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ENERGY AND SMALL AND MEDIUM ENTERPRISE



Kenya ©2001 Tom Furtwangler. Courtesy of Photoshare.

ENERGY AND SMALL AND MEDIUM ENTERPRISE

Small and medium enterprises (SMEs) together make up over 90% of the businesses in the world and account for 50 – 60% of worldwide employment. In developing countries, encouragement of an expanded private sector and the creation of local business opportunities is a crucial aspect of economic and industrial growth and the key to successful poverty alleviation activities. Strategic efforts to support small, sometimes informal, businesses offer many people a way to work toward improving their own livelihoods and building a secure future for their families.

In both urban and rural areas of developing countries, however, SMEs are often constrained by lack of infrastructure, communications, and financial investment resources. Without these services, SMEs cannot function effectively, and their contribution to economic and social development is limited.

Given the significant contribution of SMEs to worldwide job creation and income growth, it is crucial that infrastructure services be targeted to support these enterprises. Access to reliable, affordable energy services is vital for SMEs to operate efficiently and profitably, yet

function efficiently and profitably. Electricity is needed to power tools, appliances, and productive equipment, and modern fuels are needed for heating, food processing, and transportation. In Angola, for example, an assessment of peri-urban areas found that 100% of SMEs invest in energy to support their business activities.

In cities, SMEs need energy to operate shops, restaurants, hotels, small manufacturing operations, and service industry applications. Better access to energy opens up broad opportunities for income-producing activities.

In rural locations, energy is needed to support agriculture, fishing, and aquaculture, which often dominate economic activities in these areas. Modern energy services provide a way for people to move beyond subsistence farming and out of poverty.

Dependable, reasonably priced energy services enable SMEs to strengthen their market position, enhance their product and service base, increase business opportunities, and augment income flows in local and export markets. Energy services contribute to the development and maintenance of SME activities in the following ways:

SMALL AND MEDIUM ENTERPRISES IN THE DEVELOPING WORLD			
Enterprise	Employees	Total Assets (US\$)	Total Annual Sales (US\$)
Micro-Enterprise (informal)	10 or less	\$100,000 or less	\$100,000 or less
Small Enterprise (formal business)	11 to 50	\$100,000 - \$3 million	\$100,000 to \$3 million
Medium Enterprise (formal)	51 to 250	\$3 million - \$15 million	\$3 million - \$15 million

such access does not exist in many countries. Chronic power shortages and poor-quality electricity services exact an enormous toll on economic development and constrain many of the services on which small businesses rely. Recent studies of energy and SMEs in the developing world have revealed that the highest prices for electricity and modern fuels are generally paid by the smallest enterprises. Energy costs run from 10% to more than 65% of the total cost of production for many SMEs.

The Energy-SME Nexus

SMEs require a range of modern energy services to

- Increasing productivity through mechanization and energy efficiency.** Automated machinery and equipment upgrades for agricultural processing and small industries can transform labor-intensive, low-production enterprises into high value-added operations.
- Improving food preservation.** Energy for refrigeration and freezing can help preserve agricultural products such as milk and fish for export or retail sales, and energy for drying can be used for improved processing of fruits and meats.

- **Promoting communications.** Telephones, radio, and educational television programs help entrepreneurs keep up-to-date on market conditions. Reports on weather conditions can help farmers determine the optimal time to shear animals, bale hay, or harvest crops.
- **Increasing operating hours.** Lighting allows entrepreneurs to extend their working day and thus increase their income by serving customers in the evening or operating workshops past sundown. Street lighting helps to extend selling hours for street vendors.
- **Improving working conditions.** Modern energy services are cleaner and safer than traditional means of heating/cooling, cooking, and lighting, which benefits both workers and consumers. Eliminating the use of smoky kerosene lamps, crude cooking stoves, and unstable electrical connections (such as in pirated electricity) reduces the incidence of accidents and indoor air pollution.
- **Creating marketplace attractions.** Lights, fans, radios, televisions, and other electrical appliances can draw people to a common location, creating new business opportunities.

Meeting SME Energy Needs

To satisfy SME energy needs, a number of solutions are available. Grid-based electricity, where it exists, is the likely choice. In areas that are not grid-connected, however, SMEs can obtain electricity from smaller-scale, decentralized generators run on diesel fuel, or renewable power sources such as wind, solar, micro-hydro systems, and/or biofuels. Modern petroleum-based fuels and biofuels provide transportation services as well as more efficient heating and food processing than do wood, charcoal, or dung. Technical assistance to SMEs in modernizing their production systems and making them more efficient can significantly reduce the energy inputs required for their operations, making them more profitable and economically competitive.

In addition, demand for improved energy services can provide opportunities for entrepreneurs. In areas unserved by the electric grid, energy supplies can be provided by small-scale, locally owned businesses. This allows for growth of new SMEs and creates an added source of employment in energy service provision and maintenance, agriculture, and business management.

How Is USAID Helping?

USAID works collaboratively with enterprises and host-country policy makers to strengthen the business environment for SMEs by increasing their access to modern energy services. This involves improving policies and legal and regulatory frameworks to promote the conditions necessary for effective energy service delivery and attracting investment capital. USAID also works with private voluntary organizations, local non-governmental organizations, and other development groups to extend much-needed services to underserved clients—especially women, the rural poor, and smallholder farm families.

