

MANUFACTURING

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Senvion installs first prototype of new turbine

Senvion, a leading global manufacturer of wind turbines, has successfully completed the installation of the first 3.6M140 EBC (Eco Blade Control) turbine prototype at the Windtestfeld Nord near Husum, in Schleswig-Holstein, for 4testwind GmbH. The Senvion 3.6M140 EBC is one of Senvion's biggest on-shore turbines designed for moderate and strong wind speeds.

The new turbine is equipped with the innovative load-reducing pitch control system Eco Blade Control (EBC) technology, which enables optimized load management even in challenging wind conditions. The 3.6M140 EBC also features a newly designed steel tower and a larger rotor diameter of 140 meters which generates high yields even at lower wind speeds.

The rotor blades are equipped with the new Rodpack technology, which ensures a lighter blade design. At a hub height of 110 meters, the turbine can power up to 3,400 households per year and has an extended lifetime of 25 years.

The Windtestfeld Nord, near Husum, is just three kilometers away from the North Sea. This location offers the ideal wind conditions for the testing and the certification of the turbine.

"Senvion is committed to reducing the levelized cost of energy," said Jürgen Geissinger, CEO at Senvion. "With this new turbine, we have combined core product developments to create a machine that is targeted toward optimal energy efficiency. The combination of the 140-meter rotor diameter



A cross section of Senvion's 3.6M140 EBC. (Courtesy: Senvion)

and the upgrade to 3.6 MW allows additional output at the same site. Even with the larger 68.5-meter rotor blades, the 3.6M140 EBC can be installed in the same amount of time as a smaller turbine, ensuring an effective solution for our customers."

The wind-farm owner, 4testwind GmbH, is a co-development from the iTerra GmbH & Co. KG and Betriebs und Beteiligungsgesellschaft Senvion mbH.

"Throughout this very demanding project, we have always been able to remain on track and keep focused together with our manufacturing partner, Senvion," said Dr. Peter Brodersen, managing director at iTerra Wind GmbH & Co. KG.

"Even the change to a newer type of plant was possible and despite all the adversities we were able to commission the prototype in time before the HUSUM Wind 2017. I would like to thank Senvion and all the others who have fought for the project. This determination and positive cooperation were the guarantors of success."

Senvion presented the 3.6M140 EBC turbine at Hamburg Wind-Energy in September 2016. Serial production for the turbine already has begun with further installations planned for this year. ↵

Source: Senvion

For information, go to www.senvion.com

GE Renewable Energy unveils its largest onshore wind turbine

GE Renewable Energy recently unveiled its new 4.8-158 onshore wind turbine, GE's largest high efficiency turbine to date. Featuring the largest rotor in the segment and innovative blade design, the 4.8-158 offers a significant improvement in Annual Energy Production (AEP), reducing the cost of energy for customers with low to medium wind-speed sites.

"The 4.8-158 design is an important next step in turbine technology and efficiency, and we're excited to introduce this turbine at this moment in time," said Pete McCabe, president and CEO of GE's Onshore Wind Business. "It is well suited for low to medium wind-speed regions worldwide — examples include Germany, Turkey, and Australia — as well as for mechanisms like auctions, as countries around the world are putting an increased emphasis on lowering the cost of energy."

The new 4.8 MW wind turbine, GE's first onshore entry in the 4MW space, is equipped with a 158-meter rotor and a range of tip heights up to 240 meters. The combination of a larger rotor and tall towers enables the turbine to take advantage of higher wind speeds and produce more energy.

GE's latest turbine features high-tech blades, improved loads and controls, and taller, more cost-effective towers. These new innovative features have been developed thanks to close partnerships with LM Wind Power, Blade Dynamics, and GE's Global Research Center.

The 77-meter-long carbon blades leverage the strong track record and material innovations of LM Wind Power and are their longest onshore blades to date. These carbon blades will enable flexibility, allowing GE to offer its customers a high efficien-



GE's latest turbine features high-tech blades, improved loads and controls, and taller, more cost-effective towers. (Courtesy: GE Renewable Energy)

cy product while continuing to drive down LCOE. The blades also feature one of the industry's smallest bolt circle diameters, keeping manufacturing and logistical costs to a minimum.

"This turbine is a great example of what we can achieve through the GE Store, combining technology and development with innovative design and expertise from the Global Research Center, LM Wind Power, and Blade Dynamics," McCabe said. "We collected input from more than 30 customers around the world to ensure we are meeting their specific turbine needs with this product as they work to provide lower-cost renewable energy."

