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The 11 planned off-grid networks will offer clean power to around 20,000 people for EUR0.28/kWh, according to one of the EU bodies which is backing the project.

A coalition of organizations has backed a plan to install 11 “solar-battery” mini-grids in Lesotho which will have a combined generation capacity of 1.8MW. An announcement of the project on the website of the EU"s EDFI Electrifi organization did not specify what battery storage capacity the mini-grids would have.

The mini-grids will be installed by the OnePower, U.S.-based non-profit out of the Massachusetts Institute of Technology and will reportedly supply power to 20,000 people and seven health centers via 7,300 new electricity connections. The panels will generate up to 3.48GWh of electricity annually, according to European finance development institution (EDFI) the Electrification Financing Initiative (Electrifi), and will generate 100 jobs during construction and six permanent roles.

The local power networks will offer clean electricity to customers for an “almost cost-reflective tariff” of LSL5/kWh (EUR0.28) after PowerOne received help with its business plan from EU investment body Get vest.

EDFI Electrifi, which said it contributed LSL75 million (EUR4.23 million) to the project in a mixture of a loan and investment in PowerOne stock, said the mini-grids would be mounted on solar trackers designed and built by an unspecified company in sub-Saharan Africa, and would also feature smart meters.

The EU-funded electrification body said the Renewable Energy Performance Platform (REPP) backed by the U.K. government and managed by London-based financial services company Camco Clean Energy had matched its equity and loan investment in a PowerOne project the former described as “Africa"s second largest project-financed mini-grid transaction.”

The EU body said the mini-grid project also received unspecified volumes of grant funding from the UN Capital Development Fund; UN Development Program; The U.S. Agency for International Development"s Power Africa fund; and U.K.-government backed UK Aid. The PowerOne portfolio also received an unspecified loan from New York impact investor the Open Road Alliance, according to EDFI Electrifi, plus legal support from Chicago-based Sidley Austin and Washington DC"s Covington & Burling, via the Thomson Reuters Foundation‘s TrustLaw program.

EDFI Electrifi said the funding it provided built upon an earlier EUR100,000 loan it gave PowerOne for a feasibility study to lay the groundwork for the mini-grid scheme and added, REPP lent LSL7 million (EUR395,000) to the company in 2019 to fund Lesotho"s first solar-battery mini-grid, which became

operational last year in the village of Ha Makebe. The scale of that project was not specified.

As the global community grapples with the urgent need to transition to cleaner and more sustainable energy sources, the small Southern African nation of Lesotho is emerging as a potential leader in the renewable energy sector. At the heart of this transition lies a crucial yet often overlooked component: energy storage. This technology, which includes batteries, pumped hydro storage, and thermal storage, plays a pivotal role in ensuring the reliability and efficiency of renewable energy systems.

The potential of energy storage in Lesotho is immense. The country"s high-altitude geography makes it ideal for pumped hydro storage, a technology that stores energy by using two water reservoirs at different heights. When demand is low, excess electricity is used to pump water from the lower reservoir to the upper one. When demand is high, the water is released back down, driving a turbine and generating electricity. This technology, combined with the country"s abundant water resources, could provide a significant boost to Lesotho"s renewable energy capacity.