ABB commissions HVDC converter station in Mozambique

Refurbished Songo HVDC converter station uses innovative re-connectable converter transformer technology to support export of clean hydropower to South Africa

Zurich, Switzerland, April 16, 2015 – ABB, the leading power and automation technology group, has successfully commissioned the refurbished Songo High Voltage Direct Current (HVDC) converter station in Mozambique, Africa. The station is a key component in the 1,920 megawatt (MW) HVDC link transmitting electricity from the Cahora Bassa hydro-power plant in Mozambique across a distance of 1,417 kilometers to the South African grid. The HVDC link serves the power utilities Hidroeléctrica De Cahora Bassa (HCB) in Mozambique and Eskom in South Africa.

The hydropower plant is located on the Zambezi River in northern Mozambique, a country with a wealth of natural resources and a growing economy. Mozambique has great potential as an energy exporter with around 12 gigawatts (GW) of hydro capacity that could be developed and the Cahora Bassa plant is already one of the largest generation facilities in the South African power pool.

South Africa, where coal-based thermal power is the main source of electricity, has a significant demand-supply gap, so the approximately 2 gigawatts of power supplied from their neighbor to the northeast is critical. For Mozambique, the energy exports represent an important source of income.

ABB replaced the existing equipment with new DC converter transformers, smoothing reactors, arresters and measuring equipment. The installation houses the first re-connectable converter transformers to go into operation worldwide. They allow the system to operate at different voltage levels, between 533 and 600 kilovolts (kV), enabling it for any future upgrade. ABB previously upgraded the Apollo converter station, at the South African end of the HVDC link, in 2008.

“We are pleased that our innovative HVDC solution will bring clean renewable energy from Mozambique to the people of South Africa in a reliable and efficient manner” said Patrick Fragman, head of ABB’s Grid Systems business, a part of the company’s Power Systems division. “This refurbishment boosts power availability and strengthens the transmission infrastructure in the region.”

ABB pioneered HVDC transmission technology over 60 years ago and has built a vast global installed base, having completed about 100 HVDC projects around the world, representing a total installed capacity of more than 120,000 megawatts and accounting for about half of the global installed base. ABB remains at the forefront of HVDC innovation and is uniquely positioned in the industry with in-house manufacturing capabilities for all key components of HVDC systems, including power semiconductors, converters and high voltage cables.

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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