Siemens to supply key components for two major HVDC projects in China
Transmission of ecofriendly hydro-based electricity to megacities in the Guangdong region

Siemens Energy is to supply key components for two high-voltage direct-current (HVDC) transmission projects in southern China. The total order value for the company is approximately EUR250 million. Commissioning of the high-efficiency power transmission systems is scheduled for 2013. The HVDC links will transmit hydro power from upcountry to the coastal industrial region of Guangdong. Purchaser is China Southern Power Grid Company, Guangzhou. The link from Nuozhadu to Guangdong spanning roughly 1500 kilometers will have a transmission capacity of 5000 megawatts (MW). The 1300-kilometer-long connection between Xiluodu and Guangdong will have an overall capacity of 6400 MW, which equals the combined ratings of approximately six large conventional power plants.

“The global market for HVDC with a current volume of EUR3 billion is showing dynamic growth rates and will at least double within the next five years. With HVDV technology transmission losses can be reduced by as much as 40 percent, which is ideal for bridging very large distances,” said Udo Niehage, CEO of the Power Transmission Division of Siemens Energy.

For the two power connections Siemens together with its Chinese partners will supply the key components for the HVDC system instrumentation and controls, converter valves and eight 800-kV converter transformers produced at the Siemens manufacturing plant in Nuremberg. Compared to a similar three-phase AC line the transmission losses with an HVDC link are 30 to 40 percent less. HVDC links can therefore be up to 3000 kilometers long with low losses. In densely populated regions HVDC also has the advantage that it only needs a smaller route width for the overhead line than that required for a comparable three-phase transmission line.

Energy-efficient high-voltage direct-current transmission systems (HVDC) are part of Siemens’ Environmental Portfolio. In fiscal 2010, revenue from the Portfolio totaled about EUR28 billion,
making Siemens the world’s largest supplier of ecofriendly technologies. In the same period, our products and solutions enabled customers to reduce their carbon dioxide (CO₂) emissions by 270 million tons, an amount equal to the total annual CO₂ emissions of the megacities Hong Kong, London, New York, Tokyo, Delhi and Singapore.

The Siemens Energy Sector is the world’s leading supplier of a complete spectrum of products, services and solutions for the generation, transmission and distribution of power and for the extraction, conversion and transport of oil and gas. In fiscal 2010 (ended September 30), the Energy Sector had revenues of approximately EUR25.5 billion and received new orders totaling more than EUR30.1 billion and posted a profit of more than EUR3.6 billion. On September 30, 2010, the Energy Sector had a workforce of more than 88,000. Further information is available at: www.siemens.com/energy.

Siemens press photo

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Caption:
Siemens Energy is to supply key components for the two high-voltage direct-current transmission projects Nuozhadu-Guangdong and Xiluodu-Guangdong in southern China. Nuozhadu-Guangdong will have a transmission capacity of 5000 megawatts (MW) at a DC voltage of ± 800 kilovolts (kV) and provide electricity to the megacities in the Guangdong region, Xiluodu-Guangdong an overall capacity of 6400 MW at ± 500 kV. Commissioning of the systems is scheduled for 2013.