Benin microgrid operation

Benin microgrid operation

The mini-grid, expected to connect over 1,500 residents to electricity, is part of the company"s wider plans to install over 20 mini-grids in Benin, which will serve more than 30,000 people across 20 rural localities collectively, through a total 1.2 MW capacity.

"Therefore, we can meet the various urgent needs of residential, communal, and productive users living outside the national grid." He added. “We are committed to making clean energy technologies accessible to low-income households, promoting inclusivity and empowerment within each member of the communities we serve."

The mini-grids, co-financed by the Millennium Challenge Account – Benin II program as part of the Off-grid Clean Energy Facility, are expected to collectively deliver 1.2 MW of installed capacity and support more than 30,000 people across 20 rural localities.

Illoulofin Solar Power Station, is a 50 megawatts (67,000 hp) solar power plant in Benin, whose first 25 MW was commissioned on 19 July 2022, and the next 25 MW is under construction and is expected to come online in 2025.[1]

The solar farm is under development by the Government of Benin, with funding from the European Union (EU), the French Development Agency (AFD) and the Beninese Electricity Company (SBEE). The power station will be built in phases, with the first phase of 25 megawatts capacity followed by the second phase of equal magnitude. The energy from this solar plant will be integrated into the Beninese national electricity grid, during the 25 years of the solar farm"s expected lifespan.[2]

The first phase of this power station, comprises 47,212 crystalline PV panels, each rated at 530 Watts, for a generation capacity of 25.02 megawatts. The energy generated here is evacuated via a 20kV medium-voltage transmission line measuring 2.5 kilometres (2 mi) in length, to a location where it enters the national electricity grid of Benin.[5]

Benin microgrid operation

In December 2021, the Beninese Minister of Energy announced that the design and size of the solar farm had been increased from the original 25MW to a new capacity of 50MW.[6]

The Beninese government selected the French engineering and construction conglomerate Eiffage to design, construct, operate, maintain the solar farm for the first three years of commercial operation, then transfer it to SBEE. Eiffage in turn, tasked two of its subsidiaries, Eiffage ?nergie Syst?mes and RMT to carry out the task. During the first three years of commercial operations, Eiffage engineers will train SBEE engineers and technicians on the solar farm operations and maintenance.[7]

The engineering, procurement and construction (EPC) contractor is a consortium comprising Eiffage Energy Systems and RMT, both of whom are subsidiaries of the Eiffage Group.[7] The first phase of the power station cost US$72 million. It is expected that with the doubling of capacity during the second phase, the cost will increase.[2][6]