Battery research and development lilongwe

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Speaking at the launch of the Battery Energy Storage System (BESS) project in Kanengo, Lilongwe, Chakwera emphasized the importance of reliable and sustainable energy supply in accelerating development.

"This project will improve security and reliability where storage during low-usage hours will help us discharge adequate power when it is most needed," said Chakwera.

Scheduled to be fully operational by June 2025, this innovative system is designed to enhance security and reliability by storing energy during low-usage hours for release during peak demand.

The Malawi leader also expressed optimism that this project will pave the way for Malawi to eradicate power outages, expand electricity access, and stimulate development through various profitable ventures for households and businesses.

"My administration remains focused on increasing electricity access from the current 20 percent to 100 percent by 2030 with more than half the population connected to the national grid," he added.

When the sun sets in Malawi each day, most rural Malawians use candles, torchlights and kerosene lamps to light their homes. From sunset to sunrise, between roughly 6 p.m. and 5 a.m., they socialize, do household chores and study in near-total darkness because they are living without access to electricity.

Malawi is one of the world"s least-developed nations, with 70% of its population living on less than $2.15 USD a day, according to the World Bank. Most Malawians experience energy poverty, meaning they lack access to sustainable and affordable modern energy services and products. Approximately 85% of Malawi"s population of more than 20 million people have no access to electricity. Only 3% of Malawi"s population have access to a clean fuel for household cooking.

"The depth of energy poverty for people living in Malawi cannot be overstated," says University of Michigan School for Environment and Sustainability (SEAS) Professor Pam Jagger, a political economist who focuses on the dynamics of poverty and the environment in low-income countries.

For the past decade, Jagger has been collaborating with Professors Charles Jumbe and Thabbie Chilongo, development economists at the Center for Agricultural Research and Development at the Lilongwe University of Agriculture and Natural Resources (LUANAR) in Malawi. They have worked together on several studies focused on energy access.

The team has been supported by a five-year, $4.79 million award from the National Science Foundation (NSF)

Partnerships in International Research and Education (PIRE) program. This multi-institutional, multi-country project has enabled Jagger and her collaborators to study the effectiveness of different interventions designed to improve energy access. Most recently, they completed data collection for a study in rural Malawi exploring what types of households are early adopters of solar technologies, what types of technologies they are using and the benefits they derive from them.

Solar power--which includes standalone solar panels and solar home systems or kits consisting of a solar panel, rechargeable battery/inverter, and light bulbs--is touted by nongovernmental organizations (NGOs), governments and the private sector as an affordable electricity solution for people living in places where there is no access to grid electricity now or in the foreseeable future.

From left: Longtime collaborators Professors Thabbie Chilongo (LUANAR), Pam Jagger (U-M) and Charles Jumbe (LUANAR).