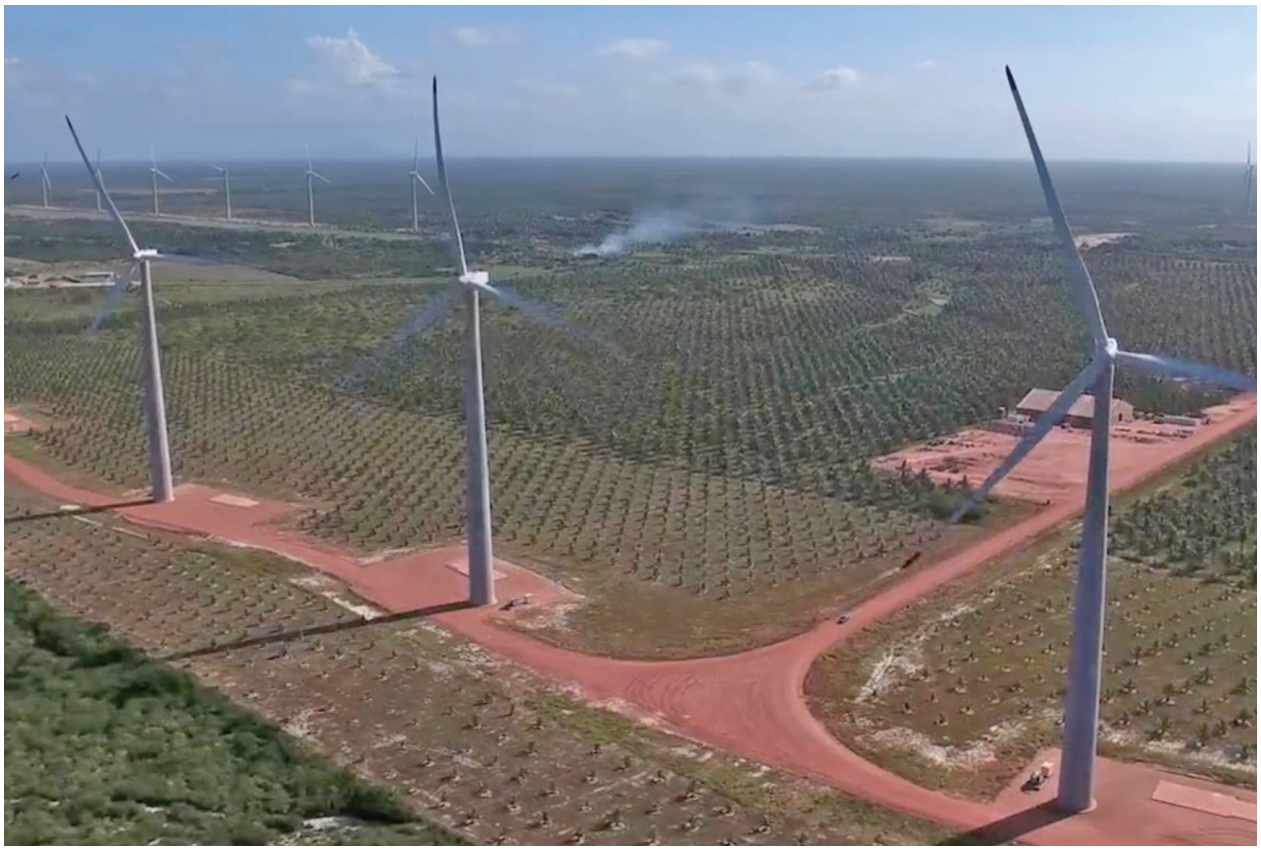


By working with an innovative local partner in the Brazilian market, ONYX InSight has ensured smooth project delivery for Rio Energy, minimizing disruption with the support of expert local market knowledge. (Courtesy: Rio Energy)

INNOVATION

Onyx Insight to bring advanced predictive maintenance to Brazil

ONYX InSight, a leading predictive analytics and engineering firm in the global wind-energy industry, is introducing advanced sensing technology and predictive maintenance solutions to the Brazilian market through a long-term monitoring deal with Rio Energy, one of the fastest growing energy producers in Brazil.

