Senegal specific energy storage applications

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Madagascar-based Axian Energy has obtained EUR84 million ($89.2 million) of financing for a solar-plus-storage project, featuring a 60 MW solar plant and a 72 MWh battery energy storage system (BESS) in southern Senegal.

The Emerging Africa and Asia Infrastructure Fund (EAAIF), Dutch entrepreneurial development bank FMO, and Deutsche Investitions- und Entwicklungsgesellschaft (DEG) have announced an investment in a solar plant with a BESS in Senegal.

The Kolda solar farm project, valued at EUR105 million, will feature a 60 MW photovoltaic system with 72 MWh of battery storage. It has been billed as the largest planned solar plant with BESS in West Africa to date.

Axian Energy is developing the Kolda solar project in southern Senegal, scheduled for completion in 2026. The 60 MW system will supply power to about 235,000 people in underserved areas, with battery storage providing up to three hours of power during evening peak times.

FMO board member Huib-Jan De Ruijter said the project will stabilize the grid and offer essential services to Senegal"s utility, Senelec, while boosting affordable electricity for people and businesses, particularly in the Casamance region.

Senegal has set a target of reaching 40% of renewable energy capacity by 2030. Figures from the International Renewable Energy Agency (IRENA) show that the country had 263 MW of cumulative solar capacity at the end of 2023.

Axian Energy, a subsidiary of Madagascar-headquartered Axian, has renewable energy projects in operation across seven African countries and projects in the pipeline across eight more. Its operational projects have a combined capacity of 133 MW, which it aims to extend to 1 GW by 2030.

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Cairo, Egypt and Abu Dhabi, UAE - 13 November 2023: Infinity Power, a joint venture between Egypt"s Infinity and UAE"s Masdar, announced today the signing of a 20-year Capacity Change Agreement with Senelec, Senegal"s national electricity company to supply 40MW through a battery energy storage system (BESS). The system will enable Senelec to stabilise the nation"s electricity grid and pave the way for further renewable energy growth in Senegal.

The project will be operated by Infinity Power"s Parc Eolien Taiba N"Diaye (PETN) windfarm, located approximately 70km north of Dakar. The windfarm supplies 158.7MW of clean, renewable wind energy to over 2 million people across Senegal. PETN represents a 15% uplift in Senegal"s renewable generation capacity, and is the largest wind farm in West Africa.

Construction of the battery energy storage system is expected to commence in early 2024 at the Tob?ne substation in Thies and is expected to become operational in 2025. Once complete, it will be one of the largest of its kind in West Africa, and will help Senegal to avoid approximately 37,000 tonnes of carbon dioxide emissions each year. The BESS will also provide ancillary services such as frequency regulation, reactive power support, and energy charge and discharge.