



JDR Cable Systems' new facility is the first stage of JDR's plans to expand its product portfolio to support the growing global renewable energy market, (Courtesy: JDR Cable Systems)

## ► CONSTRUCTION

### JDR gets grant for subsea cable facility

JDR Cable Systems, a subsea cable and umbilical supplier and servicer, reached final agreement under the U.K. government's Offshore Wind Manufacturing Scheme (OWMIS) on financial support for its subsea cable manufacturing facility in Cambois, near Blyth, Northumberland.

JDR is now on track to start construction this summer with opening planned in 2024. The new £130 million U.K. Export Finance (UKEF) Export Development Guarantee is set to create 171 local jobs on completion, while

safeguarding 270 jobs at existing JDR facilities.

"Our offshore wind sector is a major industrial success story that delivers cheaper energy for consumers and high-quality manufacturing jobs across the U.K. Investments such as this from JDR, with government backing, are exactly the kind which our British Energy Security Strategy will attract, while reducing our exposure to volatile global gas prices," said Kwasi Kwarteng, U.K. Business and Energy Secretary.

"Now more than ever it's critical to push forward with the U.K.'s offshore energy ambitions, and we are delighted to take this major step forward in delivering the new site at Blyth," said Tomasz Nowak, JDR CEO.

"JDR's investment in Blyth shows

how attractive the U.K.'s renewable energy sector is, supporting jobs, growing the economy, and leveling up the U.K.," said Minister for Investment Gerry Grimstone.

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

## ► CONSTRUCTION

### Siemens Gamesa to supply 75 MW to South Korea farm

Siemens Gamesa will supply 75 MW its SG 5.0-145 turbine for Gunwi, South Korea's third-largest wind farm, to developer SK D&D.

Following its expected commission-



South Korea is among the first Asian countries to commit to achieve carbon neutrality by 2050. (Courtesy: Siemens Gamesa)

ing in 2024, the 75-MW Gunwi wind farm will generate enough electricity to power 64,000 local households, forming part of the country's efforts to reduce reliance on fossil fuels and boost the target of renewable energy generation to 20 percent in the electricity mix by 2030.

Located in Gunwi-gun, Kyongsangbuk-do province, the Gunwi wind farm will feature the SG 5.0-145, one of the most powerful turbines available in the local market, to best use the wind resources from a mountainous area. To optimize the wind-farm performance, Siemens Gamesa also signed a long-term service agreement of 20 years to provide operation and maintenance services.

Operating as a subsidiary of South Korea's leading conglomerate SK Group, SK D&D has been increasing its investment in the renewables market to fulfill its ESG commitments, including forging a partnership with Siemens Gamesa since 2014 to develop two wind power projects totaling 84 MW.

South Korea is among the first Asian countries to commit to achieve carbon neutrality by 2050, with plans announced to develop wind energy, both onshore and offshore, in a bid to reduce its reliance on fossil fuels for power generation while cutting carbon emissions.

By the end of 2021, the country had wind installations of approximately 1.7 GW, with the share of wind power less than 1 percent of total electricity generation.

Expanding across Asia Pacific, Sie-

mens Gamesa has installed more than 11 GW of onshore turbines in China, Pakistan, Japan, South Korea, Vietnam, Indonesia, the Philippines, Thailand, Australia, and New Zealand.

**MORE INFO** [www.siemensgamesa.com/en-int](http://www.siemensgamesa.com/en-int)

## CONSTRUCTION

### Fisher, Graig unveil Ulstein Twin X-Stern concept

James Fisher and Sons, a provider of specialist products and services to the energy, marine and defense industries, and Graig Shipping PLC, U.K. shipowner, unveiled the Ulstein Twin X-Stern, a service operation vessel (SOV) design concept. The SOV will support the

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The SOV will support the U.K.'s target of 50 GW of offshore wind-energy generation by 2030 as part of its net zero strategy. (Courtesy: James Fisher Renewables)

U.K.'s target of 50 GW of offshore wind energy generation by 2030 as part of its net zero strategy.

