

## ABB wins \$540-million order in Brazil for world's longest power transmission link

### HVDC technology to minimize transmission losses across 2,500 km power link

Zurich, Switzerland, July 29, 2009 – ABB, the leading power and automation technology group, has won orders worth over \$540 million from the Abengoa Group to deliver the key technology for the world's longest power transmission link to be constructed in Brazil.

The power highway will link two new hydropower plants in the northwest of the country with São Paulo, Brazil's main economic center, over a distance of 2,500 kilometers. Power will be transmitted at very high voltage (600 kilovolts) to minimize transmission losses.

This will be the second transmission project in Brazil using HVDC (high-voltage direct current) at 600 kV. The Itaipu project, with two transmission lines built by ABB in 1984 and 1987, is the world's highest-voltage DC power transmission system currently in operation. ABB pioneered HVDC transmission technology more than 50 years ago and remains the world leader in this domain.

"HVDC technology is ideally suited for the efficient transmission of renewable energy generated in remote areas, such as hydropower," said Peter Leupp, head of ABB's Power Systems division. "With the Itaipu project celebrating 25 years of successful operation this year, ABB is proud to continue partnering Brazil in its ongoing efforts to strengthen the country's power network."

ABB will provide two 3,150 megawatt HVDC converter stations, and an 800-MW HVDC back to back station to transmit power to São Paulo and the alternating current network in the northwest of the country. The stations are scheduled for completion in 2012 and are a part of the government's Accelerated Development program.

HVDC has lower losses and a smaller footprint than traditional AC transmission systems, and is able to stabilize intermittent power supplies that might otherwise disrupt the grid. For these reasons, it is the technology of choice for long-distance transmission projects which can deliver electricity from remote generation sources to the centers where it is needed.

Abengoa is a technology-based company that applies innovative solutions for the sustainable development of the infrastructure, environmental and energy sectors. It is present in more than 70 countries, where it operates with its five Business Groups: Solar, Bio-energy, Environmental Services, Information Technology and Industrial Engineering and Construction.

ABB ([www.abb.com](http://www.abb.com)) is a leader in power and automation technologies that enable utility and industry customers to improve performance while lowering environmental impact. The ABB Group of companies operates in around 100 countries and employs about 120,000 people.

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