# Kenya energy storage technologies

Kenya energy storage technologies

Two thirds of Kenya"s electricity is generated from renewable/clean energy sources. Of this, wind power accounts for 15% (435MW) while solar accounts for just under 2% of total installed capacity (51MW) with these numbers expected to continue to grow.The success in growth of these two energy sources has inadvertently resulted in excess energy being generated during off-peak hours and increased intermittent capacity in the national grid, thus presenting a good opportunity for introduction of battery storage to balance the demand and supply in the system.

TheInternational Trade Administration,U.S. Department of Commerce, manages this global trade site to provide access to ITA information on promoting trade and investment, strengthening the competitiveness of U.S. industry, and ensuring fair trade and compliance with trade laws and agreements. External links to other Internet sites should not be construed as an endorsement of the views or privacy policies contained therein. This site contains PDF documents. APDF readeris available from Adobe Systems Incorporated.

The energy sector in Kenya is rapidly evolving, with new technologies playing a key role in enhancing efficiency and sustainability. This article delves into some of the most exciting innovations in the sector, from smart grids and energy storage solutions to advancements in renewable energy technologies. We"ll also highlight how these innovations are being implemented and their potential impact on Kenya"s energy landscape.

The Kenya Electricity Generating Company PLC (KenGen), has been designated to be the Implementing Agency for the Kenyan Battery Energy Storage System (BESS), which is part of the Kenya Green and Resilient Expansion of Energy (GREEN) program, funded by the World Bank. KenGen is the leading electric power generating company in Kenya, generating 1904MW, which represents a market share of 65% of the nation"s installed capacity, making KenGen the largest energy producer in East Africa. The company"s energy mix includes Hydro (825.69 MW), Geothermal (799 MW), Solar (253.5MW), Wind (25.5MW).

Preliminary analysis from a recent study by the Ministry of Energy indicates the critical need of integrating BESS within the national grid infrastructure. The BESS will be utilized in the storage of excess energy generated by geothermal plants and help address grid instability arising from high levels of intermittent power by providing load balancing power to the grid.

CS Kenya expects KenGen to issue a call for an Expression of Interest for the 100MW BESS project in January 2024. U.S. firms in the energy sector, known for their innovation and quality, have a strong advantage in BESS technologies making them very competitive in the Kenyan market, and we encourage firms to be on the lookout for this procurement via KenGen"s website: https://

Kenya Electricity Generating Company PLC (KenGen) has been appointed as the Implementing Agency for

the Battery Energy Storage System (BESS) as part of the Kenya Green and Resilient Expansion of Energy (GREEN) program, funded by the World Bank.

Battery storage systems are devices that the power generated from renewable energy sources such as solar and wind to be stored and released when needed. This means that power from renewable energy can then be distributed, including to support the national grid, and for other transmission-related services.

KenGen is currently considering pilot installation of the BESS capacity for several key regions, including Central Rift, Coastal Region, Mount Kenya, Nairobi, North Rift, and Western Kenya. The specific project site selection will depend on a forthcoming Feasibility Study (FS), conducted by KenGen and designated FS Consultants.

"By efficiently storing surplus energy and enhancing electricity stability and reliability, the BESS project will not only alleviate energy curtailment but also usher in a new era of sustainability and energy security,” KenGen Managing Director and CEO, Peter Njenga said.