

in the second half of 2019, while serial production is scheduled for mid-2020.

Initially, the new variants are targeted at the onshore market, but may have offshore applicability.

The name EnVentus combines “energy,” “environment,” “invent,” and the Latin word for wind “ventus” to encompass the company’s pioneering and innovative heritage within wind energy and aspiration to lead the global transition to a more sustainable energy system.

**MORE INFO** [www.vestas.com](http://www.vestas.com)

## ► CONSTRUCTION

### U.S. installs 5.9 GW in fourth quarter of 2018

The U.S. wind sector installed 5.9 GW of new capacity in the fourth quar-



About 16.5 GW of wind projects were under construction at the end of 2018, with a further 18.6 GW in advanced development. (Courtesy: New Energy Update)

ter of 2018 to bring the total for the year to 7.6 GW, an 8 percent increase on 2017, the American Wind Energy Association (AWEA) said in a report published January 30.

Wind operators completed 909 MW of partial repowering projects in the fourth quarter for an annual repowering total of 1.3 GW, AWEA figures showed.

The U.S. is forecast to install 10.9 GW wind capacity in 2019 — the highest level since 2012 — as developers race to meet production tax credit (PTC) deadlines, the Energy Information Administration (EIA) said in its latest Short-Term Energy Outlook published in January. The wind installation forecast represents a 3-GW increase on the 2019 projection set out in EIA’s 2018 Annual Energy Outlook.

More than half of the new wind capacity additions will be in Texas, Iowa, or Illinois, and most of the capacity will come online toward the end of the year, EIA said.

About 16.5 GW of wind projects were under construction at the end of 2018, with a further 18.6 GW in advanced development, AWEA said in its report. The combined total of 35.1 GW was up 22 percent year-on-year. About 20 percent of this activity was in Texas while other prominent states included Wyoming, Iowa, South Dakota, and New Mexico, AWEA said.

GE Renewable Energy reclaimed the top spot for turbine manufacturers in 2018, installing 40 percent of U.S. wind turbines by capacity. Vestas installed 38 percent of capacity while Nordics USA held 11 percent of the market and Siemens Gamesa held 8 percent.

Most of the turbines installed were of capacity between 2 MW and 3 MW while 24 percent were more than 3 MW, AWEA said.

In October, GE unveiled a new 5.3 MW turbine that incorporates 77-meter blades and hub heights of up to 160 meters.

**MORE INFO** [newenergyupdate.com](http://newenergyupdate.com)

## ► CONSTRUCTION

### Global Wind Service to assemble towers for East Anglia ONE

Siemens Gamesa Renewable Energy has contracted wind-turbine installation and service company Global Wind Service to assemble 102 towers for East

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Anglia ONE Offshore Wind Farm in the U.K. The towers will be assembled at the Norfolk port of Great Yarmouth, only half an hour drive from GWS' office in Lowestoft, ahead of their load-out and installation offshore as part of the wind-farm construction.

The pre-assembly work of the SWT-7.0-154 turbines is scheduled to commence at site mid-March 2019 and expected to run for a year. For the 66kV high voltage scope, GWS will be drawing on the specialized HV-technicians from GWS' joint venture Delpro Wind.

East Anglia ONE is in the Southern North Sea, approximately 43 kilometers off the Suffolk coast. Once in full operation in 2020, the installed power capacity of 714 MW will be supplying green energy to about 600,000 British households. As such, it will be one of the largest offshore wind-power plants in the world built on an investment of about 3 billion euros.

East Anglia ONE will be the first wind farm project to use 66kV cables on a commercial scale. This higher rating is expected to be the dominating technology for future offshore projects in an effort to reduce the loss of energy during transmission.

"Global Wind Service is very pleased to be part of this world-leading project together with our strong partner through 10 years, Siemens Gamesa," said Michael Høj Olsen, chief commercial officer at GWS. "We have been present in the U.K. for over nine years now, so this is a great way for us to underline our strong and continuous



East Anglia ONE will be the first wind farm project to use 66kV cables on a commercial scale. (Courtesy: Global Wind Service)

commitment to the country's offshore wind market. A long-term project like East Anglia ONE is supporting GWS' strategy to continue our growth globally and in the U.K. where it will also create more local jobs, which is great for the UK wind industry."

