Zambia microgrid applications

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ENGIE Energy Access, Africa’s top provider of Pay-As-You-Go (PAYGO) and mini-grid solutions, has started building 15 solar mini-grids in Zambia’s Eastern Province. This project is a key component of the transformative Increase Access to Electricity and Renewable Energy Production (IAEREP) program, supported by the 11th European Development Fund and the European Union.

By expanding the adoption of off-grid energy solutions in Zambia, ENGIE Energy Access will provide reliable electricity to underserved families and small businesses, creating economic growth and increasing socio-economic welfare in local communities.

MySol Grid Zambia, a unit of ENGIE Energy Access, is responsible for constructing, owning, operating, and maintaining these mini-grids. This ensures that residential, commercial, and productive-use customers have access to dependable and renewable power along with value-adding services.

The first sites in this groundbreaking project include Lusinde, Kandongwa, Nyimba Mwana, Chidiwa, Chataika, Kanyanga, Petulo, Kasamba, Chidiwa, Mphole, Mung"omba, Kalambana, Mtore, Kondwelani, Lunga, and Luamphande. They are scheduled to be operational by the end of 2024.

In 2023, MySol Grid Zambia signed a USD 7.5 million debt facility with the Facility for Energy Inclusion (FEI), managed by Cygnum Capital. This funding will provide the company with the necessary resources and flexibility to construct a total of 60 mini-grids under the IAEREP program. This is a significant step for the mini-grid sector, with these assets having attracted non-recourse long-term financing.

ENGIE Energy Access has been operating in Zambia since 2017. The company now employs over 250 people, works with 650 independent sales agents, and has established more than 60 locations nationwide. They have sold over 300,000 solar kits and have one mini-grid running in Chitandika.

Mumbwa, Zambia, 30th October 2021 – Solarworx has been able to complete the first pilot installation of its innovative DC Microgrid in the area of Mumbwa, Zambia. The grid builds upon existing Solar Home Systems from Solarworx or other manufacturers and allows sharing the excess power from solar panels or battery capacity. Costs are considerably lower than for AC mini-grids, enabling bottom-of-the-pyramid households to receive a grid-like electricity connection.

Together with the local partner Little Sun Zambia Ltd. and with the great contribution of the people of Mumbwa we have successfully set up a first grid of 10 interconnected households, another 15 connections are underway. All devices report net metering and technical data remotely, which allows now to fine tune operating principles and to analyze the financial viability of the grid.

The energy transfer is billed autonomously and anonymously, producers receive mobile money for sharing their energy while consumers pay for the consumption. The Microgrid devices allow a bidirectional power transfer of 250W per access point.

Solarworx is cooperating with EEP Africa for the roll-out of the DC-Microgrid. The RES Project Zambia is supported by the German Federal Ministry for Economic Affairs and Energy as part of the Renewable Energy Solutions Programme of the German Energy Solutions Initiative.