The predictive maintenance service, which will be delivered in partnership with innovative local operations partner, Filtralub, will be the first of its kind in Brazil and will enable Rio Energy to achieve savings of up to 30 percent on O&M costs by improving failure detection and optimizing operations, maintenance planning, and asset output. The deal covers predictive maintenance using both ONYX InSight's ecoCMS technology and third-party hardware.

Installation of the advanced sensing technology began in the first quarter of 2020. ONYX InSight will provide an advanced combination of hardware, software, and monitoring services — powered by engineering expertise — and Filtralub operational and installation support to the customer.

By working with an innovative local partner in the Brazilian market, ONYX InSight has ensured smooth project delivery for Rio Energy, minimizing disruption with the support of expert local market knowledge.

The deal increases the share of Brazil's wind-turbine fleet covered by advanced predictive maintenance. By helping to drive down the levelized cost of energy (LCOE), predictive maintenance can improve owner & operator profitability — ONYX InSight has achieved cuts in LCOE of up to 12 percent.

"Brazil's wind industry is the one of the largest in the world and continues to grow quickly," said Jose Morais, business development manager, Iberia and LatAm, ONYX InSight. "Within this significant installed wind-energy capacity, there is unrealized potential for efficiency savings delivered by predictive maintenance. The high capacity factor in Brazil means owners and operators cannot afford to neglect

turbine health. The latest predictive maintenance technology delivering advanced data analytics and insight will help wind-farm owners and operators to protect their assets and ensure maximum energy production in a competitive market."

MORE INFO www.onyxinsight.com

INNOVATION

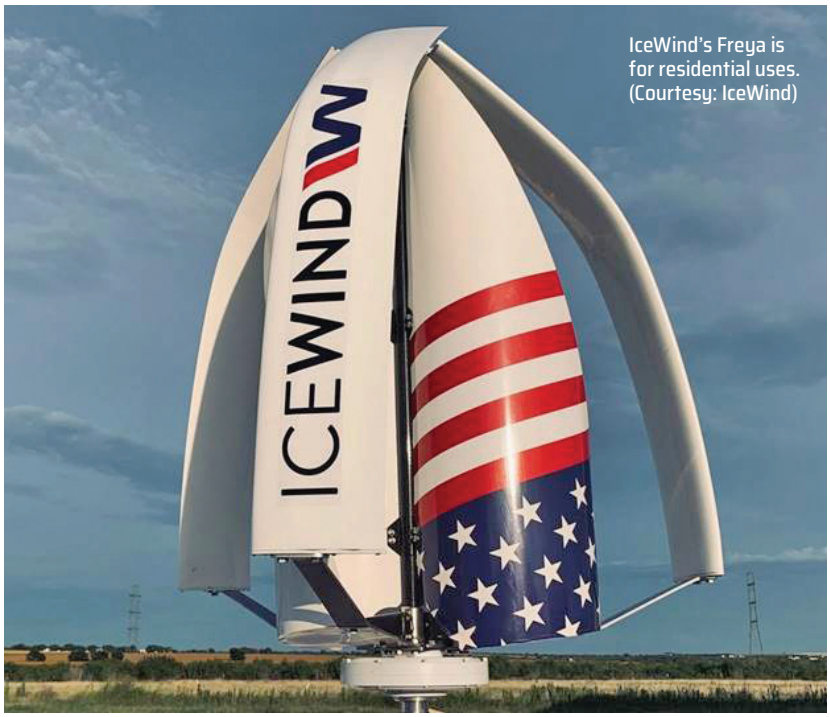
IceWind to sell light commercial, residential turbines in the U.S.

