Energy Efficiency Opportunities Assessment Tool - Key Terms and Definitions

Program Indicators Tab

Market Transformation Potential – The potential for programs to influence their relevant market channels over the long run (e.g., the extent to which the program may change retailer stocking practices over time) and the likelihood of changing purchasing decisions (e.g. the probability that consumers would buy energy-efficiency products once a financial incentive is no longer available).

Political Feasibility – How likely local utility and government stakeholders are to accept and support the program. Without buy in from key stakeholders, a program is likely to never make it out of the planning stage. This may be affected by key stakeholders having backed a similar program in the past that did not have positive results.

Program Complexity – Burdens from marketing, administration, and evaluation all add to the complexity of implementing programs. This factor is evaluated based on available resources, experience, and expertise in these areas. The score for this factor can be high if a particular country has implemented similar programs recently and gained experience can be leveraged for new programs.

Environmental Aspects – The lifecycle impact of the program on waste, water use, and emissions. For example, if facilities and infrastructure for recycling CFL lamps are not present in the country, a CFL lighting program may score poorly in that country.

Economic Aspects – The potential to increase jobs and develop the local manufacturing industry. If, as a part of the program, manufacturing demand is increased or jobs are created as people are needed for energy audits or installations, this score will be high.

Equity/ Affordability – How a program would perform in providing DSM options to different customer classes within each of its target sectors. For instance, in sub-Saharan Africa a lighting program may score higher in this area than an air conditioner program because air conditioners are only used by the more wealthy customers.

Advance Inputs – Country Tab

Technical Line Loss Rate (%) – Percentage of the electricity generated that is lost in transmission and distribution due to losses in the transmission lines, transformers, distribution lines, and other equipment between the generation station and the customer meter.

Marginal Grid Electricity Emission Factor (gCO_2e/kWh) – The average amount of greenhouse gas (GHG) emission in gCO_2e released to the atmosphere to generate one kilowatt-hour of electricity.

Payback Period (Years) – The length of time required to recover an investment made into an energy efficiency through associated energy savings using the simple payback calculation method.

Coincidence Factor (%) – The percentage of the electricity consumption of a technology that occurs during the utility peak period, contributing to the system peak.

Advanced Inputs – Program Tab

Distribution by Efficiency/Model (DBE/M) – The Distribution by Efficiency/Model factor is used to split the savings opportunity from a single baseline across multiple applicable upgrade measures. For example, consider two residential lighting measures, one CFL and one LED, both with incandescent baselines. The DBE/M factor is used to split the baseline incandescent consumption between the two measures so that the savings opportunity is not double counted. For instance, assuming a lighting program that distributed the same number of CFLs and LEDs, we would give a DBE/M factor of 50% for the LED measure and 50% for the CFL measure (must always sum to 100%).

Relevant Percentage of End Use (RPEU) – The RPEU is used to set what percentage of end use consumption is applicable to the measure being considered. For instance, if a measure considers an upgrade to plug-in lighting, but the end use assigned to the measure is lighting, then this factor can be used to set what percentage of the lighting consumption comes from plug-in lighting.

Existing Penetration of High Efficiency Measures (EPOHEM) – The EPOHEM factor is used to reduce the applicable end use consumption to account for the energy consumed by high efficiency devices that are not applicable to the baseline. For instance, consider an LED lighting measure that has a baseline of incandescent. If the end use for the measure is lighting, and if 60% of the lighting consumption for the sector comes from incandescent bulbs, then 40% should be entered for the EPOHEM factor.

Payback Acceptance Override – The Payback Acceptance Override is used to override the default payback acceptance curve assigned to a measure. Instead of using the payback acceptance curve of the sector assigned to the measure on the Advanced Inputs - Country tab, the payback acceptance of another sector can be used by entering the name of the other sector here. This is useful when the sectors do not line up with the facility types due to data limitations, such as commercial buildings being included in a large industrial tariff category based on voltage requirements.

Top EE Opportunities – Technical/Achievable Tab

Technical Potential – The maximum theoretical savings possible for an energy efficiency measure/program. The technical potential assumes that the entire applicable market participates in the program.

Achievable Potential – The actual savings that can be expected from implementing a program of energy efficiency measures. The achievable potential accounts for market barriers and other practical limitations such as market spoiling, resource constraints, and payback acceptance.

Cost of Energy Savings/ Cost to Conserve Energy (CCE) – The cost of conserved energy (CCE) represents the annualized cost per kWh of reducing electricity consumption by implementing an energy efficient measure as measured in comparison to a less efficient baseline. This cost is directly comparable to the retail rate and avoided cost of electricity.

Energy savings — Demand and energy savings of DSM measures at the customer level not accounting for "net-to-gross" effects. These are the total savings of the program without accounting for free-ridership, which reduces the impacts of the program by accounting for the customers that would have adopted the energy-efficient technology anyway without the program present.