



FOWIC will, in corporation with Shimizu, make use of the jack-up vessel Blue Wind for the project. (Courtesy: Fred. Olsen Windcarrier)

## ► CONSTRUCTION

### Fred. Olsen awarded Taiwan wind-farm contract

Fred. Olsen Windcarrier (FOWIC) has been awarded a contract working with Shimizu for the transportation and installation of monopile foundations for the 640 MW (8 MW/80 wind turbines) Yunlin offshore windfarm off the west coast of central Taiwan.

FOWIC, which is in a cooperative relationship with Shimizu regarding offshore wind-farm construction, will start operations in February 2024. The duration of the project is estimated to be 200 days. FOWIC will, in corporation with Shimizu, make use of the jack-up vessel Blue Wind for the project.

When fully operational, this project in Taiwan will have a capacity to create up to 640 MW of green energy equivalent of more 600,000 Taiwan households and be another important step toward a fully green-energy future in Taiwan.

“We are extremely proud to be awarded the transport and installation contract with Shimizu,” said Alexandra Koefoed, CEO at Fred. Olsen Windcarrier. “This contract demonstrates our commitment to offshore wind development in APAC as a region and to our partnership with Shimizu. We look forward to executing this project together with Shimizu and all the local stakeholders and suppliers on the project.”

Fred. Olsen Windcarrier established a partnership with Shimizu Corp. in 2021 to strengthen its posi-

tion in the offshore wind industry in the APAC region. Both companies have a background in civil engineering and offshore and marine construction.

Together, FOWIC and Shimizu capitalize on a versatile jack-up vessel fleet, while making use of a larger pool of market knowledge and project execution experience. “We’re happy for the chance to contribute with our joint capabilities to the Yunlin offshore windfarm project and to the APAC renewable energy overall,” Koefoed said.

The vessel is engaged in the Ishikari Bay New Port Offshore Wind Farm project, one of the largest commercial offshore wind farms in Japan with 8 MW/14 wind turbines. The vessel will start preparation for the Yunlin offshore wind-farm project in December 2023.

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

## CONSTRUCTION

# DNV awarded Polish offshore wind contract

Independent energy expert and assurance provider DNV has been awarded a contract by the Equinor and Polenergia S.A. owned joint ventures, MFW Bałtyk II sp. z o.o. and MFW Bałtyk III sp. z o.o. for the certification of the Bałtyk II and Bałtyk III offshore wind farms. The projects, in the Polish exclusive economic zone of the Baltic Sea, are set to contribute to Poland's renewable energy goals.

With a planned installed capacity of 720 MW each, Bałtyk II and Bałtyk



Kim Sandgaard-Mørk, executive vice president for renewables certification at DNV (Courtesy: DNV)

To ensure efficient operations, each wind farm will have its own offshore substation.

DNV's scope of work includes the delivery of certificates for the wind farms related to design, fabrication/installation/commissioning and operation in accordance with relevant laws, regulations, and codes. The following assets are defined as relevant for certification: wind-turbine generators, offshore substation platform, inter-array cables, and offshore export cables.

"DNV is extremely pleased to be awarded this contract and contribute to the drive to increase renewable energy in the country," said Kim Sandgaard-Mørk, executive vice president

III will collectively generate 1,440 MW of clean energy, enough to power more than 2 million Polish households. The electricity produced will be exported to the Polish transmission grid, operated by the Polish TSO Polskie Sieci Elektroenergetyczne S.A.

for renewables certification at DNV. "This move by Poland, to expand its offshore wind capacity, is supported by DNV's 2022 Energy Transition Outlook Report, which states that the share of offshore wind in total wind electricity generation will increase steadily, rising globally from 8 percent in 2020 to 34 percent in 2050."

