

James Fisher and Sons recently announced a high voltage commissioning contract at Taiwan's Zhong Neng offshore wind farm. (Courtesy: James Fisher Renewables)

#### **CONSTRUCTION**

## James Fisher receives voltage contract at Taiwan wind farm

James Fisher has been awarded a contract for the provision of high voltage (HV) specialist personnel and HV safety management services. Developed in collaboration with the China Steel Corporation and Copenhagen Infrastructure Partners, the Zhong Neng offshore wind farm will be comprised of 31 turbines that are set to generate 300 MW of renewable electricity, enough to power about 300,000 households.

James Fisher's renewables team will securely manage the high voltage network and electrical safety throughout the construction and commissioning phases of the onshore substation and wind-turbine generators, spanning about 10 months.

"Taiwan has ambitious plans to achieve 20 percent renewable energy generation by 2025, and the growth in its offshore wind industry will play a significant role in this," said Maida Zahirovic, head of renewables at James Fisher. "As with any ambitious growth plan, the journey won't be without its challenges -- but with collaboration across the entire supply chain and experienced industry players, Taiwan will soon enjoy a thriving renewables sector. We're delighted to be working with Zhong Neng as we continue to champion the expansion of renewables across Taiwan and Asia Pacific more broadly."

"This project is another string to our bow within Asia Pacific, and a further signal of our commitment to the growth of renewables in the region," said Emma Su, APAC operations specialist at James Fisher. "We are dedicated to helping build the foundations to advance Taiwan's renewable energy landscape, both by bringing our own expertise, and crucially, developing the local workforce and supply chain."

James Fisher Renewables has supported 28 projects in the Asia Pacific region to date, including works at The Changfang and Xidao Offshore Wind Project (CFXD), phase II of the Taiwan Power Company (TPCII), Greater Changhua, Formosa 1 and 2 and the Yunlin project.

MORE INFO www.james-fisher.com



Morrison Fabrication in Louisiana will fabricate the unit. (Courtesy: Chet Morrison Contractors LLC)

#### **CONSTRUCTION**

## Morrison announces contract for floating platform fabrication

Energy service company Chet Morrison Contractors, LLC recently announced a contract award by Aikido Technologies, Inc. (Aikido), a floating wind technology provider, for its Aikido One project, which will demonstrate how the Aikido Platform can enable offshore wind project developers to increase the speed of deployment and reduce costs. Morrison will be responsible for the fabrication of a 1:4 scale 100kW floating wind platform.

"The Aikido One Demonstrator will be a transformational project for the U.S. offshore wind industry for two reasons: First, it represents the largest floating wind platform constructed in the U.S. to date; second, it is the world's first upending semi-submersible platform," said Sam Kanner, Aikido CEO. "Proving this concept in realistic conditions will show how the Aikido Platform can solve challenges facing the floating wind industry in the U.S. and around the world, relating to serial production and limited port space. We are thrilled to be working with such an experienced and well-respected firm as Morrison."

"Aikido is an innovative company that is bringing something unique to the market. We are excited to work with Sam and the entire Aikido team on their concept," said Chet Morrison, Morrison CEO.

Morrison Fabrication in Harvey, Louisiana, will be used for fabrication



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#### THE BUSINESS OF WIND



Windward Offshore CSOVs being built at Norwegian shipbuilder VARD. (Courtesy: Windward Offshore)

of the unit, which is planned to occur over Q2 and Q3 of this year, culminating with a test program upon completion.

MORE INFO www.morrisonenergy.com www.aikidotechnologies.com

#### **CONSTRUCTION**

## Windward Offshore orders Seaonics cranes

Seaonics will supply 3D Electric Controlled Motion Compensated (ECMC) cranes to two commissioning service operation vessels (CSOVs) under construction for the German shipowner at Norwegian shipbuilder VARD.

"We are pleased to announce our partnership with Seaonics delivering cutting-edge ECMC C25 3D cranes for our CSOVs," said Windward offshore managing director Benjamin Vordemfelde. "Equipping two of our vessels with these advanced seven-ton units will bring a big operational advantage for our charterers in their offshore projects."

