97551
September 20, 2010

Mali: Household Energy and Universal Access

Overview

In rural areas of Mali, only around 13 percent of the population could access electricity in 2009, hampering their potential for development. The International Development Association (IDA) joined the government, local communities and the private sector remedy this and as of May 2010, 43,311 grid connections covering about 650,000 people had been made by local private operators. In addition, the project has connected 803 public institutions including 172 schools and 139 health centers.

Challenge

The objective of the Household Energy and Universal Access Project (HEURA) was to support the Government of Mali's efforts to increase access of isolated low income populations to basic energy services to help achieve economic growth and poverty reduction targets. The rural electricity access rate is low in Mali. According to the National Directorate of Energy, only about 13 percent of the rural population had access to electricity in 2009. These low access rates are not allowing Mali to fully harness its economic potential to compete fairly on international markets. Most rural households meet their lighting and small power needs with kerosene, dry cell, and car batteries. A spectrum of innovative service delivery mechanisms is needed with the active participation of communities, Non-Governmental Organizations (NGOs), and the private sector. Progress made in the last four years through the HEURA project should be sustained and expanded to increasing the number of connections and to ensure that energy services are impacting the competitiveness of small and medium size enterprises and social programs.

Approach

The Household Energy and Universal Access Project followed a two-pronged design: First, it helped Mali to develop a multi-layered approach to rural energy, combining bottom-up spontaneous small concessions with top down planned large concessions for electrification. Secondly, it built and strengthened a community-based woodland management to ensure sustainable wood fuel supply and inter-fuel substitution initiatives with a gradual introduction of improved stoves. The HEURA project supported the Government of Mali in creating the Agence Malienne pour le Developpement de l' Energie

More Results

650,000
number of people with access to electricity through this project

803
public institutions including 172 schools and 139 health centers provided with off-grid electricity

7,926
number households connected to solar home systems over a period of six years

MORE INFORMATION

- Household Energy and Universal Access Project

Public Disclosure Authorized

Domestique et pour l' Electrification Rurale (AMADER), a specialized agency with its staff fully funded by the government that serves as the one stop agency on household energy and rural electrification in the country. The HEURA helped the government set up a Rural Electrification Fund aimed supporting partially start-up capital costs of rural electrification sub-projects. An operational rural agency and the availability of funding from the Rural Electrification Fund have enabled local private operators to become the driving force of this project. They have provided an average matching co-financing of 25 percent of rural electrification sub-projects.

Results

- **Encouraging local private sector participation**. About 80 sub-projects managed by 46 operators are financed by the project. As of May 15, 2010 about 43,311 off-grid connections in households and for public lighting have been made to provide electricity to about 650,000 persons. In addition, through the project, about 803 public institutions including 172 schools and 139 health centers have also been provided off-grid electricity access.

- **Empowering women.** Women's associations are playing an important role in remote communities as providers of energy services. After receiving training in basic accounting in local languages provided by NGOs financed through the project, they manage multifunctional platform electrification initiatives, which are village diesel motors that combine electricity production with other services such as milling, husking, pumping water, charging batteries, running lights and powering tools. To date, multifunctional platforms have been installed in 64 communities resulting in 7,200 connections.

- **Introducing new renewable energy technologies into Mali's rural energy mix**. Over a period of six years, more than 7,926 households were connected to solar home systems and solar photovoltaic systems were installed in more than 500 institutions countrywide.

- **Promoting sustainable wood fuel management and inter-fuel substitution.** In order to contribute to a sustainable supply of wood fuel, predominantly used for cooking and heating, the project in partnership with the National Directorate of Nature Conservation, has placed about 874,000 hectares under community management. NGOs and local private operators have disseminated about 748,500 improved wood and charcoal stoves and about 51,385 Liquified Petroleum Gas stoves. The growing use of improved stoves is expected to help reduce indoor air pollution which is one of the main environmental health risk factors that women and children are exposed to. Indoor air pollution is associated with acute respiratory diseases, conjunctivitis, and low birth weight.

Bank Contribution

The Household Energy and Universal Access Project (comprising an IDA Credit of US$35.7 million and a Global Environment Facility (GEF) trust fund of US$3.5 million) was presented to the Board in November 2004. Based on satisfactory performance of the project, an additional IDA credit US$35 million was presented to the Board in September 2008.

Partners

In fiscal year 2011, a second additional financing will be signed. It is a combination of trust funds totaling about US$9 million provided by the Government of Russia and the Government of the Netherlands to further introduce renewable energy technologies and to promote productive uses of energy. The successful project performance has attracted other donors such as Germany's KfW and the African Development Bank to the rural electrification sector. Mali has been selected as a pilot country as part of the "Scaling up Renewable Energy in Low Income Countries Initiative", funded by a number of bilateral donors under the Climate Investment Funds to promote options to support a low-carbon and climate-resilient development.

Moving Forward

The project is working to address three main challenges: (i) introducing further low-cost technologies to reduce electricity tariff in rural areas; (ii) ensuring sustainability of the initiatives; and (iii) securing long term financing to sustain the interest of local private operators in the energy services delivery business.

Beneficiaries

The availability of modern energy services in targeted rural communities is allowing children to do their homework at night, women to be able to deliver babies in better conditions, villagers to have a security of movement at night. Furthermore, a whole range of income generating activities is emerging from ice making, food processing, bakery, tailoring, rural telephony, and commercial banking. Markets can now be open for business at night and social ceremonies can be extended to the nighttime. Organized fuel wood markets are helping beneficiaries to have additional and predictable income. The use of improved stoves is likely to reduce indoor air pollution associated with acute respiratory diseases, conjunctivitis, and low birth weight in participating households.

Kalifa Goïta is the mayor of Yorosso, a cotton-growing town south of Mali, in West Africa. For quite a while residents of his municipality only saw sunshine for close to 12 hours a day. Not anymore. The Bank-supported Household Energy and Universal Access Project ensures that the sun shines day and night in his house and town: *"If you don't have the sun, you have to look for it. Here, electric light is the sun we were looking for,"* he says. Since 2004 when the project started being implemented, Goïta says, the presence of electricity has already stimulated socio-economic activities in his town. *"We hope to attract more local investments thanks to the availability of electricity to fight under-employment of the population who had nothing to do once the crop season was over."* Not only has electricity brought light, but it has also meant that people can communicate better using electric-powered devices. *"With the phone, we know what happens in the world. With electricity, we will see what happens through television,"* says Goïta, cheerfully. The Household Energy and Universal Access Project is an IDA/GEF project which has so far allowed the construction of a small power plant feeding a network of 157 customers. The plant, which also relies on solar energy, provides electricity for 10 hours and supplies 42 public lamps. When completed, it will serve many more people.