"Building upon DNV's extensive experience in certifying renewable energy projects, it brings us great satisfaction to expand our certification expertise to Poland following the announcement earlier this year, that DNV has been authorized by the Polish Ministry of Infrastructure to issue certificates for offshore wind farms and assembly of power output equipment," said Krystian Slodzinka, project bid manager and Polish ministry coordinator, energy systems at DNV. "The certification of Bałtyk II and Bałtyk III by DNV further solidifies their commitment to meeting the highest industry standards for safety, reliability, and sustainability. I am personally looking forward to continue working on this project and to a successful outcome."

DNV is an independent expert in risk management and assurance, operating in more than 100 countries.

DNV provides assurance to the energy value chain through its advisory, monitoring, verification, and certification services.

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

## INNOVATION

# Winergy introduces Service 360 for turbine drivetrains

Winergy presented Service 360, a service concept for wind turbine drivetrains. Thanks to multi-brand service, digital services, and the unique positioning as a system provider, it is the most comprehensive service concept in the market for wind drives. Winergy,



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CMA5 Evolution is an integral part of Service 360. Plant operators have all turbine information constantly available and can optimize operation. (Courtesy: Winergy)

the wind brand of the drive specialist Flender, offers turbine manufacturers and wind-farm operators a one-stop solution for the entire drivetrain from gearbox to generator.

Today, wind is the cheapest energy form. Nevertheless, turbine OEMs and energy companies are trying to generate the maximum energy output at even lower costs.

Efficient management of wind farms is essential to harness the available wind resources while minimizing downtimes.

With Service 360, Winergy offers a service concept for drivetrains that can be individually adapted to the respective customer need. It is unique in the wind market and the result of many years of cooperation with turbine manufacturers and wind-farm operators. The service offering includes key innovations that cover the entire drivetrain, including the generator, and extends to servicing gearboxes from other manufacturers.

Winergy is thus able to cover more than 100 different turbine types and 130 gearbox models. Customers benefit from experience of the leading manufacturer of drive systems, regardless if it is a Winergy product or not.

Partners receive a complete package beyond the products. In terms of service, it is crucial to be close to the wind farms. Winergy covers all major wind markets in the world with its network of manufacturing and service locations. The integration of Moventas locations has expanded the presence further. Service 360 is thus available quickly and at any time.

Service 360 also offers service for every point in the turbine's life cycle, from installation, maintenance, and repair to partial repowering, i.e. increasing the power of the wind turbine by upgrading individual components or the entire drivetrain.

"With this flexible multi-brand service, we focus on many gearbox and turbine brands and can thus serve drivetrains of entire wind farms. Service 360 can be applied to all turbine types with their various gearbox and generator types," said Aarnout Kant, Winergy president.

Digital condition monitoring is an integral part of many wind farms. Operators use it to monitor and analyze their turbines. Winergy's CMA5 Evolution goes beyond this and offers customers a digital all-round service. It is part of Service 360 and, for the first

time, fully compatible with already installed hardware. The end-to-end solution offers customers all important services, from the condition of the turbine to concrete recommendations for action to the delivery of spare parts at the right time and place. CMA5 Evolution is based on the further development of the successful Moventas CMA5 Service and, thanks to Winergy's unique position as a system provider, covers all components of the driveline from the main bearings to the transmission and generator. Existing systems can be connected without changing the infrastructure.

Customers receive access to a digital portal in which all information about the turbines and services can be viewed transparently. The scope of the required services is based on the needs of the customers and can be individually adapted.

Cross-turbine algorithms also allow conclusions about the condition of the sub-systems and components outside the drivetrain. CMA5 Evolution offers everything in one place: recommendations for operation, condition reports, instructions, required spare parts and their availability, as well as the planning of service calls. "Service 360 combines everything our customers and partners need: service for all their turbines and drive types -- for the entire drivetrain and not just for individual components such as the gearbox or the generator," said Antti Turunen, Wind Service vice president.

"Plus, it is available everywhere in the world. With CMA5 Evolution, we are also leveraging the full potential of digital intelligence to further increase the efficiency of wind farms. In addition to wind gearboxes, generators, direct drive segments as well as wind couplings, Winergy has long been known for its extensive service portfolio." The Service 360 package additionally offers original spare parts, replacement of drivetrain components, workshop repairs at one of Winergy's worldwide locations, on-site service, digital services, and training.