The order marks Seaonics' first equipment delivery to Windward Offshore, a company founded by Blue Star Group, Diana Shipping Inc and SeraVerse, in collaboration with and under the leadership of SeaRenergy Group. The first CSOV is scheduled for delivery in the second half of 2025, with the remaining vessel following in 2026.

"It's a privilege to welcome Windward Offshore as our newest customer," said Ståle Fure, vice president of sales at Seaonics. "We're excited to support their journey. Our goal is to ensure not only their success and satisfaction but also of VARD. We can't wait to see the cranes in operation."

The ECMC C25 3D Crane features a fully electrically controlled motion compensation system, ensuring smooth and precise movements even in challenging conditions.

The boom control, slew control, and telescope control are all electric driven and used dynamically to enable 3D compensation of the crane tip. The simplified design promotes operational safety and efficiency, reducing the time and effort required for cargo handling.

"This latest order underscores the trust placed in Seaonics' innovative technology and highlights our commitment to delivering specialized solutions for our clients," Fure said.

MORE INFO www.seaonics.com

## CONSTRUCTION DNV calls for HVDC transmission network

DNV, the independent energy expert and assurance provider, has issued rec-



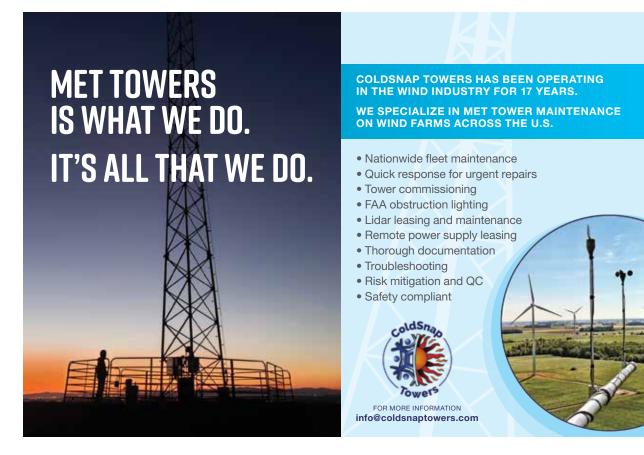
DNV recommends an offshore high-voltage direct current transmission network. (Courtesy: DNV)

ommendations and a timeline to build an offshore high-voltage direct current (HVDC) transmission network to support U.S. offshore wind power goals. As the first phase of a Joint Industry Project (JIP) exploring the feasibility of incorporating HVDC transmission into the U.S. grid concludes, the guidelines emerge from collaboration across the sector.

An offshore HVDC transmission system will enable the delivery of clean

electricity to millions of homes and ensure developers and investors achieve a secure return on their investments.

DNV recommends for agencies, governor's offices, developers, HVDC equipment manufacturers, and ser-



#### THE BUSINESS OF WIND



Since 2023, Acciona Energía has been using Youwind's web-based tools for the evaluation of offshore wind development opportunities. (Courtesy: Acciona Energía)

vice providers to work together toward building an offshore transmission system that will unlock the potential of offshore wind projects, meeting deadlines, and budgetary constraints effectively.

Specific recommendations from the joint industry project include establishing a task force with industry and state participants to review the feasibility of AC mesh solutions given the significant supply chain constraints that have emerged.

Other recommendations include enabling the connection of 525 kV HVDC bipole circuits from the Northeast through the Mid-Atlantic, investigating options to reduce the size and weight requirements of offshore platforms for 525 kV HVDC bipoles, and setting performance expectations them.

MORE INFO www.dnv.com

#### INNOVATION

## Acciona Energía uses Youwind development tech

Youwind Renewables, a provider of web-based solutions for early-stage offshore wind development, recently announced Acciona Energía, a global leader in renewable energy, is using its technology to accelerate offshore windsite selection and evaluate its current pipeline of projects. "We are thrilled to work with Acciona Energía; we know Youwind can enhance and help them accelerate their offshore wind-development initiatives," said Anna Rivera, CEO and co-founder of Youwind Renewables. "Together we have fostered a collaborative way of working, providing a great demonstration of how industry leaders like Acciona can boost

their processing power to optimize project development and drive sustainable energy innovation forward."