The concept is the result of collaboration by the Diamond Consortium, a collaboration between James Fisher and Graig with support from DNV and design partner Ulstein Design Solutions.

Placing sustainability at the fore, the Diamond SOV concept will address the supply chain chasm threatening to stymie offshore wind progress with a scalable, modular solution that can be achieved through high-volume series construction to meet developer time and budgetary constraints. With a reduced-energy consumption and increased maneuverability, the vessel will help developers lower scope 3 emissions in the construction of offshore wind farms.

James Fisher has been facilitating the U.K.'s energy system transition through innovation in vessel design, technology, and propulsion systems throughout its 175-year history.

"The philosophy behind the Diamond SOV has been successfully applied to other vessel segments for many years: developing a specification that meets a market need while allowing for a high degree of customization and configuration for individual owners and developers. We chose to go with Ulstein due to their history of successful innovative designs and believe the Twin X-Stern to be the best choice

for service operations of offshore wind farms," said Jim Hey, group business development director at Fisher.

"Building SOVs in series volumes achieves significant economies of scale and delivers a design that can be built in multiple yards simultaneously. Considering the anticipated market demand for SOVs in the U.K. and beyond by the end of the decade, this exciting new concept places the U.K. at the center of enabling global offshore wind ambitions," Hey said.

"We have successfully partnered over many years with DNV on the Graig-led Diamond business model, and we are now applying this proven, scalable strategy to the global offshore wind markets with a particular focus on U.K. waters, helping to meet the challenging environmental goals in front of us," said Graig Shipping PLC CEO Hugh Williams.

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

## INNOVATION

### Ventus Group gets DNV certification

Ventus Engineering GmbH, supplier of end-to-end optimization solutions within the type approval envelope for excellence in wind-turbine performance, has been certified from DNV according to the standard DNV-SE-0439-2021-10 Certification of Condition Monitoring for Wind Turbines, for its Dynamic Relative Blade Pitch angle Misalignment (DRBPM) inspec-



Ventus Group's DNV certification comes as the company is experiencing a period of fast expansion on a global scale. (Courtesy: Ventus Group)



Russelectric offers customized Switchgear Simulators for renewable energy facilities and microgrids. (Courtesy: Russelectric)

tion service.

This innovative technology consists of a high-speed camera coupled with onsite image processing software that accurately and efficiently measures relative blade-pitch angle misalignment while the turbine is still in operation.

Just one degree of relative blade pitch angle misalignment between two blades could result in a 2-percent loss of power production and additional loads.

The cutting-edge Dynamic Blade Pitch Angle Measurement performed while the wind turbines are in operation enables Ventus to accurately see the relative blade pitch misalignment, and then, blade pitch angles can be adjusted to be within  $\pm 0.30$  as required on the affected wind turbines.

Ventus offers this service on wind turbines for both onshore and offshore.

The DNV evaluation assessed and finally certified the overall method and procedure performed by Ventus for the accurate calculation of relative blade pitch angle misalignment between the wind-turbine blades with a review of the respective documentation material and field demonstration.

The DNV certification comes as Ventus Group experiences a period of fast expansion on a global scale. Headquartered in Austria, the company has a well-established presence in Europe and the U.K. In 2021, the company also entered the Indian market for the first time.

“The certification from DNV is a

unique technological benchmark for the industry,” said Ventus Group CTO Poul-Anker Lübker. “It means our customers can put their trust in our top-level analysis methods and documented results.”

**MORE INFO** [www.ventus.group](http://www.ventus.group)

## INNOVATION

# Russelectric announces Switchgear Simulators

Russelectric, a manufacturer of power control systems and automatic transfer switches, announced the availability of Switchgear Simulators designed to train personnel on automatic and manual operation of Russelectric switchgear for renewable energy facilities and microgrids.

Customized to mimic the opera-

tion of the customer’s Russelectric switchgear/system, Russelectric simulators are ideal for familiarizing workers on the system and its operation and for accurately diagnosing a wide range of utility, generator, and breaker problems.