**MORE INFO** [www.winergy-group.com](http://www.winergy-group.com)



Lifetime extension applies to both offshore and onshore wind parks, but onshore turbines are often missing data from structural monitoring. (Courtesy: Bachmann)

INNOVATION

## Bachmann partners with PE Concepts to extend turbine life

In Germany, 30 percent of installed onshore turbine plants are more than 16 years old. Operators must plan to extend operation within good time, but Lifetime Extension (LTE) assessments are usually conservative and based on estimates, often missing out on the full potential operational lifetime that remains after design lifetime has expired.

With a combined experience of almost 40 years in the wind industry, CMS provider Bachmann Monitoring GmbH and engineering consultancy P.E. Concepts GmbH are teaming up to take on that challenge. Bachmann systems deliver highly accurate Structural Health Monitoring (SHM) measurements that optimize the analytical LTE



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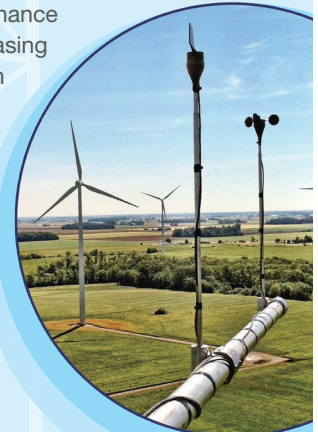
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The new Flender facility will be more than 1,800 square meters and has the structural capacity for a 50-ton crane. (Courtesy: Flender)

assessment performed by P.E. Concepts. This often leads to a longer period of extended lifetime for wind turbines and a dramatic impact on total ROI.

Bachmann's high-accuracy load and Eigenfrequency measurements help P.E. Concepts calculate remaining useful lifetime more accurately than traditional SCADA data and wind information.

"With Bachmann's data, we can significantly improve the theoretical calculation models and reduce uncertainty – often leading to a much higher remaining useful lifetime for our clients," said Matthias Saathoff from P. E. Concepts.

An analytical assessment based on measurement data supports the period of life extension with continuous monitoring, facilitating the optimal use of components with corresponding remaining service life potential. Owners and operators have access to all SHM data, allowing for better planning when it comes to economic decision-making during the extension period. "When it comes to ensuring

optimal Lifetime Extension, the use of Structural Health Monitoring data simply makes sense," said Marc Thomsen, product manager at Bachmann.

**MORE INFO** [www.bachmann.info/en](http://www.bachmann.info/en)

## INNOVATION

### Bachmann equips OT1300 Panel PC with Intel processors

Bachmann is equipping the OT1300 Panel PC Series with high-performance, 11th generation Intel processors that guarantee faster data processing and maximum work performance.

The new variant diversity of CPU and memory media enables adaptation to custom requirements and thus offers potential for using lower-cost variants. The OT1300 Series offers full scalability for the processors and for RAM, mass storage devices, and display diagonals.

This flexibility offers customers reduced development and maintenance costs. Special emphasis has been placed on characteristics such as long-term availability, robustness, or industrial design.

Compatible solutions have been found for future repair and spare parts, to keep the conversion effort to a minimum and reduce costs. Device design remains neutral; there is no visible logo and design remains in the customer's hands.

In the standard configuration, the operating devices are delivered with the current Windows 10 Edition, Windows 10 IoT Enterprise 2021 LTSC. This edition offers the longest-term update support, to ensure maximum security. It is also possible to import customer-specific images to keep the commissioning effort minimal.

Bachmann offers the pre-installed atvise® HMI package that combines high-performance software with SCADA features, enabling cost-effective implementation of demanding applications. Bachmann is the central contact

for all concerns (HMI, software, and control system).

