ABB deploys microgrid with large battery energy storage in Australia
Securing power supply for off-grid mining operation and lowering environmental impact for a clean-energy future

ABB has supplied a containerized microgrid solution to support a gas-fired power station to optimize and automate its operations, increase energy efficiency, reduce fossil fuel consumption and enable uninterrupted power supply from Alinta Energy’s Newman Power Station, which supplies mining operations in the Pilbara. ABB’s microgrid solution includes a 30 megawatt (MW) battery energy storage system, which is one of the largest of its kind to be deployed in a gas-fired power plant. A 30 MW battery energy storage system can supply 6,000 homes with the power supply, where the average supply would be 5 kilowatt (kW).

Mining is a key focus sector in Australia and accounts for approximately six percent of the country’s GDP. The Newman Power Station, situated around 1,200 km kilometers (km) north of Perth in Western Australia, supplies power to remotely located mining operations.

ABB’s microgrid solution will provide power supply to cover the time it takes to start-up a new gas turbine, when there is a fault in the running turbine causing power to trip. This back-up will enable uninterrupted supply of reliable power and prevent any disruption.

ABB’s modular and containerized microgrid will integrate five 6 MW ABB Ability PowerStore™ Battery energy storage systems with the power station’s existing gas turbines, providing a ‘spinning reserve’. ABB has supplied a range of transformers and switchgear to integrate the system.

The innovative solution incorporates ABB’s Microgrid Plus automation and control technology that serves as the brain of the entire system to monitor the gas turbines and facilitate utility-grade power quality and grid stability. It is also equipped for remote service and maintenance.

Our plug-and-play microgrid solution, has been designed to meet complex automation requirements and will ensure grid stability and fuel saving for Alinta’s operation” said Massimo Danieli, Head of ABB’s Grid Automation business unit, a part of the company’s Power Grids division. “Microgrids and energy storage are key focus areas in our Next Level strategy, supporting our quest to provide grid stability, fuel savings, and bring reliable power to people, while reducing environmental impact, as exemplified by this project.”

ABB is a pioneer in microgrid technology with installations all over the world, across a diverse range of applications serving remote communities, islands, utilities and industrial campuses. 15 of these microgrid solutions are installed in Australia.

ABB received the order from Kokam, a recognized storage solution provider who also supplied batteries for Solar Impulse 2 that in 2015-2016 completed a pioneering 40,000 kilometers (km) flight around the world exclusively on solar power. ABB was one of the main alliance partners for this historic flight.
ABB (ABBN: SIX Swiss Ex) is a pioneering technology leader in electrification products, robotics and motion, industrial automation and power grids, serving customers in utilities, industry and transport & infrastructure globally. Continuing a history of innovation spanning more than 130 years, ABB today is writing the future of industrial digitalization with two clear value propositions: bringing electricity from any power plant to any plug and automating industries from natural resources to finished products. As title partner of Formula E, the fully electric international FIA motorsport class, ABB is pushing the boundaries of e-mobility to contribute to a sustainable future. ABB operates in more than 100 countries with about 135,000 employees. www.abb.com

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