

EmPower Louisiana
Flex-Fund Revolving Loan Program

GUIDANCE FOR CALCULATING ENERGY METRICS

1. **Jobs Created or Retained:** Jobs created means new positions created and filled or existing unfilled positions that are filled as a result of receiving funding from the American Recovery and Reinvestment Act of 2009 (ARRA). Jobs retained means existing filled positions that would not have been retained if not for ARRA funding. Jobs created and retained must be reported on a quarterly full-time equivalents, or FTE basis. 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:

$$\text{Jobs created or Retained (FTE)} = \frac{\text{Cumulative Hours within the Quarter Funded (hrs)}}{\text{Cumulative Hours in a Full Time Quarterly Schedule (hrs)}}$$

Example: 100 hours will be spent performing lighting retrofits in a warehouse. These hours will be funded with sep Energy Efficiency dollars.

The average cumulative hours in a full-time quarterly schedule is 520 hours.

Jobs created or retained (quarterly basis) = 100 hours / 520 hours = 0.192 FTEs.

2. **Annual Energy Savings (kWh):** This number represents the annual energy savings in kWh that will result from the proposed project.

$$\text{Annual Energy Savings (kWh)} = (\text{Current Annual Energy Use}) - (\text{Post Project Annual Energy Use})$$

3. **GHG Emissions Reduced (Metric Tons CO₂):** greenhouse gas (GHG) emission reductions are tied to electric energy savings. A simple calculation is to assume that all project energy savings are reductions in electricity usage. This electricity reduction then is converted into emission reductions based upon the electricity emission profile for the Louisiana subregion using Environmental Protection Agency (EPA) eGrid data (<http://cfpub.epa.gov/egridweb/view.cfm>):

$$\text{GHG Emissions Reduced (MT CO}_2\text{e)} = \text{Annual Energy Savings (kWh)} \times \frac{0.5332}{1000} \left(\frac{\text{MT CO}_2}{\text{kWh}} \right)$$

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 Savings achieved by the total funding amount for that individual project. Then multiply by a conversion factor as shown in the equation below:

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$$\text{Cost Effectiveness} \left(\frac{\text{MMBtu}}{\$1000} \right) = \frac{\text{Annual Energy Savings (kWh)}}{\text{Requested Grant Amount (\$1000)}} \times 0.003412 \left(\frac{\text{MMBtu}}{\text{kWh}} \right)$$

Example: a building retrofit project will result in 1,000,000 kWh of energy saved each year. The Subgrantee is using \$50,000 in Energy Efficiency funding for the project.

$$\text{Cost Effectiveness} \left(\frac{\text{MMBtu}}{\$1000} \right) = \frac{1,000,000 \text{ (kWh)}}{\$50 (\$1000)} \times 0.003412 = 68.24 \text{ MMBtu}/\$1000$$