**MORE INFO** [www.bachmann.info/en](http://www.bachmann.info/en)

## MAINTENANCE

# Flender expands production in Australia

German drive train specialist Flender is expanding production and service capacities in Australia by opening a new facility in Sydney. With its Winergy brand for wind-turbine drives, the company has one of the largest installed bases in Australia, aiming to scale up the local presence and be close to customers.

The same is the case for the industrial drive portfolio with a proven track record in Australian industries such as mining, cement, harbor equipment, and further. Flender's gearboxes and couplings continue to power some of Australian industries' heaviest machines.

"For both our wind and industrial business, we see enormous growth potential on the continent," said Andreas Evertz, Flender Group CEO. "To reach the goals from the Paris climate agreement, we must not only ramp up renewable energy capacities but also transform our industries toward sustainability.

This includes recycling and establishing a circular economy. Our workshops are perfectly equipped for servicing and refurbishing the existing installed base, not only for our own fleet but all gearbox types in the market."

The new Sydney facility will be more than 1,800 square meters and has the structural capacity for a 50-ton crane. It will have all equipment required to deliver OEM standard to customers. Flender will be able to repair gearboxes up to 40 tons as well as equipment such as main shafts for wind turbines, lube systems, fluid couplings, and brakes.

Sydney is Flender's fourth service hub in Australia besides the locations in Rockhampton, Perth, and Melbourne. "It is important to be close to our customers," said Kareem Emara, managing director of Flender Australia and New Zealand. "With the new facility in Sydney, we are continuing to be more agile and respond to their needs as quickly as possible.

We have been in the industry for many years. Using our OEM knowledge and technical expertise we can provide proactive support."

Flender's facilities are set up to support the lifecycle of a product from installation to decommissioning and refurbishment.

With the digital drivetrain intelligence AIQ, Flender also provides




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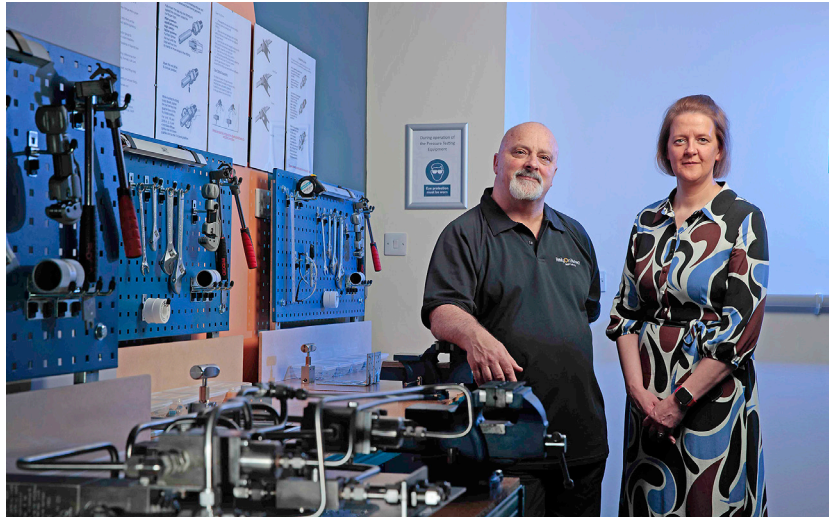
Flender is headquartered in Bocholt, Germany, offers gear units, couplings and generators and associated services, with a focus on key industries such as wind power, cement, mining, oil and gas, power generation, water and wastewater, marine, conveyor and crane technology.

