Cameroon microgrid operation

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In the Central African country of Cameroon, electricity is scarce outside of major cities. But that may soon change because of a public-private partnership that has a set goal of installing 750 minigrids.

The effort is about more than lighting up the 11,000 villages that lack power; the partners hope to foster long-term social, environmental and economic benefits.

Begun with the installation of seven solar minigrids by Renewable Energy Innovators Cameroon (REIc), the project is a partnership between the US Trade and Development Agency (USTDA), SimpliPhi Power, Morua Power and REIc.

As a result of one of the first seven minigrid installations, a woman who sold food in her community has experienced a major life change. Before the minigrid was installed, she woke before dawn to prepare food -- for sale to the community -- under the light of a kerosene lamp. But the kerosene fumes often contaminated and spoiled the food.

"With electricity, she wakes up before sunrise, can turn on the light, make her dough and sell her food to the community. She can come back to her family to provide food and money and nourishment," said Katherine Morua, founder of Morua Power, an engineering firm that"s focusing on the socioeconomic aspects of the project. "By bringing power to a community that doesn"t have it, we help empower them socioeconomically."

The USTDA has provided a $950,000 grant that is funding a feasibility study for providing solar minigrids to more than 100,000 households in Cameroon. The grant went to REIc, which has asked SimpliPhi Power to prepare technical, regulatory, financial and legal analysis to develop an initial 134 solar minigrids, working with the National Renewable Energy Laboratory and Morua Power. SimpliPhi Power generally supplies energy storage systems, but focuses on creating a socioeconomic impact in underrepresented communities.

With every project, we ask, "Did we help someone today?" -- Matt Roberts, SimpliPhi

The project is expected to be a model for more than 750 minigrids that REIc would develop. The minigrids will range in size from about 40 kW to about 150 kW, providing enough electricity for phone charging, WiFi and lighting for several dozen to 100 households. The larger minigrids will serve hospitals, said Jesse Gerstin, director of sustainable business development at SimpliPhi Power.

"This is minigrid development with a focus on community impact, our bread and butter in the region. With every project, we ask, "Did we help someone today?" " said Matt Roberts, director of marketing and communications at SimpliPhi.

To help people in the Cameroon communities, the project aims to provide not only electricity but also services benefitting the residents. They include education services such as laptops for students and WiFi, said Gerstin.

The USTDA grant focuses on providing analysis that will move the country toward broader electrification via minigrids.

"We"re establishing a whole pathway for minigrid development in a country that doesn"t have much established," said Gerstin. The company is working with the Cameroon agency that oversees the electricity sector, which now has no regulations related to minigrids. SimpliPhi will gather data about the minigrids to help develop regulations.