Noted Icelandic wind-based renewable energy company IceWind recently announced its launch in the United States. IceWind's groundbreaking product, the Freya, is for residential uses, while their Njord line is available for commercial applications such as powering telecommunication towers, outdoor advertising, on-site office trailers, and more.

"We are excited to bring our turbines to America," said IceWind's CEO Sæ ór Ásgeirsson. "With a blustery midsection, gusty extremities, and an overall interest in renewable energy, we are looking forward to America embracing our unique wind turbines for both residential and commercial applications. Our recent demo event on the Texas coast over the Independence Day weekend proved that there is great interest among Americans for a robust individual solution to renewable energy."

The U.S. operation will be based out of San Marcos, Texas, and helmed by Daryl Losaw, a modular home builder, investor, consultant, and entrepreneur.

"When I first saw the IceWind turbines in Iceland, I knew I had to bring them to market in the U.S.," Losaw said. "They are perfectly complementary with solar, a great stand-alone solution for very windy places, and a handy answer for small-energy outdoor applications that will cut down on carbon from generators, diesel engines, and maintenance calls."



IceWind's Freya is for residential uses. (Courtesy: IceWind)

The current residential model, the Freya, is useful as a supplementary power source, so it will cut users' power usage and costs, but not fully power the average home. Should customers want or require a complete wind solution, two to three Freyas will power most average small-scale residential power needs excepting central air conditioning for a price comparable to installing photovoltaics (solar). Other residential applications include powering small vacation cabins, separately metered home offices, and small additional dwelling units (ADUs), and backup emergency power when needed. IceWind's Freya is an excellent solution for residential renewable power as they are silent, aesthetically pleasing, have a 25- to 30-year lifespan, can work both on- and off-grid, require negligible operation and maintenance costs, and can generate power at wind speeds as low as 7.8 mph, a gentle breeze.

The Njord commercial models are ideal for many applications: powering telecommunication towers, electricity for outdoor advertising (lighting, mechanical features), replacing generators used at construction sites and other remote offices, and more. The beauty of IceWind's products is how sustainable and hardy they are in challenging conditions. Unlike the diesel generators used in these applications, they never need refueling and rarely need maintenance.

MORE INFO www.icewindusa.com

INNOVATION

Glennmont Partners adopts Greenbyte's monitoring platform

Glennmont Partners, one of Europe's largest pure renewables fund managers, has adopted Greenbyte's monitoring platform to oversee the technical performance of its dynamic European wind and solar portfolio. Greenbyte will be fully integrated with Glennmont's financial and commercial management systems, pulling data

Glennmont operates a complementary portfolio of onshore and offshore wind and solar assets across France, Italy, Finland, and Germany. (Courtesy: Glennmont Partners)

from Glennmont's newest funds with an operational fleet exceeding 1 GW to inform decision-making and create transparency with investors.

European renewables have been identified as a "safe haven" for investors amid market volatility, offering stable long-term returns, backed by high standards of commercial and technical performance. As capital continues to be channeled into renewables infrastructure and portfolios scale up, it is important that fund and asset managers continue to invest in technologies and systems that deliver maximum value to an increasingly diverse set of investors.

Glennmont operates a complementary portfolio of onshore and offshore wind and solar assets across France, Italy, Finland, and Germany. With further investment planned, the geographical scale and diversity of this asset base will continue to grow, underlining the requirement for a versatile asset management system encompassing the technical, financial, and commercial aspects of project operations.

Greenbyte was chosen by Glennmont to support its technical asset management functions. Through its user-friendly platform, Greenbyte facilitates the early identification of issues leading to asset downtime and losses, offering Glennmont a complete list of identified issues for the company to focus on in the technical management of its portfolio. This ultimately reduces downtime and enables Glennmont to identify value add and value protection projects to undertake within the Funds.

To ensure seamless integration between Glennmont's management tools, Greenbyte's platform will also act as a data input for the fund manager's financial and commercial platforms. Greenbyte's data will be fed directly into detailed monthly reporting on each individual asset in Glennmont's portfolio, allowing complete transparency on asset performance with its investors.

