



GE's 6-Megawatt Wind Generator Leaves Factory, Destined to Accelerate Offshore Wind Growth

- *The Completed Permanent Magnet Generator (PMG) is the First Generator out of the First Series of 300 Generators to be Manufactured in GE's Offshore Wind Factory in Saint-Nazaire*
- *PMG's Low Component Count and High Redundancy Increase Availability and Reliability, Optimizing Energy Production*
- *GE is Well Positioned to Serve the Offshore Wind Market in France and Worldwide*

PARIS—February 10, 2016—Higher, bigger and more reliable wind turbines are defining the future of offshore wind. Harsh environments demand the technology provider to come up with solutions that have high reliability and less maintenance requirements. It's a journey GE (NYSE: GE) started years ago. It is yet another example of how GE is helping customers build wind farms in some of the most challenging locations.

Today, GE Power Conversion has successfully completed manufacturing the first serial PMG in GE Renewable's offshore wind factory in Saint-Nazaire, which was inaugurated in late 2014. The factory is set up to have a capacity of manufacturing 100 generators per year.

As the first series, 300 generators are to be manufactured on-site. The first recently completed generator is to be installed in GE's Haliade™ 150-6MW offshore wind turbine in Denmark. The turbine's power yield is 15 percent higher than that of other same-generation wind turbines, each is capable of supplying 5,000 households per annum. The power supplied by these turbines will become increasingly cost-effective as the volume of generators coming out of the Saint-Nazaire factory increases.

This highly sophisticated production site uses the air-cushion system that has been implemented to move generators within the site. The innovative way of manufacturing eliminates the need of cranes within the factory, significantly driving down the infrastructure costs. The site is also equipped with a test bench, ensuring every generator coming out of the assembly line is ready to be deployed.

"The factory in Saint Nazaire is the first offshore wind manufacturing site in France. It is a milestone in the nation's energy history. Now by leveraging technologies from different GE businesses—the GE Store, we are well positioned to bring clean offshore wind energy to the domestic market as well as export to regions beyond France where energy is needed," said Frederic Maenhaut, Renewables Executive, GE Power Conversion.

The 6-MW PMG is one of the world's largest generators ever built. Its direct drive system has no mechanical gearbox coupled to the generator. Low component count increases equipment reliability and therefore enables higher energy efficiency, which also leads to increased turbine availability. Less downtime and maintenance requirements ultimately can reduce the cost of wind energy.

The generator is split into three electrical circuits. In the unlikely event of two circuits going offline, the high level of redundancy enables the turbine to continuously produce power even in "degraded" mode.

This is a critical element for offshore wind power plants as stormy weather and treacherous water can delay repair work for days or weeks, needless to mention the very high maintenance expenditure.

“Offshore wind is gaining increasing competitiveness in the power mix, and GE is well positioned to serve this industry. We developed this PMG technology five years ago. It is ideal for offshore setting, helping increase wind turbines’ availability and optimizing energy production,” said Maenhaut.

GE’s PMGs have been previously selected to be installed on Block Island, America’s first offshore wind farm, which will help generate 30 MW of electricity in 2016.

About GE

GE (NYSE: GE) is the world’s Digital Industrial Company, transforming industry with software-defined machines and solutions that are connected, responsive and predictive. GE is organized around a global exchange of knowledge, the "GE Store," through which each business shares and accesses the same technology, markets, structure and intellect. Each invention further fuels innovation and application across our industrial sectors. With people, services, technology and scale, GE delivers better outcomes for customers by speaking the language of industry. www.ge.com

About GE Power Conversion

GE Energy Connections provides customers with electrical solutions that enable local utilities and energy-intensive industries to more efficiently manage electricity from the point of generation to consumption. GE’s Power Conversion business, a business unit of GE Energy Connections, applies the science and systems of power conversion to help drive the electrification of the world’s energy infrastructure by designing and delivering advanced motor, drive and control technologies that evolve today’s industrial processes for a cleaner, more productive future. Serving specialized sectors such as energy, marine, oil and gas, renewables and industry, through customized solutions and advanced technologies, GE Power Conversion partners with customers to maximize efficiency. To learn more, please visit: www.gepowerconversion.com.

Follow GE’s Power Conversion business on [Twitter](#) and on [LinkedIn](#).

###

For more information, please contact:

Paul Floren, GE
Power Conversion, Global Communication
Leader
+33 1 53 59 28 44
+33 6 20 71 14 21
paul.floren@ge.com

Wenlin Jin, GE
Power Conversion, External Affairs
+33 1 53 59 28 45
+33 6 10 13 02 53
wenlin.jin@ge.com