

### Energy Sector Renewable Energy Division

Erlangen (Germany), June 9, 2011

#### **Siemens starts operating its first 6 megawatt wind turbine**

Low weight design of SWT-6.0-120 will reduce costs for future offshore wind projects

**Siemens Energy has installed the first prototype of its next generation offshore wind turbine in Høvsøre, Denmark, and has today initiated the first trial operation. The new SWT-6.0-120 wind turbine with a power rating of 6 megawatts (MW) and a rotor diameter of 120 metres uses the innovative Siemens direct drive and proven rotor technology. Nacelle and rotor of the SWT-6.0-120 weigh together less than 350 tons, setting a new low-weight standard for large offshore machines.**

The new SWT-6.0-120 is the third direct drive wind turbine type developed by Siemens. The company is in the process of thoroughly testing and validating the performance of the new wind turbine before the product will be officially launched for sale in the near future. "In tendency large wind turbines have always been heavier per megawatt than small ones. The SWT-6.0-120 breaks this rule, having a weight per megawatt similar to that of many turbines in the 2 to 3 MW range", says Henrik Stiesdal, Chief Technology Officer of the Siemens Wind Power Business Unit.

"Reaching this low weight with a strong and robust machine is the result of targeted innovation combined with our more than thirty years of wind industry experience", Stiesdal adds. The low weight of the SWT-6.0-120 wind turbine will contribute to a significant reduction in the cost of energy for offshore wind power plants. The low weight positively impacts the costs of the turbine itself, but also that of the tower and the support structures.

"We have developed the SWT-6.0-120 wind turbine specifically for the offshore projects of the future. Our direct drive technology offers a smart, straightforward design that minimizes the number of moving parts in the wind turbine. We expect that our new SWT-6.0-120 will set new standards for performance, robustness and optimized maintenance concepts, which are major advantages in the harsh conditions offshore," says Henrik Stiesdal.

The new Siemens SWT-6.0-120 makes use of several key technologies that are well-proven in offshore applications of the market-leading Siemens 3.6 MW turbine. The first series of the 6 MW wind turbine will feature the same proven B58 blade as is now used on the SWT-3.6-120. Other proven technologies employed in the new SWT-6.0-120 wind turbine include the Siemens IntegralBlade® design for blades manufactured without glue joints.

The SWT-6.0-120 is designed and optimized for service and maintenance work. It features the Siemens advanced diagnostics systems to reduce customer risk and enable maximum reliability and availability. A particular offshore feature is a helicopter-hoisting platform which is integrated in the nacelle rear and allows easy and safe access for service technicians.

The first 6MW prototype will now undergo an extensive commissioning and trial operation process before being released for automatic operation. During 2011, Siemens will install additional prototypes of the SWT-6.0-120 wind turbines for further testing and validation. A number of pre-series 6 MW wind turbines will be installed during 2012 and 2013 for further tests and optimization of the turbine performance. Serial production is planned for 2014.

Over the last 20 years, Siemens has successfully installed more than 600 offshore wind turbines with a combined capacity of more than 1,800 MW in European waters. With a secured order backlog for further offshore projects with a total capacity of about 3,600 MW, Siemens will foster its position as market leader in this segment. Electricity from offshore wind power plants is expected to make a major contribution toward a clean and sustainable power supply.

Wind power is an integrated part of Siemens' Environmental Portfolio. In fiscal 2010, revenue from the Portfolio totaled about EUR28 billion, making Siemens the world's largest supplier of eco-friendly technologies. In the same period, our products and solutions enabled customers to reduce their carbon dioxide (CO<sub>2</sub>) emissions by 270 million tons, an amount equal to the total annual CO<sub>2</sub> 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 EUR3.3 billion. On September 30, 2010, the Energy Sector had a work force of more than 88,000. Further information is available at: [www.siemens.com/energy](http://www.siemens.com/energy).



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**Caption:**

Siemens Energy has installed the first prototype of its next generation offshore wind turbine, and has initiated the first trial operation. The new wind turbine with a power rating of six megawatts (MW) and a rotor diameter of 120 meters uses the innovative Siemens direct drive technology. In the picture the nacelle of the prototype is lifted to the top of the tower. Siemens is in the process of thoroughly testing and validating the performance of the new wind turbine before the product will be officially launched for sale in the near future.