"For a ground-breaking project like East Anglia ONE, it was important to choose a supplier with solid experience and expertise as well as prov-

en quality and safety record," said Andrew Elmes, senior project manager for SGRE. "With GWS' in-house high-voltage competences in Delpro Wind, along with over nine years of local presence in the U.K. market, we have selected a strong partner for this project, and we are happy to continue our long-term cooperation with GWS."

**MORE INFO** [www.globalwindservice.com](http://www.globalwindservice.com)

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## CONSTRUCTION

# Collett delivers blades to Kype Muir wind farm

Using its Nootboom triple extendable Super Wing Carriers, Collett recently delivered 78 turbine blades (26 turbines in total) destined for Kype Muir Wind Farm.

Collett's teams undertook the planning and delivery of 494 components including blades, towers, nacelles, drive trains, and hubs required for the development of Kype Muir Wind Farm. The 80-meter hub height towers of the Senvion 3.4MW turbines feature 52-meter blades, and while these are not the largest the company has been appointed to handle, they necessitated the use of its Super Wing Carriers due to the problematic road restrictions and alignments en-route.

Several areas of route modifications were identified ahead of the project — including bridge restrictions — with an emphasis on the Lambhill Road and Brown's Bridge areas on approach to the site. Excluding the loaded wind-turbine blades, each of the components would be loaded to a combination of

3-, 4-, 5-, and 6-axle stepframes, modular low loaders, and clamp trailers for transportation to the site. With the planned route modifications — including removal of vegetation, road signs, and road widening — already having been completed, this did not pose challenge to navigate.

The challenge arose when it came to the transportation of the 52-meter blades, which is where Collett's Super Wing Carriers came into effect. The use of these specialist trailers provided the ability to shorten the body and wheelbase of the trailer while loaded with the use of the bolster arrangement on the trailer deck. Using the features of these Super Wing Carriers, extendable up to 64.3 meters, meant that the proposed access route to the development site became a viable option for this size of turbine.

Proof of this flexibility was demonstrated prior to transport by Collett Consulting creating a 3D model of the loaded vehicle. This then allowed Collett to produce a detailed swept-path analysis video of the blade components, successfully negotiating restricted route sections by manipulating the trailer while loaded.

This in-depth planning allowed Collett to highlight the sections of the

route where the steering angle of the Super Wing Carrier's bogie provided extra maneuverability. The challenge was to ensure there would be no contact with any part of the blade or the trailer chassis with the road surface, bridge structures, or buildings when navigating several sections of the route. This is where capabilities of the Super Wing Carriers to raise the trailer height came into action, allowing Collett to raise the height of both the front and the rear of the trailer, resulting in each of the blades oversailing the embankments and stone parapets when crossing the bridges en-route. By employing the capabilities of these trailers, Collett was able to remove the need for further, more costly modifications, and ensure that each of the 78 52-meter blades would safely arrive.

The 18-week delivery schedule that began in July is now complete. Following an agreed timetable of 1.5 turbines per week, Collett systematically transported each of the 494 cargoes from their portside location direct to the delivery site. Working on a multi-port strategy with components arriving at the Port of Grangemouth and King George V Dock, the Collett team has undertaken all ship's discharge and stevedoring duties, port storage, extensive planning and delivery for each complete turbine.

Deliveries to the site, three miles south of Strathaven, South Lanarkshire, are now completed and construction of the wind farm is underway. Kype Muir Wind Farm is the flagship development of Banks Renewables and is expected to be fully operational in early 2019.

MORE INFO [www.collett.co.uk](http://www.collett.co.uk)

## INNOVATION

# Sulzer Schmid slashes cost of drone inspections

Sulzer & Schmid Laboratories AG, a Swiss company pioneering next-generation technology for the inspection of



Super Wing Carriers can vary the trailer height, allowing Collett to raise the height of both the front and the rear of the trailer, resulting in each of the blades oversailing embankments and stone parapets when crossing bridges. (Courtesy: Collett)