MORE INFO www.greenbyte.com

INNOVATION

ArcVera's performance testing services receive accreditation

ArcVera Renewables, a leading international provider of consulting and technical services for wind, solar, and storage projects, has received continued accreditation under recognized International Standard ISO/IEC 17025:2017 from the American Association for Laboratory Accreditation (A2LA) for ArcVera's wind-turbine power performance testing (PPT) services (Certificate Number 5339.01). A2LA is one of the largest accreditation bodies in the world and is dedicated to the formal recognition of competent testing and calibration laboratories.

This accreditation, which certifies the quality of ArcVera's wind-turbine PPT processes and the competence of its quality management system, is another critical milestone for the company. With A2LA accreditation achieved, ArcVera can now pursue its IECRE accreditation, which the company expects to receive shortly. As well, earlier this year, ArcVera acquired provisional accreditation to test GE wind turbines and is expecting to receive full accreditation pending successful completion of a customer test on GE turbines.

In the immediate term, ArcVera can perform IEC 61400-12-1 compliant tests on GE wind turbines as well as related technical sub-tasks, such as terrain assessments, site calibration, met tower and sensor installation, and review of third-party power curve tests.

As a leader in this field, ArcVera also represents the United States on the IEC committee, which develops standards for wind-turbine power performance testing (61400-12-1), nacelle Lidar power performance testing (61400-50-3), and energy assessments (61400-15).

MORE INFO www.ArcVera.com

CONSTRUCTION

Reygar to supply Ørsted with BareFLEET monitoring system

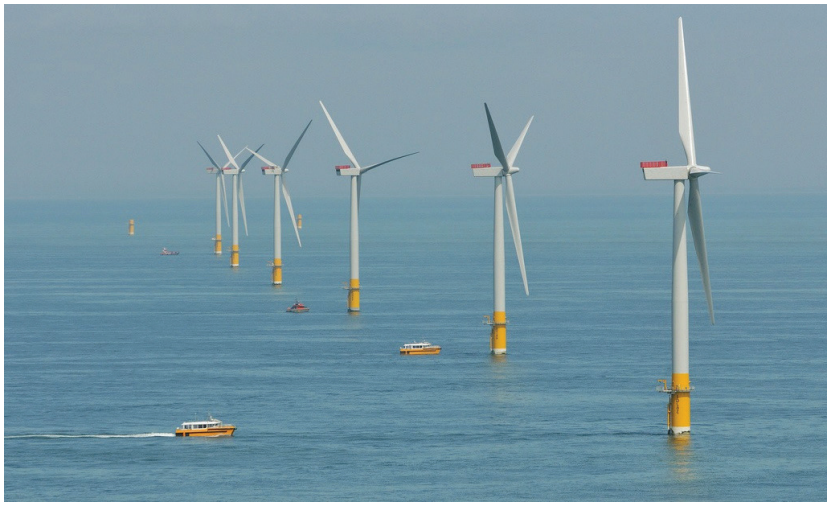
Ørsted, a global leader in developing and building offshore wind farms, has selected Reygar Ltd.'s innovative BareFLEET remote monitoring and reporting platform to track and analyze the performance of its chartered fleet of Crew Transfer Vessels (CTVs) operating across wind farms in Europe. Reygar is the leading provider of advanced vessel performance monitoring systems to the offshore renewable energy sector.

Ørsted has 9.9 GW offshore wind capacity installed and under construction. By adopting the vessel-agnostic, cloud-based BareFLEET system, the wind-farm developer and operator can be confident of getting the best possible service from the vessels that are chartered.

Ørsted has commissioned Reygar's BareFLEET system to log vessel motion, fuel consumption, and PAX movements. The system will provide an accurate record of events — including transit, push on, transfer, and crane lifts — so that all operational activity may be assessed for improvement or enhancement.

The system will collate data from existing onboard sensors across the firm's varied fleet, supplementing this with motion sensor measurements, observations added manually by the captain and video of transfers.

