ENERGY EFFICIENCY TALKING POINTS

USAID Energy Efficiency Toolkit

WHAT IS ENERGY EFFICIENCY?

- Energy efficiency involves improving end-use technologies and processes to provide equal or better energy services with fewer units of energy—in other words, at lower energy costs.
- Energy efficiency is typically measured as a ratio of energy supply input to useful energy service output and is often expressed in percentage terms.
- Energy efficiency is not energy conservation.
- Energy conservation is reducing energy use by going without a service.
- Replacing an incandescent bulb with a light emitting diode (LED) bulb that uses less energy for providing the same amount of light is energy efficiency. Turning off the light bulb is energy conservation.

HOW DOES ENERGY EFFICIENCY SUPPORT COUNTRY DEVELOPMENT?

- Energy efficiency is one of the cleanest and cheapest resources and considered as a "first fuel." It is recognized as the most cost effective means to address several energy related issues including energy security, social and economic development, and climate change.
- By reducing the cost of energy consumption, energy efficiency helps to increase the affordability of energy services.
- Energy efficiency can help countries in expanding energy supply and providing reliable access to energy without adding more power plants.
- By reducing the need for additional power plants, energy efficiency helps in reducing greenhouse gas (GHG) emissions and dealing with climate change.

- Energy efficiency promotes competitiveness and contributes to improving industrial and commercial productivity by reducing the need for, and cost of, importing energy. This supports economic development of the country.

WHAT ARE THE KEY BARRIERS TO ENERGY EFFICIENCY IMPLEMENTATION?

While large opportunities exist for energy savings, there are several barriers to energy efficiency programs:

- Often, clear information about energy efficient technologies and associated savings are not available to end consumers. For example, without an energy efficiency label on appliances, consumers find it difficult to identify an energy efficient product and make an informed purchasing decision that takes into account the operating costs over a product's lifetime.
- Energy efficient technologies and processes involve additional upfront cost. In the absence of financing, upfront costs become a barrier to the uptake of energy efficiency.
- There are barriers related to regulations and policies, as well as misplaced or split incentives between the source of investment in energy efficiency and the beneficiary of cost savings.

HOW IS ENERGY EFFICIENCY FINANCED?

There are a number of ways to finance energy efficiency programs. Financing mechanisms can be categorized into several types: (1) Public and private sector lending programs; (2) Subsidies, rebates, and tax incentives/credits; (3) Energy service company (ESCO) performance contracts; and (4) On-bill financing.

- Lending programs are traditionally used by public and private sector institutions to fund energy efficiency programs. These can be in the form of soft loans, revolving funds, guarantee funds etc.
- Subsidies, rebates, and tax incentives are used to encourage consumers to invest in energy efficiency by reducing the cost of efficient technologies and processes.
- Performance contracting involves an ESCO that implements energy efficiency projects for a fee, which is directly linked with the energy savings resulting from the project implementation.
- On-bill financing for energy efficiency improvement is typically provided to consumers through electric utilities and recovered on their monthly electricity bills. Monthly energy savings because of efficiency improvements help consumers in repaying the monthly payments to utilities.

WHAT IS THE RELATIONSHIP BETWEEN ENERGY EFFICIENCY AND RENEWABLE ENERGY?

- Energy efficiency and renewable energy must go hand in hand. Together, energy efficiency programs and renewable energy supply can impact a larger percentage of energy demand.
- By reducing the required size of renewable energy systems, energy efficiency helps in making renewable energy more affordable and reliable to end-consumers.
- Energy efficiency also helps in dealing with the intermittent nature of renewable energy. For example, an energy efficiency program in a community can help in reducing the evening peak demand when renewable energy supply from solar plants is low.

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