With nearly 30 years of experience in the development, construction, operation, and maintenance of wind farms, Acciona Energía has established itself as a frontrunner in the renewable energy sector. The company's portfolio comprises more than 6,500 wind turbines and a total installed capacity of 13,500 MW, of which 9,387 MW correspond to onshore wind. The business seeks to expand its presence in offshore wind, exploring development opportunities across several territories.

Since 2023, Acciona Energía has been using Youwind's web-based tools for the evaluation of offshore wind-development opportunities, including its Pixel area screening tool and Pixel Park layout optimization tool.

Pixel helps to identify the optimum locations for wind farm development based on technical and financial factors, producing a Levelized Cost of Energy (LCOE) heat map to support the rapid selection of promising sites.

Pixel Park is a web-based application designed to generate detailed wind-farm layouts rapidly for any site worldwide, taking into account site-specific bathymetry and geography. This tool allows users to model the technical and financial performance of layouts, including all major windfarm components such as turbines, foundations, substations, and cable routes, for floating and fixed-bottom installations. Pixel Park can simulate and evaluate layouts that incorporate crucial redundancy and resiliency measures, such as multiple offshore substations connected by an interlink.

MORE INFO www.youwindrenewables.com

#### **INNOVATION**

## Gleason gets smaller with gear metrology system

Based on the success of the 300GMS



The system is designed for the complete inspection of types of gears as large as 175 mm in diameter. (Courtesy: Gleason)

nano platform, Gleason recently expanded its nano series with the introduction of the 175GMS nano gear metrology system.

The system is designed for the complete inspection of types of gears as large as 175 mm in diameter and shafttype gears up to 480 mm in length, maximum measurable tooth width of 340 mm, with a module range of 0.4 (optionally 0.15) to 6.35 mm.

With this update, the measuring range of the 175GMS nano in the lower module range as well as in the capacity for shaft length and tooth width has been extended. Furthermore, the 175GMS nano delivers the nano capabilities first offered with the 300GMS nano. The integrated probe changer automatically deploys a skidless probe to check the surface quality of gear teeth in the profile and lead at sub-micrometer precision.

The skidless probe is available with automatic angle setting to adapt to different helix angles of gears. The 175GMS nano Gear Metrology System is equipped with a high-precision SP25 3D scanning probe head, a wide range of styli, and a mathematical analysis that supports roughness evaluations to DIN, ISO, ANSI and other standards.

The 175GMS nano communicates inspection results directly to Gleason production machines, enabling automatic correction of machine settings. From power skiving to threaded wheel gear grinding, this synergy opens horizons for quality production. Inspection results such as topography measurements and order spectrum from Advanced Waviness Analysis software can be forwarded to KISSsoft® design software.



SINEC Security Guard gives industrial operators and automation experts the key to performing measures for vulnerability mapping and security management. (Courtesy: Siemens)

In KISSsoft, the designer can see differences between the original design and the actual produced gear and evaluate variables such as the contact pattern in the final application under various load conditions. Noise behavior can then be predicted even before testing on a single flank tester or end of a line tester at final installation. This "Smart Loop" technology advantage holds the key to elevating gear designs faster and more seamlessly to a higher level.

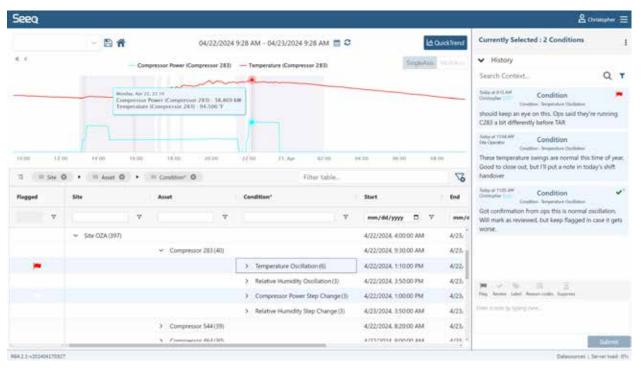
The 175GMS nano can be equipped with the Advanced Operator Pendant (AOP) enabling operators to record video and voice messages and to monitor environmental conditions. It may also be used to support remote maintenance via video, and can read bar and QR code information directly into the machine, for further use in inspection protocols or to select the appropriate inspection cycle.

The 175GMS nano can be experienced live at IMTS and AMB shows in September 2024.