The simulator can also be used to assess the impact of changes to PLC setpoints such as kW values and time delays.

Using the simulators enables operators to evaluate an almost limitless number of responses to failure scenarios and use the information to develop and validate site operating and emergency procedures.

Russelectric Switchgear Simulators are available in two versions: The Training Simulator allows personnel to train on the automatic operation of Russelectric Switchgear, while the Advanced Training Simulator allows personnel to train on both manual and automatic operations.

With the addition of hard-wired

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The new module enables blade experts to make informed decisions for maintenance and repairs. (Courtesy: Sulzer Schmid)

controls and interlock circuits, the simulator PLC accurately mimics full manual controls, enabling personnel to train in the comfort and safety of an office environment.

**MORE INFO** [www.russelectric.com/products/simulators](http://www.russelectric.com/products/simulators)

## ► INNOVATION

### Sulzer Schmid launches 3DX blade damage monitor

Sulzer Schmid, a Swiss company pioneering UAV technology for wind rotor blade inspection, recently announced the launch of its latest 3DX Damage Progression module designed to track damages and monitor how they develop over time. By comparing the evolution of blade damages from one inspection campaign to another, the new module enables blade experts to

make informed decisions for maintenance and repairs.

The new 3DX Damage Progression module allows users to compare damages that have been recorded during previous inspections with new inspection data. The progression of damage is displayed in a time series of recorded inspections, so that it can be easily evaluated. In this way, leading-edge erosion, for example, can be closely monitored and its evolution tracked in a so-called “damage chain.”

“We are constantly innovating to increase the degree of automation for rotor-blade inspections, and that’s what makes our new Damage Progression module possible in the first place,” said Tom Sulzer, Sulzer Schmid co-founder and CEO. “When inspections are carried out in a routine and automated fashion the data generated becomes a veritable treasure. With advanced analytics and machine learning the data can generate important insights and trend analysis, which can be used to optimize repair campaigns and

maintenance strategy. As more and more data are collected, we learn how problems develop over time and lay the foundation for predictive maintenance. The benefits are huge, resulting in substantial cost savings and better overall performance.”

The inspection data is used to identify, localize, measure, and classify damages. This means that, for each subsequent inspection, it is always possible to find the exact location and history of any damage, review, and evaluate its evolution. Knowing how damages develop over time allows blade experts to determine which damages need to be repaired when. This makes the planning of repair campaigns more efficient, saving downtime, and optimizing blade repair budgets.

This additional module is available on the proprietary browser-based 3DX™ Blade Platform, which integrates all the inspection information in one place, providing an overview of the blade health of the entire fleet of wind turbines.

**MORE INFO** [www.sulzerschmid.ch](http://www.sulzerschmid.ch)

## ► INNOVATION

### Ventus establishes wind turbine entity in Canada

Ventus Group has formed Ventus Wind Services (Canada) Inc., registered in Ontario and operating to supply Ventus’ optimization solutions in wind-turbine performance throughout North America.

“Ventus Wind Services (Canada) Inc. has been established to conclude our first project in the country, with one of the world’s major utilities and a global player in the renewable energy sector,” said Ventus Group CTO Poul-Anker Lübker. “Ventus Group intends to be an important player in the North American wind-turbine optimization and condition monitoring market, with our existing products



Operational since June 2019, the Beatrice Offshore Wind Farm is about 13 kilometers from the Caithness coast and has a rated capacity of 588 MW. (Courtesy: Rovco)

and services as well as with our novel and award winning TripleCMAS Rotor Monitoring and alarm system when it is introduced into the global market later in the year.”

Over the last 18 months, Ventus Group has been preparing for rapid growth internationally, including the successful completion of ISO 9001 and 45901 certifications for the business. The company also has been awarded DNV certification for its flagship Relative Dynamic Blade Pitch Angle Measurement.

