

Nkonge Solar Plant adds 20MW to national grid

GEOFREY SERUGO

The Shs 82.6 billion state-of-the-art solar plant is poised to enhance Uganda's national grid with an additional 20 megawatts of power. This ambitious project, spearheaded by Xsabo Group, is situated in Kabulasoke at the Nkonge station. It promises to generate a significant 20 megawatts of power daily, augmenting the country's current total installed generation capacity of 1,842 megawatts.

Thanks to financing secured through a loan from the Uganda Development Bank, this plant marks a significant step forward, elevating the country's grid-connected solar portfolio to an impressive 80.6 megawatts. It joins a network of five other plants, which collectively contribute 60.6 megawatts. The commissioning of this solar plant is eagerly anticipated in March.

On September 28, 2020, Xsabo Group received a 21-year, three-month license to construct and operate this 20-megawatt solar plant in Kyakasa village, Kasambya sub-county, Mubende district.

Dr David Aloba, the founder and managing director of Xsabo Group, elaborated on the plant's innovative features. It is equipped with 38,000 bifacial panels and 547 horizontal single-axis solar trackers. These trackers, driven by motors and controlled by an AI system, adjust the modules' position throughout the day to optimize sun exposure. Each tracker is also fitted with an antenna for seamless communication with control boxes. The bifacial panels, unlike lesser-quality alternatives in the market, come with a 25-year warranty.

"The plant includes 84 string inverters, each rated at 250kW, along with three power stations featuring



Solar panels

communication units, a distribution cabinet, a transformer, switching gear cabinets, and various auxiliaries such as smoke detectors and emergency lights," Dr. Aloba detailed.

Furthermore, the plant boasts a self-sufficient meteorological station, equipped with sensors to measure critical weather parameters like ambient and solar panel temperatures, wind speed and direction, humidity, and solar radiation. These measurements are vital for assessing the plant's efficiency and

efficiency. The power from the 20MW Xsabo Nkonge power station will be sold to the Ugandan Government through the Uganda Electricity Transmission Company Limited (UETCL) at an advantageous tariff of US cents 7.1 per kilowatt-hour, making it the most cost-effective among existing solar plants in the country.

She commended the Xsabo Group for its significant contribution to Uganda's energy sector, utilizing the nation's favorable climate to provide citizens with clean and renewable energy. Dr Aloba emphasized the group's dedication to playing a constructive role in securing a sustainable future for both current and future generations by powering development, thereby creating opportunities for livelihoods.

"We are focused on building resilience, catalyzing sustainable growth, and fostering a net-zero economic transition in Uganda and across Africa, aligning with the global shift towards a low-carbon future," he stated.

Denis Ochieng, the acting managing director of the Uganda Development Bank (UDB), reported that the bank had approved funding of Shs 691 billion to support 201 projects throughout the country. The bank's unaudited results showed an eight percent growth in assets from Shs 1.52 trillion in 2022 to Shs 1.64 trillion in the last year. This increase was primarily due to a 24 percent rise in gross loans to customers, totaling Shs 1.6 trillion by the end of the period.

Ochieng highlighted that UDB has been instrumental in advancing Uganda's socio-economic development. The bank's efforts are expected to create 18,558 jobs through the funded projects, in addition to generating Shs 11.39 trillion in additional output value, contributing Shs 615.96 billion in tax revenue to the government, and earning Shs 3.3 trillion in foreign revenue.

"The bank is committed to enhancing development in underserved segments, including SMEs, youth, and women. We continue to implement a range of special programs, specifically designed to support the development of these key sectors," he added.

performance. All data are stored in a data management unit and accessible via the Supervisory Control and Data Acquisition (SCADA) system.

The facility also includes a substation, housing a control building, a main transformer, mechanical structures for equipment support, and an overhead line for dispatching power to the national grid.

Dr Sarah Wasagali Kanaabi, the chairperson of the Electricity Regulatory Authority (ERA), highlighted the project's economic