MORE INFO www.gleason.com

## Siemens releases new cybersecurity software

Siemens has launched a new cybersecurity software to address the need to



The new Seeq Vantage app scales subject matter expert-driven insights for accelerated value across the enterprise. (Courtesy: Seeq)

identify cybersecurity vulnerabilities on the shop floor as quickly as possible.

The cloud-based SINEC Security Guard offers automated vulnerability mapping and security management for industrial operators in OT environments. The software can automatically assign known cybersecurity vulnerabilities to the production assets of industrial companies. This allows industrial operators and automation experts who don't have dedicated cybersecurity expertise to identify cybersecurity risks among their OT assets on the shop floor and receive a risk-based threat analysis.

The software then recommends and prioritizes mitigation measures. Defined mitigation measures can also be planned and tracked by the tool's integrated task management. SINEC Security Guard will be available for purchase in July 2024 on the Siemens Xcelerator Marketplace and on the Siemens Digital Exchange.

"With SINEC Security Guard, customers can focus their resources on the most urgent and relevant vulnerabilities, while having full risk transparency in their factory; it is unique because it takes the specific situation of the customer's operational environment into consideration while providing a single pane of glass for securityrelevant information in the OT area," said Dirk Didascalou, CTO of Siemens Digital Industries. "When developing the SINEC Security Guard, we drew on our extensive experience with cybersecurity in our own factories."

Industrial operators are tasked with continuously safeguarding their production assets on the shop floor. They need to analyze vendor security advisories, manually match them to the asset inventory of their factory, and prioritize mitigation measures. Because this process is time-consuming and error-prone using the existing tools, factories are running the risk of missing critical vulnerabilities in their assets or producing false-positives. This can lead to incorrectly configured plant components and inadequately allocated resources. With the SINEC Security Guard, industrial operators can tackle these challenges without needing indepth cybersecurity knowledge.

For a comprehensive view of IT and OT cybersecurity, SINEC Security Guard will also offer a connection to Microsoft Sentinel, Microsoft's Security Information and Event Management (SIEM) solution for proactive threat detection, investigation and response. Once connected, SINEC Security Guard can send alerts for security events including attacks to Sentinel, enabling a security analyst to incorporate SINEC Security Guard insights and conclusions in investigations and responses with Microsoft Sentinel powered Security Operations Centers.

"As information technology and operational technology systems continue to converge, a holistic cybersecurity architecture is key to protecting IT and OT capabilities alike," said Ulrich Homann, Corporate Vice President, Cloud + AI at Microsoft. "By combining our domain knowledge, Siemens and Microsoft make it easier for industrial operators to efficiently detect and address cybersecurity threats at scale,"

SINEC Security Guard also supports the manual upload of existing asset information for asset inventory.

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Get your FREE subscription, plus our online content, at www.windsystemsmag.com The initial release of SINEC Security Guard only supports Siemens OT assets but third-party device support is planned. SINEC Security Guard will expand the existing Siemens software portfolio for OT network security consisting of SINEC Security Inspector and SINEC Security Monitor.

MORE INFO www.siemens.com

#### MAINTENANCE

### Seeq launches industrial enterprise monitoring app

Seeq, a leader in industrial analytics and AI, recently announced the launch of the Seeq Industrial Enterprise Monitoring Suite with the release of Seeq Vantage, the company's first industrial enterprise monitoring app, at Conneqt, the company's global industry conference in Miami.

Today's industrial operations face numerous enterprise-level reliability, performance, and sustainability challenges, which are difficult to systematically identify, prioritize, and correct to maximize operational potential. With siloed teams and information, and limited visibility to historical knowledge and insights from previous operations and events, it can be challenging for organizations to achieve measurable impact.

"Industrial Enterprise Monitoring builds upon and elevates the Seeq mission to enable the creation of the insights that empower decisions and actions that increase operational excellence, drive sustainable manufacturing and, ultimately, the customer's bottom line," said Mark Derbecker, chief product officer of Seeq.

"We've always known that the people across the organization are the secret ingredient, and Industrial Enterprise Monitoring enables a company to turn local insights and expertise into a powerful system-wide advantage."