MORE INFO www.reygar.co.uk



Ørsted has commissioned Reygar's BareFLEET system to log vessel motion, fuel consumption, and PAX movements. (Courtesy: Reygar)

MAINTENANCE

Dropsafe: Systematic approach needed for Drops in offshore wind

Global leader in Dropped Object (Drops) prevention, Dropsafe, has called for a more systematic approach to tackling Drops throughout the offshore wind supply chain. This follows the publication of 2019 data by the G+ Global Offshore Wind Safety Organisation showing an overall rise in reported Drops incidents in the sector.

Dropsafe maintains that, rather than focusing Drops prevention exclusively on retroactive on-site mitigation strategies such as secondary securing, Drops risks must be considered throughout the full lifecycle of a wind-turbine fleet — from design and manufacture of equipment to installation, operations and maintenance (O&M), and decommissioning.

The G+ 2019 incident data report, released in July, shows that, in 2019, there were 92 Drops incidents, representing an increase of 44 percent from 2018. This upward trend has been attributed to improved reporting but underlines the severity of the threat to offshore-wind personnel, alongside the reputation and financial standing of businesses in the sector.

High potential (HiPo) incidents decreased compared to the previous year, with 38 percent of Drops incidents classified as high potential in 2019 compared to 61 percent in 2018.

Dropsafe has drawn parallels to the experience of businesses in offshore oil & gas, which saw a comparable trend in Drops incidents 20 years ago. The offshore drilling sector subsequently took decisive action to "self-regulate" on Drops risks. Industry working group DROPS was formed to facilitate systematic action on Drops prevention, leading to an advanced, supply chain wide culture of Drops prevention.

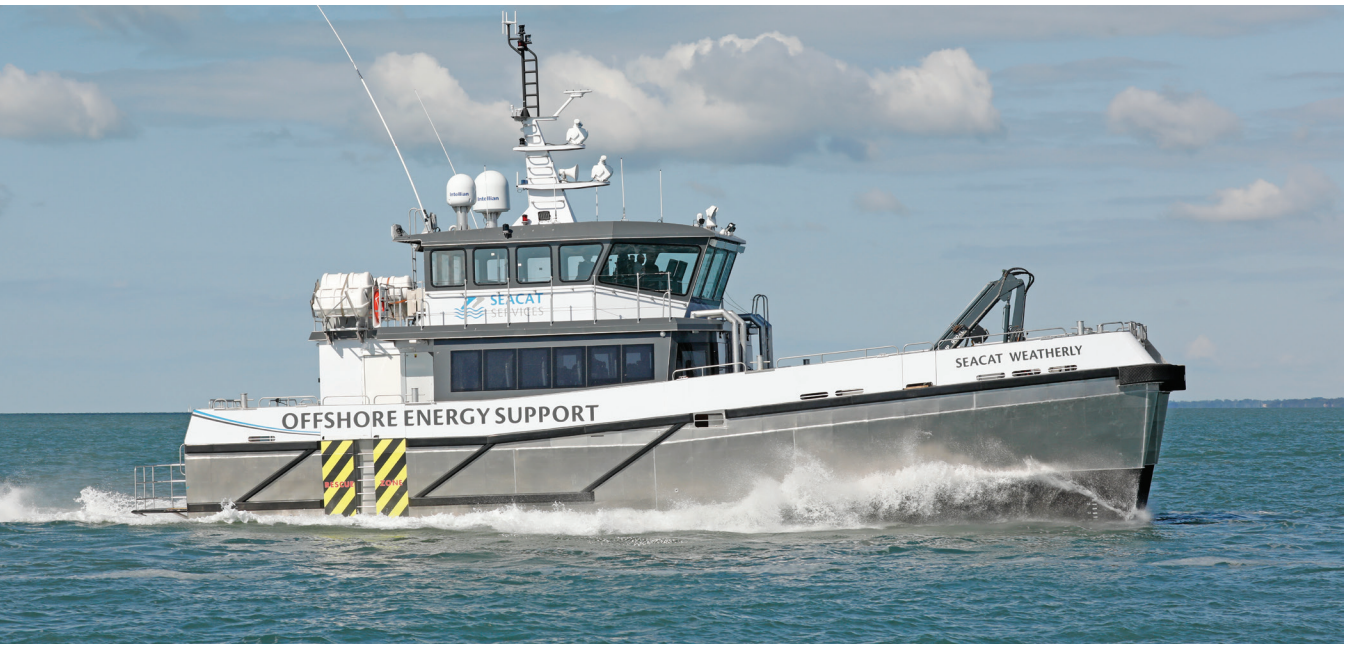
In particular, while Drops prevention technologies such as secondary securing, barriers, netting, and tool tethering are vital, DROPS advocates a hierarchy of controls that starts with designing equipment and processes in such a way that risks are minimized before these systems need to be installed.