**MORE INFO** [ventus.group](http://ventus.group)

## ► MAINTENANCE

### B & K Vibro names new CEO

Brüel & Kjær Vibro (B&K Vibro), an independent supplier of condition monitoring solutions for rotating machinery, recently named Volker Polonyi as its new CEO and president. Most recently at B&K Vibro’s parent company, NSK, Polonyi was director



**New B&K Vibro CEO Volker Polonyi has 35 years of experience in bearing and linear technology.** (Courtesy: B & K Vibro)

of the European Technology Centre, a regional research and development facility that developed advanced bearing technologies to ensure customers could respond effectively to challenges in their business environment.

Polonyi brings with him 35 years of experience in bearing and linear technology, having also served as NSK’s managing director for industrial bearing sales, sector manager for wind power technology, and head of application development.

“In his many years with NSK, Volker has successfully developed and executed commercial and digital strategies that create customer value through technology. The expertise that he brings from NSK, coupled with his industry knowledge and leadership skills, are exactly the right combination to drive the con-

dition monitoring business of B&K Vibro to the next level. His appointment marks an exciting milestone for B&K Vibro,” said Dai Kodama, NSK’s chief integration officer.

“There are clear synergies between B&K Vibro and NSK, with a huge degree of shared talent and knowledge, and we have been working together successfully to deliver exciting, innovative business and engineering solutions,” Polonyi said. “As CEO and president of B&K Vibro, I am looking forward to working with our customers, colleagues, and partners to expand our business, capture new markets, and drive long-term growth.”

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

## ► MAINTENANCE

### Rovco begins 3-year contract for Beatrice offshore wind farm

For a third year, Rovco, a provider of offshore subsea and survey solutions, has been awarded a contract to carry out work on the Beatrice offshore wind

farm, Scotland's second-largest operational offshore wind farm.

The project will be delivered by Rovco's U.K.-based team and will involve survey work on all inter-array cable and subsea jacket locations across Beatrice. The survey work provides a focused approach to the monitoring and reporting of asset and critical infrastructure conditions, delivering insights that enable the planning of potential preventative maintenance and remedial works.

The project will use the Glomar Worker DPIO vessel, equipped as standard with a Work-class ROV, SubSLAM X2 and associated survey tooling suite, along with PanGeo Subsea's 3D Sub-Bottom Imager™ to perform cable depth of burial assessments. The delivery of the project, managed from Rovco's operational base in Scotland, will support further full-time employment opportunities across the local region.

Having worked on more than 50 percent of operational wind farms in U.K. waters, remaining incumbent at Beatrice strengthens Rovco's continued expansion. The business' growth is further supported by the recently announced completion of a £15.2 million Series B funding round into the business.

"We are thrilled to have been awarded the year-three scope of work for Beatrice Offshore Wind Farm Ltd, under this prestigious framework agreement. The team at Beatrice are early adopters of technology that helps drive efficiencies and smarter ways of collating and presenting valuable data.

Delivering the highest quality insight available on the market, we ensure that the Beatrice team have the necessary information to fully inform their ongoing operations and maintenance planning and decision making," said Simon Miller, Rovco managing director.

"Crucially, our offshore setup and technology selection enables us to operate whilst the wind farm is still operational and producing energy. In addition to our own team of experts, we are pleased to be leveraging local supply chain partners and talent, en-

suring the successful, safe and timely completion of the work on Beatrice," Miller said.

"We are delighted to have Rovco back on site again to continue their long-running relationship with the Beatrice Wind Farm. Rovco consistently provides high quality data which allows for our teams to gain a detailed insight into long term integrity management requirements, enabling us to optimize through-life operational costs. Alongside Rovco's approach to innovation, their safety culture continues to align with our core values – with complex works completed efficiently and with a strong safety focus," said Matthew Henderson, Beatrice Offshore Wind Farm's subsea and structural engineering manager.

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

## ► MAINTENANCE

### Firetrace opens India, China facilities

Firetrace International, a provider of fire suppression technology across 35 countries on five continents, has opened facilities in India and China, bringing its fire safety support to those expanding renewable energy markets.

