

Press Release



ABB books \$900 million Ultrahigh-Voltage DC power transmission order in India

World's first ultrahigh voltage multi-terminal system to supply hydropower across 1,700 kilometers, with highest ever converter capacity – new global benchmarks in HVDC technology

Zurich, Switzerland, Dec. 22, 2011 – ABB, the leading power and automation technology group, has booked an order worth more than \$900 million from Power Grid Corporation of India Ltd., to deliver an ultrahigh-voltage direct current (UHVDC) transmission system. The link will supply hydropower from mountainous northeast India to the populous region of Agra in central India, 1,700 kilometers away.

Northeast India has abundant hydropower resources scattered over a large area, while the load centers are often located thousands of kilometers away. India plans to create pooling points in the region to collect electricity generated from several hydropower stations and transport it across power superhighways to major urban load centers.

The UHVDC link, operating at 800 kilovolts (kV) will have a converter capacity of 8,000 megawatts (MW), the highest ever built. When operating at full capacity, it will have the means to supply electricity to 90 million people based on current figures for average national consumption.

The system will be the world's first multi-terminal ultrahigh-voltage link and will have three converter stations. Two "sending" stations will convert power from alternating current (AC) to DC for transmission over a single power line and deliver electricity to a third, "receiving" station in Agra where it will be converted back into AC for distribution to end users. The power link will pass through the so called "chicken neck area"; a very narrow patch of land (22 km wide x 18 km long) in the state of West Bengal, which borders Nepal and Bangladesh. Using ultrahigh-voltage transmission, helps to minimize losses and improve efficiency. The deployment of a multi-terminal solution as compared to running separate power links, brings considerable cost reductions.

"HVDC technology is ideally suited for transmission of power, with minimum losses, over long distances and where space is limited," said Peter Leupp, head of ABB's Power Systems division. "This project will set many new global benchmarks and emphasizes ABB's leadership in HVDC. We are pleased to continue supporting India in the development of its power infrastructure."

ABB will execute the North-East Agra transmission project together with BHEL (Bharat Heavy Electricals Limited), a leading Indian government-owned power company that will deliver the remainder of the project worth more than \$1.1 billion in total. The project will be executed on a turnkey basis including design, system engineering, supply, installation and commissioning and is scheduled to go in operation in 2015.

UHVDC transmission is a development of HVDC, a technology pioneered by ABB more than 50 years ago, and represents the biggest capacity and efficiency leap in over two decades. ABB is a world leader in HVDC transmission technology, with many pioneering achievements and over 70 HVDC projects around the world with a combined transmission capacity around 60,000 MW.

ABB previously communicated in March that it had been selected for this project.

ABB (www.abb.com) is a leader in power and automation technologies that enable utility and industry customers to improve their performance while lowering environmental impact. The ABB Group of companies operates in around 100 countries and employs about 130,000 people.

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