive money must be used to offset the cost of equipment electrification projects, which includes the purchase of all-electric ag equipment.
- 4.2.** Exclusions include but are not limited to: Hybrid or low emissions equipment
- 4.3.** Examples of eligible equipment include:
 - Irrigation pumps
 - Forklifts
 - Tractors
 - Harvest equipment
 - Chillers/boilers
 - Other heating and cooling equipment
 - Work trucks/haulers/other vehicles
 - Other equipment justified at 3CE's discretion

5. Funding Distribution

- 5.1.** Total funding for the program is \$400,000

¹ 3CE maintains the right to modify the program design, including the eligibility guidelines and award amounts as needed.

- 5.2. Applicants will be eligible for incentive payments totaling 80% of project cost with total incentive payment not to exceed \$20,000 to support electrification/fuel switching projects.
- 5.3. There is no matching funds requirement.
- 5.4. 3CE may choose to provide a portion of the requested funding at 3CE’s discretion.
- 5.5. Program funding may be used in conjunction with other funding, incentives, rebates, etc.
- 5.6. Funding will be provided on a reimbursement basis. Upon the acceptance of a project application, funding will be held until proof of purchase.

The following table shows the program budget allocation by County²:

COUNTY	Total Incentive Available
MONTEREY	\$ 170,000
SAN BENITO	\$ 30,000
SAN LUIS OBISPO	\$ 35,000
SANTA BARBARA (PG&E service territory only)	\$ 110,000
SANTA CRUZ	\$ 55,000
TOTAL	\$ 400,000

6. Application Process

6.1. The application will be accessible online and include the following information regarding the project:

- Customer information
- Brief narrative outlining the project
- List of equipment to be replaced if applicable
- Age of the equipment
- Fuel source and annual fuel consumption
- Equipment operation schedule (hours per year the equipment is operating)
- Details regarding the electric replacement equipment (Cost, capacity, etc.)

6.2. Upon receiving the application 3CE will conduct preliminary analysis to determine customer eligibility and application completeness as well as project feasibility and emission reductions.

6.3. 3CE will reach out to selected applicants to discuss the project.

7. Project Selection

Eligible projects will be scored and ranked based on emissions reductions, cost of GHG reduction, and the economic impact of the grant which will be determined based on the size of the AG operation, and whether or not the equipment is purchased from a local supplier or manufacturer. See evaluation criteria scoring rubric below:

² 3CE maintains the right to re-allocate funding by County for any reason and at any time.

Evaluation Criteria	Weight
Total est. emissions reductions (MT CO2e)	33%
Cost for emissions reductions (\$/MT CO2e)	33%
Local Economic impact	33%

3CE retains the right to reject any application for any reason under this program and to change the project selection guidelines at any time and for any reason.

8. Analysis

The following equation and inputs are an example of how 3CE may determine the GHG impact of the projects. 3CE reserves the right to modify this methodology.

Table C1. Average Emission Test Results for 1988 to 1995 Model Year Engines

Engine (Reference)	HC (g/hp-hr)	CO (g/hp-hr)	NO _x (g/hp-hr)	PM (g/hp-hr)	BSFC (lb/hp-hr)
Average (50 to 100 hp)	0.99	3.49	8.30	0.722	0.408
Average (>=100 hp)	0.68	2.70	8.38	0.402	0.367

Farm equipment is typically aged in “run hours”, for the purposes of calculating GHG reductions, annual “run hours” of operation as well as the above emission rate values will be utilized. A simple example of a calculation is outlined below:

$$g\ HC = h_{yr} * EF * hp$$

Where;

g HC = grams of Hydrocarbon

h_{yr} = Run hours per year

EF = Emission factor (g/hp-hr)

hp = Horsepower rating

Besides GHG impact, 3CE is also interested in the amount of added kWh load expected to result from these electrification projects. In order to determine the added load and added revenue to 3CE some basic information regarding the electric equipment will be needed. 3CE will determine added load based on the demand of the equipment (kW) and the operation schedule (hours of use).

9. Program Implementation Outline

- Launch the program webpage
- Initial outreach

- Open application period (application document live on website)
- Rank and score applications
- Award eligible applicants/allocate funding
- Track program outcomes and collect participant feedback

10. Related Program Resource Links

- CARB: EMFAC2017 [User's Guide](#)
- CARB FARMER Program [website](#)
- Carl Moyer: [Tables for Emission Reductions and Cost-effectiveness calculations](#)

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