

UGANDA SOLAR PV POWER PLANTS



Therefore, in order to fill this knowledge gap of lack of information on performance of solar PV installation in this country, this study aims to provide a techno-economic performance analysis of a 10 MW solar PV plant located in Soroti City, in the eastern region of Uganda. The Soroti solar power plant is the first grid-connected solar plant



The power station is located in Tororo District, approximately 12 kilometres (7 mi), by road, southwest of the town of Tororo in the Eastern Region of Uganda. [4] This is approximately 230 kilometres (143 mi) by road, east of Kampala, the country's capital and largest city. [5] The geographical coordinates of Tororo Solar Power Station are 0°37'50.0"N, 34°06'40.0"E ???



These studies do not analyze the techno-economic performance of grid-connected solar PV Power Plants in Uganda curtailing their roll out. Up to now, the installed solar power capacity stands at 88.3 MW which is (4.8 %) of the 1847.5 MW as of 2023 (ERA, 2024b) and yet the country's vision is 5000 MW or 12 % of the total energy required by 2040.



150MW Kabulasoke Solar Power Plant (Under Development): This project, signed in December 2023, involves the construction of a 150MW photovoltaic solar plant in the Kween district by a UAE-based firm, Masdar. Amea West ???



??? Solar photovoltaic (PV) mini-grids are a nascent technology in Uganda; only a few are operational, such as the Kitobo solar power plant in Kalangala district. Most solar PV mini-grid business models are still being evaluated. By contrast, more hydropower, diesel, and biomass mini-grids have been in

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SummaryLocationOverviewDevelopersConstruction costs, funding, and commissioningSee alsoExternal links



Lira Solar PV Park is a 50MW solar PV power project. It is planned in Northern, Uganda. According to GlobalData, who tracks and profiles over 170,000 power plants worldwide, the project is currently at the permitting stage. It will be developed in a single phase.



Soroti solar power plant is a fixed tilt solar PV power plant. Solar power projects require long-tenor loans and can experience difficulty in attracting willing long-term capital investors



The commissioning of the solar PV power plant is expected in Q3 2025. It will be AMEA Power's first operational asset in the country. It will generate approximately 53,940MWh of clean energy per year, power more than 192,640 households and will offset 26,600 tons of carbon emission annually.



Despite solar capacity of just 7% in the country, Uganda's eight hours of sunshine per day represents huge potential for solar power's development. Attracting investment is key. As part of efforts to scale up solar ???



AMEA Power has started a 24MWp Solar Photovoltaic (PV) project in Uganda. The Emerging Africa Infrastructure Fund (EAIF) secured the investment for the \$19mn project financing during COP28. The project is being implemented by Ituka West Nile Uganda Limited, a project company

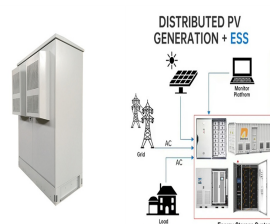
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registered in Uganda and fully owned by AMEA Power .

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Solar energy can be converted to electricity on and off-grid through photovoltaic or concentrated solar power (CSP) technology. About 200,000 km² of Uganda's land area has solar radiation exceeding 2,000 kWh/m² /year (i.e. 5.48 kWh/m/day) this is a high potential for solar power investment[12]. 1.1. Generation and transmission of solar energy



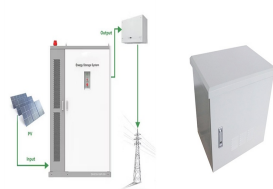
However, Xsabo solar was producing more than any other solar PV plant in 2020. All the four solar plants in Uganda were made of polycrystalline cells type with an average nominal efficiency of 16.67%, and the number of modules per plant ???



This paper therefore reviews the growth of Solar Photovoltaics (PV) in Uganda that was birthed in the 1980's and continues to mature steadily today contributing 4.24%(50MW) to the national grid



The government of Uganda has announced plans to build four solar and wind farms in two regions in Uganda. This follows a signed agreement with Amea Power, an independent power producer (IPP) based in the United Arab Emirates for the development.. According to the agreement, a 10MW solar photovoltaic power plant and a 10 MW wind farm ???



Namugoga Solar PV Park is a 50MW solar PV power project. It is planned in Central, Uganda. According to GlobalData, who tracks and profiles over 170,000 power plants worldwide, the project is currently at the announced stage. It will be developed in a single phase.



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The 24 MWp Solar PV project is being implemented by Ituka West Nile Uganda Limited, a project company registered in Uganda and fully owned by AMEA Power. The project is located on a 52- hectare site in Ombachi village, Uleppi Subcounty, Madi Okollo District in the West Nile Sub-Region, around 450 km from Kampala.



Nkongwe Mubende Solar PV Park is a 23MW solar PV power project. It is planned in Central, Uganda. According to GlobalData, who tracks and profiles over 170,000 power plants worldwide, the project is currently at the under construction stage.



This article lists all power stations in Uganda. As of January 2019, Solar power station Community Coordinates Fuel type Capacity (megawatts) Year completed Owner Notes Namugoga Solar Power Station: Karuma Power Plant Paves Way For ???



Pabbo Solar PV Park I is a 10MW solar PV power project. It is planned in Northern, Uganda. According to GlobalData, who tracks and profiles over 170,000 power plants worldwide, the project is currently at the permitting stage. It will be developed in a single phase.



Construction of a 24 MW solar plant is underway in northwestern Uganda. Once commissioned, it will be the first solar asset in the region and Amea Power's first operational asset in the country.

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The power station is in the Namulaba Village, Butiti Parish, Kabulasoke sub-county, Gomba District, [2] outside of the town of Kabulasoke and off of the Mpigi???Kabulasoke???Maddu???Sembabule Road. The station is approximately 73 kilometres (45 mi), by road, west of Mpigi, the nearest large town. [3] This location is approximately 111 ???



The project involves the development, construction and operation of a 24MWp/20MWac solar PV power plant in Ombachi, Limited has entered into a 20-year Implementation Agreement with the Government of Uganda and the project will sell power to Uganda Electricity Transmission Company Limited, based on a 20-year Power Purchase ???



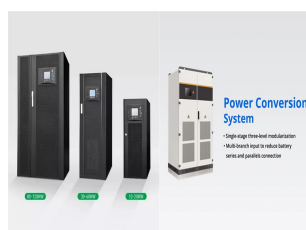
This programme saw the development of solar PV power plants such as Tororo and Soroti, each of 10 MW (GETFiT-Uganda Citation 2018). The availability data revealed that both hydro and thermal power plants have a high effectiveness of 100% while solar PV power plants and co-generation power plants relatively low values.



The Ministry of Energy and Mineral Development (MEMD) did however publish a "National Road Map on Scaling Up Productive Use of Solar Energy" in 2023. 1 On p9, this key policy document highlights that "Uganda's energy mix is largely dominated by hydroelectricity power (82%), followed by thermal power (8%), PV solar (5%) and Bagasse (5%



However, Xsabo solar was producing more than any other solar PV plant in 2020. All the four solar plants in Uganda were made of polycrystalline cells type with an average nominal efficiency of 16.67%, and the number of modules per plant range from 30,500 to 68,00 depending on the power capacity.



However, in 2016, Uganda government through the Electricity Regulatory Agency (ERA) partnered with institutional donors such and private investors construct two large Solar PV plants in Soroti and Tororo in North-Eastern and Eastern Uganda respectively. 2.1 Soroti Solar PV

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Power Plant The rural Soroti region is heavily dependent upon