

Power Transmission and Distribution

For the trade press

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Siemens connects Majorca to power grid on the Spanish mainland – HVDC link for higher security of power supply and increased system stability

Siemens Power Transmission and Distribution (PTD) has been awarded its third HVDC order in Europe within half a year. Siemens is delivering the two converter stations for the new high-voltage direct current transmission link (HVDC) between Morvedre near Valencia and Santa Ponsa near Palma de Mallorca, connecting the Balearic island of Majorca with the Spanish mainland. From May 2011, the 250-kilometer (155-mile) long, 250 kV HVDC submarine cable with a power capacity of 400 MW will provide the resort island with environmentally friendly and low-loss power supply from the Spanish mainland. The customer is Red Eléctrica de Espana (REE). The order volume for Siemens totals to about EUR 100 million.

The aim of the new high-voltage direct current link is to ensure a reliable power supply with minimal losses to the resort island of Majorca without building new power plants. Over 790,000 thousand inhabitants live on Majorca, the largest of the Balearic islands, in addition up to seven million vacationers visit the island every year. Thanks to this first access to the electricity market on the Spanish mainland, the peak load demands of Majorca can be covered by electricity imports from the European power grid, especially during the main holiday season in the hot summer months. This will save emissions of over 1.2 megatonnes of CO₂ per year. This is how much of the gas which is harmful to the climate would be produced otherwise, for example through the construction of a new oil-fired 400 MW power plant on Majorca. A plant like this would produce higher CO₂

emissions in comparison with energy-mix supplied by means of the HVDC transmission, using regenerative and conventional sources in a combination from the mainland. This is equivalent to a CO₂ saving of 52 percent thanks to the use of electricity from the grid on the Iberian peninsular.

The Siemens scope of supply comprises the delivery and installation of the HVDC converter station on a turnkey basis, as well as gas-insulated switchgear (GIS) and a highly integrated switching station (HIS) for connection to the network. The order also includes the core components such as Thyristor valves, converter transformers, smoothing reactors, protection and control systems and the AC and DC filters.

“Winning the third HVDC order in Europe in such a short time clearly shows the high level of acceptance of our technology among power network operators,” said Pamela Knapp, member of the Group Executive Management at Siemens Power Transmission and Distribution. In May 2007, Siemens was awarded the order for constructing the converter stations for the “Storebælt” submarine cable project in Denmark, and an order for two converter stations for the “BritNed” HVDC project, connecting the Netherlands to Great Britain.

The **Siemens Power Transmission and Distribution Group (PTD)**, headquartered in Erlangen, Germany, is one of the leading global players in its market sector. As a product supplier, system integrator, solution designer and service provider, Siemens PTD ensures - for utilities and industry alike - the efficient and reliable transmission of electrical energy from the power plant to the consumer. With a worldwide workforce of about 27,500 and operations in more than 100 countries, PTD had sales of 6.5 billion euros according to U.S. GAAP in fiscal 2006. Further information at www.siemens.com/ptd.

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Caption:

Siemens Power Transmission and Distribution (PTD) connects the resort island Majorca to the power grid on the Spanish mainland for the first time. The 250 kilometres (155 miles) long, 250 kV HVDC submarine cable link between Morvedre near Valencia and Santa Ponsa near Palma de Mallorca will allow power transmission of 400 MW at a DC transmission voltage of 250 kV as from May 2011. Thanks to this first access to the electricity market on the Spanish mainland, the peak load requirement of the islands can be covered by electricity imports from the European power grid, especially during the main holiday season in the hot summer months.