ISSUE
08
MAY
2014

IMPACT

this issue

Rural electrification points to a brighter future for Liberia

KEY ACHIEVEMENTS

Supported the development of a new Rural and Renewable Energy Agency for Liberia

Helped the RREA take its first major electrification program to completion, in a country with only 2% electricity access

Continuously build capacity of the RREA's staff using a 'learning by doing' approach

Strengthened the RREA to effectively use international financing for renewable and rural energy projects

Rehabilitated Hydro Plant Highlights Success of Liberia's Rural Electrification Agency

A mini hydro plant destroyed during Liberia's civil war has been brought back to life by the country's newly created rural electrification agency and is now bringing power to homes and businesses for the first time in more than a generation.

The rehabilitation of the Yandahoun plant in Liberia's northern Lofa County represents a small but important first step in bringing electricity to the millions of Liberians who currently live off the grid. It also signifies the success of the World Bank-supported Rural and Renewable Energy Agency (RREA) in taking its first major electrification project from concept stage through to completion.

"This is our flagship project—a real milestone," said RREA General Director Augustus Goanue. "It demonstrates our emphasis on extending the benefits of electrification beyond the capital and therefore distributing the benefits of development more evenly."

Even before the outbreak of civil war in 1989, Liberia had labored to meet the energy demands of its people. By the time the conflict ended in 2003, warring factions had gutted the country's power plants and transmission lines, leaving less than two per cent of the population—mostly residents of the capital, Monrovia—with access to publicly provided elec-

ESMAP

"This is our flagship project—a real milestone. It demonstrates our emphasis on extending the benefits of electrification beyond the capital and therefore distributing the benefits of development more evenly. "

Augustus Goanue
General Director
Rural and Renewable Energy Agency

"It was 'learning by doing.' Instead of sending people on courses, we created a system in which new RREA staff members were involved in every step of a project's implementation process."

Jenny Hasselsten
Energy Specialist
World Bank Africa Region

tricity. A country that had struggled to extend electricity to its people in the best of times now faced the challenge of starting over from scratch.

It was in this context that the World Bank initiated a program to establish the RREA. The initial ESMAP support—through the World Bank's Africa Renewable Energy and Access Program (AFREA)—went toward developing legislation, recruiting and training staff, and renovating a building in downtown Monrovia that now serves as the RREA's headquarters.

The focus then shifted toward building the RREA's capacity to develop and implement rural electrification projects. This was a crucial because the destruction of government buildings, the ransacking of official records, and the exodus of qualified personnel that took place during the 14-year conflict had left little institutional capacity with which to undertake Liberia's formidable reconstruction process.

Ms. Jenny Hasselsten, an Energy Specialist with the World Bank, said the capacity building process involved intense on-the-job training.

"It was 'learning by doing,'" Ms. Hasselsten said. "Instead of sending people on courses, we created a system in which new RREA staff members were involved in every step of a project's implementation process."

In May 2009, a series of assessment studies were conducted that determined that the

IMAGES

Page 3—© *Africa Renewable Energy and Access Program* | World Bank
All other images—Rural Renewable Energy Agency (RREA) of Liberia.

rehabilitation of the long-abandoned hydro plant in Yandahoun would be an ideal pilot project opportunity for the RREA.

The assessments found that the generation capacity of the Yandahoun plant could be doubled from its pre-war capacity of 30kW, and that there were numerous opportunities for productive uses in the area that would enable small enterprises to take advantage of the income-generating opportunities afforded by a restored electricity supply.

In addition, interviews carried out with dozens of households and businesses revealed a willingness to contribute in-kind to the plant's rehabilitation and a capability of area residents to pay for generated electricity.

Following these fact-finding activities, ESMAP support financed a series of technical studies along with bidding documents for the design, supply, installation, and commissioning of the micro hydro plant. At the same time, the RREA's staff was being trained in renewable energy technology and development, strategic management, developing annual plans, and conducting GIS-based spatial mapping and analysis techniques, and was involved in every stage of the Yandahoun reconstruction process.

Construction got underway in May 2011, and less than two years later, in March 2013, the plant was fully commissioned.

As well as serving as a stand-alone agency dedicated to bringing electricity to rural areas, Ms. Hasselsten said the RREA now also functions as a mechanism through which a wide range of international donors can direct funding for future rural electrification programs.

The most recent evidence of this came in early November, when the RREA was allocated US$ 50 million from the Climate Investment Funds (CIF) to develop and implement a renewable energy investment plan. The financing, which will be administered through the World Bank and the African Development Bank, is part of the CIF's Scaling Up Renewable Energy Program in Low

ESMAP MISSION

The Energy Sector Management Assistance Program (ESMAP) is a global knowledge and technical assistance program administered by the World Bank. It provides analytical and advisory services to low- and middle-income countries to increase their know-how and institutional capacity to achieve environmentally sustainable energy solutions for poverty reduction and economic growth. ESMAP is funded by Australia, Austria, Denmark, Finland, France, Germany, Iceland, Lithuania, the Netherlands, Norway, Sweden, and the United Kingdom, as well as the World Bank.

Income Countries (SREP) facility.

The SREP was established to scale up the deployment of renewable energy solutions and expand renewables markets in the world's poorest countries. It aims to pilot and demonstrate the economic, social, and environmental viability of low carbon development pathways.

In Liberia, the SREP financing will enable the RREA to build a series of new mini-hydro plants connecting to new mini-grids in other isolated rural areas.

Mr. Goanue said the RREA is currently working with the government to identify projects where the new mini-hydro plants will be located.

"We want to replicate the Yandohun project using the capacity we have gained," Mr. Goanue said. "We now have the experience to go ahead and manage other similar projects around the country."

THE WORLD BANK

The World Bank
1818 H Street, NW
Washington, DC, 20433 USA
www.esmap.org
esmap@worldbank.org

ESMAP
Energy Sector Management Assistance Program