

ABB microgrid solution to boost renewable energy use by remote community in Kenya

Zurich, Switzerland, September 2, 2015 – ABB PowerStore™ technology to stabilize power supply from wind/diesel hybrid plant in the city of Marsabit

ABB, the leading power and automation technology group, has won an order from Socabelec East Africa Ltd. to design, supply and install a PowerStore flywheel-based microgrid stabilization solution for the Marsabit wind farm in northern Kenya.

The country plans to quadruple its energy output in the next five years bringing on board an additional 5,000 megawatts (MW) of power capacity, with the aim of providing the majority of its approximately 50 million citizens access to electricity by 2020. The renewable energy sector in Kenya is among the most active in Africa, and the country possesses some of the continent's most abundant and consistent wind resources.

Marsabit is an oasis at the edge of the desert in a windy area of northern Kenya. The city has a population of 5,000 and is not connected to any national grid for its power needs. Being a remote community served by an isolated microgrid, it requires a secure, stable power supply based on easily available and preferably clean sources, like wind.

Today's electricity supply for the area relies on diesel generators and two 275 kilowatt (kW) wind turbines. ABB's containerized, 500 kilowatt (kW) PowerStore stabilization system will be integrated into the existing power network and will interface with existing diesel power station controls. This will maximize renewable energy penetration by stabilizing the grid connection and utilizing any excess wind energy generated. The project is scheduled for completion in 2016.

"Sustainable development of Africa and fostering microgrid solutions are both key focus areas in ABB's Next Level strategy and dedicated 1000 day programs have been constituted for them" said Claudio Facchin, President, Power Systems division. "Our microgrid technology solutions can significantly boost renewable integration and can play a key role in helping isolated and remote communities to gain access to clean electricity as in this case."

ABB PowerStore is a compact and versatile grid stabilizing generator. Its primary purpose is to stabilize and protect power systems against fluctuations in frequency and voltage. This dynamic flywheel-based system can inject or absorb power up to its nominal rating, and helps to integrate intermittent renewable energy into a grid, so customers can operate their hybrid plants in an optimal way. These rugged, proven systems are today successfully at work, often in harsh and remote environments, in locations around the world.

ABB's offering includes automation and intelligent control and stabilization solutions that manage renewable energy integration in isolated grids, ensuring utility-grade power quality and grid stability. ABB's solutions enable very high levels of wind and solar power penetration in diesel- powered grids, reducing dependency on fossil fuel supplies and curtailing CO2 emissions. ABB has a proven track record and

more than 30 global microgrid installations for a diverse range of applications such as islanded electrical grids, remote communities and research and industrial campuses.

ABB (www.abb.com) is a leader in power and automation technologies that enable utility, industry, and transport and infrastructure customers to improve their performance while lowering environmental impact. The ABB Group of companies operates in roughly 100 countries and employs about 140,000 people.

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