MORE INFO www.dropsafe.com

MAINTENANCE

Seacat expands offshore support fleet with Seacat Weatherly

Class-leading offshore energy support vessel operator Seacat Services recently announced the acceptance of Seacat Weatherly, the first next-generation Chartwell 24 catamaran designed by pioneering naval architect Chartwell



Seacat Weatherly is the culmination of a long-term collaboration between South Coast businesses Seacat Services, Chartwell Marine, and shipyard Diverse Marine. (Courtesy: Seacat Services)

Marine to enter operational service. Following her completion at the Diverse Marine shipyard in Cowes and successful sea trials, Seacat Weatherly heads straight to her first charter contract at a major U.K. offshore wind project.

Seacat Weatherly is the culmination of a long-term collaboration between South Coast businesses Seacat Services, Chartwell Marine, and shipyard Diverse Marine, and the product of an industry-wide drive to refine the formula for offshore-wind vessel support. As offshore-wind projects grow in scale, customers are placing increased emphasis on the core metrics that define effective vessel operation, including the safety and comfort of crew transfers, "time on turbine" for technicians, technical availability, and efficiency.

The first of a two-vessel order, Seacat Weatherly is designed to meet — and exceed — the operational standards expected by offshore wind project owners and contractors. She brings a number of key technical innovations to the market, including advanced engine and hull design, a large foredeck, and safety features such as step-free access, sliding handrails, and unrestricted visibility from the wheelhouse.

This has all been achieved while making use of many of the same components and equipment as her sister vessels in the 13-strong Seacat Services fleet, in order to maintain operational familiarity and ensure effective management of spares and inventory.

"Seacat Weatherly is a fine addition to the fleet, capitalizing on all of the core attributes that have defined the Seacat Services offering to date," said Andrew Calderbank-Link, operations director at Seacat Services. "Refining vessel designs is vital to meeting the changing needs of the offshore wind sector, and Seacat Weatherly ensures that our crews can bring maximum operational value to our customers from day one."

"It brings us great satisfaction to see Seacat Weatherly enter service, and we will be monitoring closely how she performs on site," said Andy Page, naval architect and managing director at Chartwell Marine. "The Chartwell 24 design has been formulated for the industry by the industry to meet the specific requirements of offshore wind construction and operation, both in Europe and further afield."

MORE INFO www.seacatservices.co.uk

MAINTENANCE

PSG leaders take on roles with standards organizations

Mathew Moreau, product manager of dropped tools and FME at Pure Safety Group (PSG), has been named chairman of the International Safety Equipment Association (ISEA) Standards Committee for Dropped Objects Solutions. The committee is the first ever to focus exclusively on preventing dropped object hazards in general industry, construction, and other sectors that involve work at height.

In 2018, the committee set the first U.S. standard to establish design, testing, and performance criteria for active systems used to prevent dropped objects in the workplace.

Dropped objects cause 278 deaths and 52,700 injuries a year in the U.S.

alone, according to the latest statistics, making it the third-leading occupational safety hazard.

