Siemens installs prototype of its 7-megawatt offshore wind turbine

- Upgraded wind turbine can produce electricity for up to 7,000 households
- Built on Siemens’ large direct drive platform with 10% more energy
- Utilizes proven technology and the supply chain of its predecessor
- Field tests with upgraded generator and enhanced electrical system

Only a few months after its sales launch at the EWEA Offshore trade show in Copenhagen, the new Siemens offshore flagship wind turbine of the type SWT-7.0-154 has now been installed as a prototype. The planned field testing of the 7-megawatt (MW) offshore machine in Østerild, Denmark, mainly focusses on the upgraded generator and the enhanced electrical system. The majority of other components are equal to the proven technology of the Siemens SWT-6.0-154 – including the rotor with its outstanding diameter of 154 meters. This latest edition of the D7 product platform can produce 32 million kilowatt hours of clean electricity under offshore wind conditions, enough energy to supply up to 7,000 households.

In May 2011, Siemens installed the first prototype of its direct drive offshore wind turbine, while in the meantime the direct drive wind turbine has become the benchmark in the offshore wind industry. “The installation of the 7-MW version is an exciting step in its further development”, says Morten Rasmussen, Head of Technology at Siemens Wind Power and Renewables Division. “Based on the reliable technology and supply chain of our six megawatt machine we have improved our flagship wind turbine with stronger permanent magnets, optimized generator segments and upgraded converter and transformer units. With only these minor changes we expect to get it ready for serial production within only two years.”
The gearless drive technology permits a compact design: Using Siemens' Direct Drive technology the SWT-7.0-154 is the lightest turbine of its class. The combination of robust design and low weight reduces offshore infrastructure, installation and maintenance costs. Today's cranes and installation vessels will be sufficient for its installation.

With the SWT-6.0-154 Siemens experienced a tremendous success of its direct drive offshore technology. Gearless Siemens turbines have been selected for around ten projects. The first of them are already in operation. The new Siemens offshore machine will strongly contribute to lowering the levelized cost for offshore electricity: The SWT-7.0-154 model yields nearly 10 percent more power than its predecessor at comparable operational costs. Due to the upgraded electrical system it provides increased reactive power capabilities, important for grid code compliance. Advanced technology based on a proven platform will assure high reliability and maintainability.
New Siemens wind turbine SWT-7.0-154 installed:

The prototype in Østerild, Denmark was installed only a few months after the product launch at EWEA Offshore trade show in Copenhagen.

This press release and press pictures are available at:

www.siemens.com/press/pi/PR2015050226WPEN