The Seeq Industrial Enterprise Monitoring Suite provides a comprehensive, automated view into past and present operational performance. This broader view enables better decision making and continuous improvement across today's complex industrial ecosystems. The Seeq Industrial Enterprise Monitoring Suite leverages the combined power of the Seeq Industrial Analytics and AI Suite and the context that only teams of experts can provide — all at the scale needed to drive results across the operational footprint.

The Seeq monitoring suite provides the flexibility, speed, and robust capabilities to help ensure decision-makers have key insights at their fingertips, allowing for faster, better decisions and actions.

Through the Seeq Vantage app, industrial organizations can tailor, deploy and automate cases such as asset and process monitoring, condi-

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NGC Gears has integrated two more EndoFlex endothermic gas generators into its China facility. (Courtesy: NGC Gears)

tion-based maintenance, reliability and downtime tracking and more. Coupled with the Seeq Industrial Analytics and AI Suite, customers now have an integrated ecosystem to capture, analyze, aggregate, monitor, triage, investigate, and document insights and actions at the local level and the enterprise level. The app provides proactive and automated enterprise surveillance for daily operational decisions, and comprehensive assembly of operational effectiveness and utilization understanding to prioritize longer-term investment decisions.

"Seeq empowers industrial organizations by turning their expert knowledge into a strategic asset," said Niels Andersen, principal research analyst at LNS Research. "The Seeq Vantage app significantly enhances their enterprise monitoring and AI capabilities." Seeq Vantage is scheduled for general release in June 2024.

MORE INFO www.seeq.com

#### MANUFACTURING

## NGC Gears installs EndoFlex generators at China facility

NGC Gears, one of the world's largest wind-power gearbox manufacturers, has completed the installation of two additional EndoFlex generators from UPC-Marathon, a Nitrex company, at its new facility in Jinhu, China, location.

This acquisition brings the total of generator sets to five since 2022,

collectively generating an impressive 800 cubic meters/hour (22,252 cubic feet/hour) capacity of endothermic gas supplied to carburizing and hardening furnaces used for processing various gear components.

The latest installations in February and March of 2024 support the heat-treating operations of the company's wind-energy gearbox production.

"The latest EndoFlex investments align with NGC's development of low-consumption, high-efficiency gearbox products for large-scale onshore and offshore wind turbines," said Johnny Xu, UPC-Marathon China general manager. "Our collaboration with NGC is focused on advancing excellence in the wind-power sector, and we are thrilled to see the tangible benefits our EndoFlex units bring to NGC."

"This partnership highlights the



Turbine delivery for the wind parks in Italy is expected for 2025's second quarter. (Courtesy: Vestas)

strength of our products and reinforces our commitment to providing quality, local solutions to meet the demands of modern manufacturing for a greener future," Xu said. "We look forward to continuing our work with NGC and delivering the superior endogas quality needed for their high-standard production processes."

NGC's decision to expand capacity is in response to the growing demand for wind-power solutions in China and globally. Recent statistics indicate a robust growth trajectory for wind energy, with the country leading the world in installed capacity and the manufacture of wind-power equipment. The new endothermic gas generating systems will enhance the company's production capabilities, enabling NGC to meet increasing market needs with greater efficiency and reliability.

EndoFlex offers several benefits, in-

cluding precise control of production media to the carburizing and hardening environments, leading to higher quality gear production with improved longevity and performance. The result is improved carburizing and hardening processes, higher-quality hardened gears, reduced operating costs, and increased efficiency.

MORE INFO www.ngcgears.com

# MANUFACTURING Vestas wins 81-MW order in Italy

Italian renewables producer Edison Rinnovabili recently placed an 81-MW order for the repowering of the Roio del Sangro, Monteferrante Guado, Monteferrante Casone, and Montazzoli wind parks in Abruzzo, Italy. The contract includes the supply and installation of 18 V136-4.5 MW wind turbines, as well as a 10-year operation and maintenance service agreement.

"I'd like to thank Edison for the trust placed in Vestas for the repowering of their projects," said Francesco Amati, Vestas general manager Italy. "We are really proud to see how the diversity of our portfolio continues to optimize our customer's business cases in Italy."

Turbine delivery is expected for the second quarter of 2025 while commissioning is planned for the last quarter of 2025. The order also reinforces Vestas' leadership in the country's wind energy sector, where it has installed over 5.2 GW since 1991.  $\prec$ 

MORE INFO www.vestas.com