SECTORS DOMINATED BY SMEs IN THE DEVELOPING WORLD
Agriculture and aquaculture
Business services
Energy industry (equipment, services, energy supply)
Finance
Fishing
Forestry and wood products
Hotels/tourism
Information and communications technology (ICT)
Manufacturing
Public services
Real estate
Transportation
Wholesale/retail businesses



NEW ENERGIES PHOTO

PROMOTING SMALL SCALE RENEWABLE ENERGY ENTERPRISES

ABOVE: Solar water heating at senior citizen housing in South Africa.

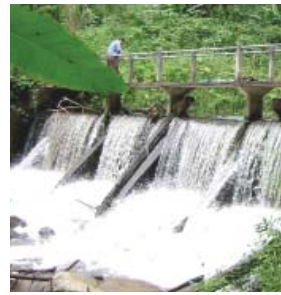
Since April 2000, E+Co has been implementing the Increased Use of Renewable Energy Resources Program (FENERCA), with the support of USAID. FENERCA is working in Brazil, Ghana, Guatemala, El Salvador, Honduras, Nicaragua, Panama, South Africa, Tanzania, and Zambia to ready enterprises for finance, implementation, and growth.

Examples include:

- An enterprise that distributes, sells, and provides maintenance for renewable energy systems—PV, micro-hydro, small-wind, and biomass solutions—in Brazil
- A small company responsible for manufacturing, installing, and maintaining solar water heaters in South Africa
- A firm that produces biomass-efficient stoves in Tanzania

Key results achieved to date include:

- Enterprise development services provided to 80 enterprises
- Forty-one business plans completed
- Nineteen FENERCA-supported enterprises secured over US\$36 million of investment from financial institutions
- More than 25 megawatts of new and clean energy from eight FENERCA-supported enterprises
- Assistance to the Energy Commission of the Honduran Congress in drafting legislation on “Incentives for Renewable Energy projects”
- Completion of one of the largest green certificates transactions involving a Guatemalan hydroelectric company and the largest Dutch utility
- Creation of a new, innovative mezzanine fund to support US\$60 million in investments, The Central American Renewable Energy and Cleaner Production Facility (CAREC)



USAID/CHRIS GREACEN, PALANG THAI

THAILAND— RENEWABLE ENERGY BOOSTS ECONOMY

ABOVE: In Thailand, small community- or entrepreneur-owned renewable energy generators may now connect to the grid and sell excess electricity to utilities

With the aim of reducing oil imports and pollution, and strengthening energy security and competitiveness, Thailand is exploring opportunities for water power, solar, wind, and biomass energy resources. Yet these technologies have faced various market obstacles, including a lack of support for small-scale renewable energy producers, who were not allowed to sell the electricity they generated to the electric utilities due to concerns over safety and compatibility.

With assistance from USAID, a group of volunteers drafted legislation to allow small community enterprises or energy entrepreneurs to connect to the grid and sell their excess electricity to the utilities. The new legislation encourages the development of clean energy resources, while providing essential energy services to entrepreneurs, thus helping to build up the local economies. To date, eight small-scale energy providers have sold power to the grid, while 40 others with a generating capacity of six megawatts received permission to connect to the grid. According to Chris Greacen, Palang Thai, “Our outreach efforts have led to at least three megawatts of additional planned installations in Thailand—enough electricity for 12,000 homes.”

“Supporting the development of small and medium-size enterprises does more than stimulate and diffuse economic growth. It creates a middle class.”

USAID, Foreign Aid in the National Interest

ANGOLA—EMPOWERING FARMERS THROUGH ACCESS TO CREDIT

In many rural areas of Angola, decimated or degraded after almost 30 years of war, people are just beginning to resettle and reestablish small farms. The Cooperative League of the U.S.A. (CLUSA), with financing from USAID, supports rural group enterprises to boost production of and revitalize local agricultural markets. One of the key factors in increasing production is access to energy and equipment needed for irrigation.

CLUSA provided loan guarantees to Banco Sol, which in turn provided in-kind credit agreements to small-scale farmers to supply them with water pumps and pipes for irrigation as well as seeds, fertilizers, and pesticides. Groups comprised of over 500 farmers collectively received equipment such as water pumps and pipes for irrigation. After three loan cycles, repayment rates have averaged over 98%. Through this program, Banco Sol can afford to give farmers a 10% annual interest rate—affordable in most cases despite high inflation.

MODERN ENERGY-ENABLED SERVICES AND IMPACTS FOR THE SME SECTOR	
Services	Impacts
Lighting, heating, cooking, cooling, computers, small machinery, radio/TV, clean water, training, market knowledge/access, information, communications, and technologies for small businesses/entrepreneurs.	Expanded and diversified incomes and employment, improved gender equity, reduced urban migration, development of an expanding middle class, and growing national and community incomes.

This document is one of a set of brochures developed by the U.S. Agency for International Development to highlight energy’s critical links to other sector priorities of USAID, its overseas missions, partner countries, and other stakeholders in the development community. The brochure set includes briefs on Energy and:

Gender | Small and Medium Enterprise | Natural Resource Management and the Environment | Health and Education | Economic Growth and Trade | Democracy, Governance, and Conflict Management | Water and Agriculture

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