

EmPower Louisiana
Renewable Energy Program

GUIDANCE FOR CALCULATING ENERGY METRICS

1. **Jobs Created/Retained:** Jobs created means new positions created and filled or existing unfilled positions that are filled as a result of Recovery Act funding. Jobs retained means existing filled positions that would not have been retained if not for Recovery Act funding. Jobs created and retained must be reported in full-time equivalents, or FTE. The U.S. Office of Management and Budget provides guidance (OMB M-09-21 Section 5 http://www.whitehouse.gov/omb/assets/memoranda_fy2009/m09-21.pdf) for estimating the FTE jobs based on the following equation:

$$\text{Jobs created (FTE)} = \frac{\text{Cumulative Recovery Act Funded Hours Worked (hrs)}}{\text{Cumulative Hours in a Full – Time Schedule (hrs)}}$$

Example: if 1000 hours will be spent installing solar PV panels fleet for a period of 5 months, the total number of hours in a full-time schedule would be: 5 months x 4 weeks/month x 40 hours per week = 800 hours

Jobs created/retained = 1,000 hrs / 800 hours = 1.25 FTE.

2. **Annual Energy Generated (kWh):** Represents the energy generation in kWh that will result from the proposed project.
3. **GHG Emissions Reduced (Metric Tons CO₂):** Greenhouse gas (GHG) emission reductions are tied to renewable energy generated that is replacing energy generated by fossil fuels. A simple calculation is to assume that annual renewable energy generated is replacing electricity usage. This electricity reduction then is converted into emission reductions based upon the electricity emission profile for subregion SERC Mississippi Valley using Environmental Protection Agency (EPA) eGrid data (<http://cfpub.epa.gov/egridweb/view.cfm>):

$$\text{GHG Emissions Reduced (MT CO}_2\text{e)} = \text{Annual Energy Generated (kWh)} \times \frac{0.46433}{1000} \left(\frac{\text{MT CO}_2}{\text{kWh}} \right)$$

Example: if the proposed project will generate 1,000,000 kWh per year, the GHG emissions reductions would be:

GHG Emissions Reduced = 1,000,000 kWh * (0.46433/1000) = 464.33 MT CO₂e

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4. **Cost-Effectiveness (MMBtu/\$1000):** represents a measure of how effective grant dollars are in achieving a given result. To calculate a project's cost-effectiveness, divide the Annual Energy Generation, by the Total Funding Requested, and then multiply by a conversion factor as shown in the equation below:

$$\text{Cost Effectiveness} \left(\frac{\text{MMBtu}}{\$1000} \right) = \frac{\text{Annual Energy Generated (kWh)}}{\text{Total Funding Requested (\$)}} \times 3.413$$

Example: if the proposed project will generate 1,000,000 kWh per year and the Applicant is requesting \$500,000 in EECBG funding for the project, the cost-effectiveness of the project would be:

$$\text{Cost Effectiveness} \left(\frac{\text{MMBtu}}{\$1000} \right) = \frac{1,000,000 \text{ (kWh)}}{\$500,000 \text{ (\$)}} \times 3.413 = 6.826 \text{ MMBtu}/\$1000$$