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

## ► MAINTENANCE

### RelyOn Nutec UK launches technical training programs

RelyOn Nutec UK, leaders in practical and digital training for traditional and renewable energy, has launched technical training programs, backed



RelyOn technical training manager Gordon Andrew and operations director Catherine Leibnitz. (Courtesy: RelyOn Nutec UK)

by 500,000 pounds of investment in staff, facilities, and equipment. In recognition of the widening energy skills gap and the new skills required to power the energy transition, the

launch signals RelyOn's commitment to the energy industry in expanding its remit across its U.K. training centers in Aberdeen, Teesside, and Liverpool. The new technical training suite in-

 An advertisement for American Wire Group (AWG). The background is a landscape with several wind turbines and high-voltage power lines against a sunset sky. In the foreground, there is a graphic of a globe with several cables wrapped around it. The text "EMPOWERING A BETTER WORLD" is written in large white letters across the top. Below it, "Wires • Cables • Hardware • Equipment • Accessories" is written in smaller white letters. At the bottom, the "AWG AMERICAN WIRE GROUP" logo is displayed in large white letters. Below the logo, the website "buyawg.com" and email "sales@buyawg.com" are listed, along with the phone number "800.342.7215".
 

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Vestas Wind Systems has signed a conditional agreement to supply turbines for an onshore U.S. project. (Courtesy: Vestas Wind Systems)

cludes Engineering Construction Industry Training Board (ECITB) courses on Small Bore Tubing and Mechanical Joint Integrity.

These programs are important for increasing efficiency of oil and gas projects, where hydrocarbon leakage reduction is of vital importance to output and safety. The programs will also be adaptable to suit the renewables market.

“We’re extremely excited to unveil our latest offering,” said Catherine Liebnitz, RelyOn Nutec UK operations director. “As established safety training providers in the energy and other hazardous industries, expanding into technical training is a natural next step for us.”

RelyOn also offers Global Wind Organization (GWO) basic technical training, delivered across RelyOn’s digital and practical methods. The course is a first step in encouraging new talent in the wind sector and is designed for complete beginners to experienced candidates who have knowledge of technical systems and want to move into the wind sector.

“The transition will require training and skills development of up to 200,000 workers, and we don’t underestimate the challenge ahead, but we know that with our increased offering we’re able to continue to serve the industry on its

journey to net zero,” Liebnitz said.

Gordon Andrew, technical training manager, will lead the new offering. Based in Aberdeen, Andrew has more than four decades of experience in the energy industry and joined RelyOn in 2021. “Our expertise in global safety training makes us perfectly placed to deliver these new courses,”

Andrew said. “And with our latest investment in updating our facilities in our U.K. energy hubs, we can ensure our clients receive the highest standard of technical training, in a location that’s convenient for them.”

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

## MANUFACTURING

### Vestas to repower three projects in the U.S.

Vestas has received a 158 MW order to repower three undisclosed projects in the U.S. The order consists of 72 V120-2.2 MW turbines for the three projects. The customer is not disclosed.

The orders include supply, delivery, and commissioning of the turbines, as well as a 10-year Active Output Management 5000 (AOM 5000) ser-

vice agreement, designed to ensure performance of the asset. In the U.S., Vestas has repowered more than 1 GW of projects in the last five years across all major turbine brands. Turbine deliveries for each project are expected to begin in the fourth quarter of 2023 with commissioning scheduled for the fourth quarter of 2024.

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

## MANUFACTURING

### Tecoi introduces welding edge prep machine

Tecoi North America has introduced to the North American market the TRF plate processing machine, a solution for heavy welding edge preparation and drilling.

The machine is designed for applications where large machining milling capacities are required for medium and large thicknesses. It is an optimal solution for industries with demanding regulations that require critical welding edge preparation, such as wind-tower fabrication, civil construction, shipbuilding, large steel structures, large vessels, and petrochemical infrastructure.

The TRF incorporates CBM® Cold Bevel Milling technology to create complex bevels in a single, high-speed cut. This results in improved quality and dimensional tolerance, without affecting the material properties of the metal.

The edges do not need to be cleaned after the bevel is cut, and the quality issues common with thermal beveling are eliminated. Bevels for narrow gap welding can be milled in one pass. Customized milling tools with specific geometries are available.

In addition to the CBM Cold Bevel Milling technology, the TRF plate processing machine also features an automatic multi-head system that duplicates productivity in the same processing station.

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

The TRF machine provides a solution for industries with demanding regulations that require critical welding edge preparation. (Courtesy: Tecoi North America)



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