The 4.8-158 leverages the best of GE's 2MW and 3MW platforms, including the proven DFIG — doubly-fed induction generator — and a robust drivetrain architecture. The turbine meets a lower standard of noise emission levels, achieving a 104-dB level during normal opera-

tions. The newly designed machine head reduces the needs for a larger crane while facilitating up-tower repairs and troubleshooting with its up-tower electrical system.

GE's most powerful onshore turbine is built to leverage the intelligence gathered from across the company's 30,000-plus fleet of wind turbines. Data analyzed from this large installed base powers the 4.8-158 with GE's next generation control system. By using GE's Predix core applications including asset performance management (APM), cybersecurity, and business optimization (BO) solutions, its customers realize business outcomes, including lifecycle extension of the customers' windfarms and improvement of farm economics. ↵

Source: GE Renewable Energy
For information, go to www.gerenewableenergy.com

Senvion wins 62 MW orders in Austria



Senvion's 3.2M114 will be erected at the Prinzendorf III wind project. (Courtesy: Senvion)

Senvion, a leading global manufacturer of wind turbines, has signed contracts to supply 20 wind turbines with a total output of 62 MW for four projects in Lower Austria. The contracts have been signed with Windkraft Simonsfeld AG, which has had an established business relationship with Senvion since 2011.

The two companies have previously worked together on four projects in Austria with a total output of approximately 65 MW.

With the orders for the four wind farms, Hipplers II (MM100), Dürnkrot II (3.2M122), Poysdorf-Wilfersdorf V (3.4M140) and Prinzendorf III (3.2M114), Senvion shows the strength of its broad turbine portfolio,

which enables optimized solutions for different wind regimes from strong-wind all the way to low-wind scenarios. The wind turbines will be installed at hub heights ranging from 100 meters to 160 meters to suit the local conditions and further optimize the yield of the wind farms. In doing so, Senvion will be celebrating two firsts in Austria: The Senvion 3.2M122 will be making its debut on the market during the projects and will be installed at hub heights of 119 meters and 139 meters. The 3.4M140 low-wind turbines will be installed at a hub height of 160 meters for the first time.

“We are very much looking forward to these projects,” said Jochen Magerfleisch, Managing Director of

Senvion EU Central. “They will further reinforce our partnership with Simonsfeld. The projects demonstrate that flexibly adapting the turbines from location to location is the way to achieve the highest yield. With a combination of low-wind and strong-wind turbines from the Senvion portfolio at various tower heights, we are helping Simonsfeld to implement the most efficient solutions for all four locations.”

“We are delighted to continue the excellent partnership with Senvion that we have built up over the last five years and expect the new turbine generation to deliver performance just as stable and productive as in the past,” said Markus Winter, head of wind-power engineering at Simonsfeld.

“With the planned electricity production from the new wind farms, we will be able to increase our overall production by more than half in the next few years,” said WKS CEO Martin Steininger. “That will help us to contribute to the process of expanding renewable energy and achieving climate targets.”

For all four projects, Senvion has signed full-service contracts lasting 15 years with extensions for up to 20 years. The wind farms are expected to be constructed between 2018 and 2021. ↴

Source: Senvion

For more information, go to www.senvion.com

Vestas gets 100 MW order in India



The Vestas V110-2.0 MW turbine is part of the Indian order. (Courtesy: Vestas)

Vestas’ progress in India continues with a 100 MW turnkey order.

Leveraging Vestas’ extensive experience from more than 100 turnkey projects across the globe, the order includes delivery, installation, and commissioning of 50 V110-2.0 MW turbines as well as the project’s civil and electrical works. The order follows the inauguration of Vestas’ blades factory in Gujarat and the 54 MW Periyapatti order earlier this year, adding to Vestas’ continued progress in India.

The order also includes a 10-year Active Output Management 4000 (AOM4000) service contract and VestasOnline® Business, its unique SCADA system for data-driven monitoring and preventive maintenance.

“This order underlines the broad range of capabilities and offerings that Vestas has to offer in the Indian market now and in the future,” said Clive Turton, president of Vestas Asia Pacific. “Our extensive experience from around 4 GW of turnkey projects across the globe has been key in securing this order, which is another significant step forward in a key market.”

Turbine delivery is expected to start in late 2017, with commissioning by first half 2018.

At the customer’s request, the customer and project names have not been disclosed at this time. ↴

Source: Vestas

For more information, go to www.vestas.com