China is targeting 1,200 GW of wind and solar energy by the end of 2030, with a current capacity of 687 GW at the end of 2021, according to Bloomberg New Energy Finance.

India is targeting 500 GW of non-fossil power generation by the end of the decade with having 152.9 GW of renewable capacity installed in February 2022, generating the fourth-largest wind sector globally, Bloomberg NEF estimates.

Firetrace's expansion means owners and operators will have improved access to the company's fire suppression technology, which stands to protect assets, communities, and investments if or when fire occurs in renewable energy assets.



Firetrace systems contain specialized gas or powder, designed for putting out fires, called suppression agents. (Courtesy: Firetrace)

Fires, which for the wind sector, result in total destruction of a turbine 90 percent of the time, can cost up to \$9 million in the most serious cases.

Firetrace's new facility in India, which will also act as a fill station for fire suppression systems already installed in renewable plant infrastructure, is close to four national highways, the IGI Airport, and New Delhi.

The office will consist of a management team with 25-combined years of fire industry experience; 50-plus engineers; and 10 sales, technical, administration, and finance team members.

The Chinese hub is co-located in a facility with eight other companies all under Halma plc, Firetrace's parent company. Their presence will enable Firetrace's clients in the region to take advantage of engineering resources, supply chain, manufacturing, warehousing, distribution, and talent management to enable economies of scale.

While rare, fires not only harm asset operators financially, but they also harm the reputation and public opinion of the wind industry. And, as the sector continues its rapid growth, India, China, and their surrounding territories aren't immune to these risks.

Operators need to look to fire-suppression systems, supported by in-country experts and local supply points like these new facilities in India and China, to stop this damage in its tracks if the renewable energy sector is to continue to grow at the current rate.

"We are delighted to have opened



With this order, Sacramento's collective Solano Wind Project will have a total capacity of about 300 MW. (Courtesy: Vestas)

facilities in India and China, which are staffed with proven industry experts and years of experience. We are well placed to work with stakeholders as the wind industry in both regions rapidly scale up, to mitigate against the risk fire poses to wind turbines," said Firetrace global sales manager Angela Krcmar.

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

## MANUFACTURING

### Vestas gets repower order from Sacramento

Vestas has received an 86-MW order from Sacramento Municipal Utility District (SMUD) to repower the Solano Wind Project Phase 4 wind farm in California. The order consists of 19 V150-4.5 MW wind turbines, which will replace the site's current legacy V47-660 kW wind turbines. With this order, the collective Solano Wind Project will have a total capacity of about 300 MW.

"Repowering wind turbines is an ef-

ficient solution to extend the life of a wind project, and we're thrilled SMUD is partnering with Vestas once again on the Solano 4 project phase and utilizing our proven 4-MW platform technology to bring renewable energy to the greater Sacramento area," said Laura Beane, president of Vestas North America.

"SMUD has long partnered with Vestas, a world leader in sustainable technologies, to produce wind-power generation at the Solano Wind Farm," said Chief Zero Carbon Officer Lora Anguay. "The retooling and expansion of the Solano Wind Farm will further boost SMUD's clean-energy mix with proven clean energy technologies and is a step forward in our vision of eliminating all carbon emissions from the region's power supply by 2030."

The order includes a full Engineering Procurement Construction (EPC) contract. Vestas will provide a full solution with delivery, installation, and commissioning of the turbines.

"Partnering with SMUD each step of the way on this project solidifies the trust and collaboration between Vestas and SMUD, and we look forward to showcasing our end-to-end capabilities as we repower the Solano 4 project," said Ramit Bajaj, senior vice president of Construction & Operations for Vestas North America.

The order also includes a 10-year Active Output Management 5000 (AOM 5000) service agreement, designed to ensure optimized performance of the asset. To further strengthen the partnership with SMUD and ensure the successful operations of the collective Solano Wind Project, Vestas also extended its multi-year service agreements for the Solano 2 and Solano 3 project phases at the same site.

Turbine delivery for Solano 4 begins in the fourth quarter of 2023 with commissioning scheduled for the second quarter of 2024. ↗

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

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