Warren Faber, engineering manager, has been named vice chairman of the American National Standards Institute (ANSI) committee that sets safety standards for anchorage connectors for active fall protection systems. The committee's work includes standardizing definitions and establishing requirements for design, performance, testing, labeling, instructions, inspection, maintenance, and storage of anchor connectors. Faber was chosen by the committee chairman for the position.

He has been an active contributor on the committee for six years and sits on several sub-committees for standards, including Z359.13 and Z359.14. He also is involved with CSA Z259, the fall protection committee in Canada, where he is an associate member and chairman of CSA Z259.11: standards for personal energy absorbers and lanyards.

Mathew Moreau. (Courtesy: PSG)

Warren Faber. (Courtesy: PSG)

"Even though they are voluntary, anchorage standards should be seriously considered in the manufacture and use of these products," Faber said. "The committee is made up of experienced engineers and government experts who follow a strict and transparent process with the ultimate goal of keeping workers safe while working at height."

Moreau served on the ISEA committee during its early work on the first dropped objects standard, which was released in 2018. Moreau was with Ty-Flot®, now a PSG company, maker of dropped prevention products such as tool tethers, tool carriers, and, its most recent invention, the Stronghold® Quick-Switch® system, and he had a long history of involvement with the standard. The patented Quick-Switch design allows tools to be passed between or transported by workers while they stay 100 percent tied off to avoid being dropped.

"I'm honored to serve as chair, given I've dedicated my career to finding ways to save lives and prevent injuries caused by dropped tools," Moreau said, who will have the role through 2021. "Most people aren't aware of the damage caused by a drop, which costs companies more than $5 billion a year in workers comp claims. ISEA raises awareness of this hazard and then provides solutions, through standards, on how to reduce or eliminate the issue."

MORE INFO www.puresafetygroup.com

MANUFACTURING

Siemens delivers technology for seventh North Sea connection

Siemens Energy is supplying the high-voltage direct-current (HVDC) power transmission technology for a further offshore connection in the German North Sea. A corresponding contract was just signed by the German-Dutch network operator TenneT and the BorWin5 Offshore Consortium, consisting of Siemens Energy and Dragados Offshore. In 2025, the platform BorWin epsilon, which is part of the BorWin5 project, will begin the low-loss transmission of electricity produced by the EnBW He Dreiht wind farm off the island of Borkum to the Garrel/Ost converter station about 230 kilometers away. The transmission capacity of 900 MW is calculated to serve more than 1.1 million households with electricity.

The project is a further contribution toward decarbonizing Germany's energy supply. BorWin5 marks the seventh HVDC offshore grid connection project undertaken by Siemens Energy in Germany with TenneT.The scope of supply for Siemens Energy and its Spanish partner Dragados Offshore S.A. includes the turnkey construction and installation of the offshore platform in the North Sea and the converter station on land. The offshore converter station will convert the three-phase alternating current produced by the wind turbines into direct current with a voltage of ±320 kV for low-loss transmission to land. The shoreside converter station in Garrel/Ost will then convert the electricity back into three-phase alternating current for feeding into Germany's power grid.

Siemens Energy will supply the HVDC technology required for the project and build the shoreside station, while Dragados will be responsible for the design, procurement, construction, and installation of the offshore converter platform.

MORE INFO www.siemensenergy.com

MANUFACTURING

China deal takes Vestas past 1 GW of order intake in 2020

Vestas has secured a 101-MW order for a project in China that includes the supply of 42 V120-2.2 MW wind turbines delivered in 2.4 MW Power Optimized Mode, as well as a 20-year Active Output Management 4000 (AOM 4000) service agreement.

With this order, Vestas has reached an order intake in China in 2020 of more than 1 GW.

Deliveries are expected to begin in the fourth quarter of 2020, with commissioning planned for the same quarter. The project and customer names are undisclosed.

MORE INFO www.vestas.com