

Ngong Cookstove Project

Location: Ngong, Kenya

Type: Improved cookstoves

Size: 800 systems

Funding: Total: US\$10,000

Private: US\$2,000

Public: US\$8,000

Objective: To save money and improve health through the use of safer, more efficient cookstoves.

Duration: 1999–2001

Scale: Urban

Summary

Women who had no alternative but to burn plastic bottles and other trash as a cooking fuel were trained to build and construct more efficient stoves to save money and improve health. The women have now gone into business building these stoves and selling them to communities across Kenya. Strong community participation and capacity building have helped to ensure economic viability and continued investment in the project by community members.

In-Country Principles That Attracted Nondonor Financing

- Capacity building and informed decision making
- Public access to, and support of, sustainable development and public participation, coordination, and partnerships

Capacity-building principles that helped attract private funding included hiring and developing staff with appropriate skills matched to the job, incorporation of popular input, and study tours. Also important were skills-oriented training for decision makers and staff and stakeholder partnerships and exchanges.



Public understanding of the changes made to the energy sector was facilitated through increased knowledge of, and participation in, energy decision making. Activities that helped increase public access and participation, which, in turn, helped generate private-sector support, included defining appropriate applications of education, communication, and outreach methods, and institutionalizing sustainable education and outreach programs.

Financing

Total project investment was US\$10,000. The capital costs of the project were approximately US\$4,000; operations and maintenance costs were US\$6,000.

The Ngong Women's Group, an informal community-based organization of women, contributed US\$2,000, and the United States (US) Department of Agriculture contributed US\$8,000.

Two aspects of this financing arrangement are noteworthy. The first is the relatively small amount of total financing for a project that has already brought financial and health improvements to over 800 families and that led to the development of a small business. The second is the size of the contributions relative to the resources of the funding organizations. Proportionally, the contribution by the Ngong Women's Group far exceeded the contribution of the government group.

The Project

Fuel cost savings and health benefits for poor women and their families were achieved through reducing wood fuel use and avoiding toxic cooking fuels. The women of Ngong, an impoverished area outside of Nairobi, were increasingly unable to afford the wood needed to fuel their stoves and were using toxic materials such as plastic bottles and other trash as fuel.

To eliminate the harmful effects of using such cooking fuel, the women constructed energy-efficient household-scale ceramic cookstoves and insulated cookers that allowed them to return to using wood as a fuel source.

The project is operational and has benefited the residential sector through increased health through improved cooking methods. Not only have the women enriched their families' health, but also they have developed a business that builds the stoves and sells them throughout Kenya.

Technical Data

An improved ceramic cookstove (“jiko”) and an insulated basket cooker were introduced to replace inefficient cooking systems. The new systems use more efficient direct combustion systems for wood. Over 800 of the new systems are in use.

Performance Data

The improved systems allow more efficient use of wood as cooking fuel. The greater efficiency of the new systems lowers the total cost of wood for cooking, thus reducing the use of plastic bottles and other toxic trash as a fuel source. The new cooking systems lead to cost savings and reduced toxic air emissions.

Participants and Roles

The Kenya Forestry Research Institute implemented the project and provided capacity-building support. The women of Ngong provided the energy, labor, and enthusiasm to not only build stoves but also build a business.

The US Department of Agriculture was the primary source of funds. Winrock International managed the project and provided technical assistance.



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Soluz Honduras

Location: North and northwestern Honduras
Type: Rural energy delivery
Size: 2,500 photovoltaic (PV) systems delivering the equivalent of 500 kW of conventional centralized power
Funding: Total: US\$1,500,000
 Private: US\$1,000,000
 Public: US\$500,000
Objective: To provide electricity to dispersed rural households and small businesses.
Duration: 1998–2002
Scale: Rural

Summary

Soluz Honduras, a private energy company with a strong market orientation and customer focus, supplies more than 2,000 rural households, micro-enterprises, churches, schools, and clinics off the power grid with electricity generated by PV systems, including over 1,500 on a monthly rental basis. Key to project success were revised private foreign investment laws, rational and transparent import tariffs, and private-sector participation in public conferences with government agencies.

In-Country Principles That Attracted Nondonor Financing

- Capacity building and informed decision making
- Public participation in, and support of, sustainable development
- Institution building and access to justice and enforcement of laws

Key to attracting private financing for the project were comprehensive and transparent energy laws and policies that defined the basic structure of the energy sector and provided



a framework for private investment and ultimate privatization. In 1994, Honduras implemented a foreign investment law. Enforcement of this law, combined with rational import tariffs on equipment, was critical to attracting investment capital. Access to and linkage with available and transparent rural electrification plans were important in attracting private investment.

Also important were principles that allowed utilities to operate under standard commercial practices and to form management teams independent of the government.

Financing

Total investment in the project was US\$1,500,000. Private-sector sources included Triodos-Solar Investment Fund (US\$250,000), Corporacion Financiera Ambiental (CFA) (US\$300,000), and SunLight Power International (US\$250,000).

The World Bank Group’s International Finance Corporation (IFC) provided US\$500,000 through the Small and Medium-Sized Enterprise (SME) Program, which is funded by the Global Environment Facility (GEF). A US\$200,000 investment from E+Co included funds that originated from the Inter-American Development Bank’s Multilateral Investment Fund. The United States Agency for International Development (USAID) provided US\$23,000 in cost-shared funds for market assessment, and Soluz funded two market surveys costing \$73,000.

Costs were allocated in two phases. Phase I, “market assessment,” was US\$500,000, and Phase II, “breakeven,” was US\$1,000,000, with three disbursements based on performance milestones.

The Project

This project provides electricity, on a private basis, to households, small businesses, schools, clinics, and churches that are not connected to the national electricity grid. It provides energy for lighting, cooking, recreation, refrigeration, entertainment, wireless communication, personal computer operation, and standard appliances to users who otherwise would have no access to electricity from the electric utility. The service displaces unsustainable kerosene and battery usage.

The company provides electricity for dispersed rural households and small businesses, mainly through a “wireless” fee-for-service (rental) approach that offers PV systems and services at affordable prices. By eliminating the up-front costs of purchasing PV systems, Soluz Honduras has achieved