The Blue Tern is headed for Neart na Goithe. (Courtesy: Fred. Olsen Windcarrier)

CONSTRUCTION

Blue Tern to support jacket installation at Neart na Goithe

Fred. Olsen Windcarrier has won a contract with the Blue Tern, a jacket installation vehicle, to support the jacket installation campaign on the Neart na Goithe (NnG) offshore wind farm.

The contract is included in FOWIC's disclosed total backlog with a value of about 355 million euros. Blue Tern will support the jacket installation campaign by doing drilling and possibly piling works.

"We are delighted to have FOWIC and the Blue Tern engaged in what will be an exciting phase in the development of NnG.

The Blue Tern is a fantastic asset, and we look forward to seeing her utilized in support of the jacket installation works," said a Neart na Goithe spokesperson.

"We are pleased to have been awarded the extra work on NnG and we look forward to working with them to safely deliver on this project," said a spokesperson for Fred. Olsen Windcarrier.

Neart na Gaoithe is a key U.K. offshore wind-farm project and located off the east coast of Scotland, 15.5 kilometers off the Fife coast and covers an area of about 105 square kilometers.

MORE INFO www.Windcarrier.com

CONSTRUCTION

VelociWrapper gets patent for cable-wrapping machine

The VelociWrapper™ Company was recently awarded a patent by the United States Patent and Trademark Office for its flagship product, the VelociWrapper, a cable-wrapping machine that increases speed and efficiency while reducing costs for wind- and solar-farm installations in the renewable-energy construction sector.

The less it costs to install wind and solar farms, the less it costs consumers, the more consumers will make the switch to clean energy, and the faster

Airpes has widened delivery of innovative lifting, handling, and weighing solutions for the wind energy and industrial markets. (Courtesy: Crosby Airpes)

that greenhouse gas emissions can be reduced worldwide.

The International Energy Agency (IEA) predicted in 2012 that global solar energy generation would reach 550 TW/h by 2030.

That number was exceeded in 2018, illustrating that the growth of solar and wind energy has not been linear, but exponential.

"Due to the demand for our machine, we have already outgrown our first facility and are currently moving our manufacturing operations into a facility five times the size to accommodate the growth," said Torrance Bistline, the founder and inventor of the VelociWrapper. "We have more patents and innovations in the works as well, which we will be unveiling soon."

The VelociWrapper requires no motorized power to run. Once the cables are laid in the ground using the system, it contributes 5 to 8 percent more efficiency in the transfer of energy through to its destination, which also reduces heat and extends the life of the cable.

The VelociWrapper Company is based in Hildale, Utah. Founded in 2021, the company's mission is to recognize and fulfill the need for high-quality custom equipment for the construction industry, focusing on the renewable energy sector. The name comes from its flagship product, the VelociWrapper™, which is a patented triplexing machine that is 100 percent green, reduces installation time, and saves money for clean-energy installations.

MORE INFO www.velociwrapper.com

CONSTRUCTION

Airpes provides blade-replacement system

Following acquisition by The Crosby Group, a leader in lifting, rigging, and load securement hardware, Airpes has widened delivery of innovative lifting, handling, and weighing solutions for the wind-energy and industrial market, including a craneless wind-turbine rotor blade exchange system.

As wind-farm operators meet demand for new turbines, they must also maintain installed towers, nacelles, and other components. Central to that work is removal and replacement of rotor blades, which can measure 80 meters (approx. 260 feet) in length and weigh more than 24 tons. With wind farms naturally being installed

in remote, windy locations, this is a complicated, expensive process that involves large cranes and heavy rigging — until now.

"Our challenge was to develop a more cost-effective, faster solution to replace the logistical feat of getting big cranes, hoisting technology, and personnel onto remote sites, sometimes for multiple days. The wind-energy market is constantly evolving and innovating — and its suppliers must keep up or even pioneer new solutions. Our ground-level, winch-based system avoids the use of large cranes, immediately eliminating much of the time and costs involved with other solutions," said Josep Compte, Airpes' managing director and co-founder.

Combining winches at ground-level with a series of pulleys and shackles in the nacelle, Crosby Airpes can remove and replace blades in a 6 o'clock position. On the top of the tower, a rig is customized according to the turbine. For installation, a smaller mobile crane provides the necessary support to the tip of the blade.

"The craneless system demonstrates innovative thinking and improvements in cost and time efficiencies for the customer," Compte said. "It has given us clear competitive advantage in one of the world's most vibrant markets, further increasing our market share and contributing to significant, long-term growth.

Leveraging The Crosby Group's global footprint, technical field support and training teams, and world-class hardware, together we will bring this solution to more sites and make the lifting and renewables industries safer and more efficient." Crosby Airpes is part of The Crosby Group's Technology Solutions portfolio, along with Crosby BlokCam and Crosby Straightpoint. This portfolio combines technology and lifting and rigging hardware to deliver solutions that improve safety and productivity for customers.

Crosby Airpes's craneless wind turbine rotor blade exchange system is available for purchase or rental.

MORE INFO bridger-howes.prezly.com

INNOVATION

VinciVR receives $200K DOE grant for VR training tool

U.S. Energy Secretary Jennifer Granholm recently announced that VinciVR Inc. will receive $200,000 as part of 259 Department of Energy grants totaling $53 million to 210 small businesses in 38 states.

"Supporting small businesses will ensure we are tapping into all of America's talent to develop clean-energy technologies that will help us tackle the climate crisis," said Steve Binkley, acting director of the DOE's Office of Science.

"DOE's investments will enable these economic engines to optimize and commercialize their breakthroughs, while developing the next generation of science leaders and ensuring U.S. scientific and economic competitiveness that will benefit all Americans."

Through the Small Business Innovation Research/Small Business Technology Transfer program across the federal government, small business powers the U.S. economy and generates thousands of jobs, both directly and indirectly. The awards aim at transforming DOE-supported science and technology breakthroughs into viable products and services.

VinciVR Inc. will receive $200,000 to work with offshore developers, disadvantaged communities, and training organizations to develop a portable virtual reality (VR) training tool for mariners that simulates offshore wind farms in various weather conditions. This will help mariners learn navigation/operations through a wind farm before construction begins.

"Offshore wind will create thousands of high paying jobs while fun-

Massachusetts Lt. Gov. Karyn Polito experiences VinciVR's offshore wind VR software. (Courtesy: VinciVR)

damentally changing US energy, but ensuring a prepared workforce will be a significant challenge," says Eagle Wu, CEO of VinciVR. "We will make sure Americans are ready for this change through this DOE investment."

"Promoting diversity within renewable energy is a core internal initiative. We are excited for this partnership in building a dynamic and operationally ready workforce to meet offshore wind energy industry's needs," said Dr. Cynthia Brown, managing partner of IWNL.

MORE INFO www.vinci-vr.com

INNOVATION

Endangered whales tagged with digital acoustic tech

The Bureau of Ocean Energy Management (BOEM) and the National Oceanic and Atmospheric Administration's (NOAA) Stellwagen Bank National Marine Sanctuary recently announced the successful digital acoustic tagging of 14 sei whales in waters offshore Massachusetts. This is the first time researchers have successfully tagged an endangered species in the United States using an un-crewed aerial vehicle (UAV), or drone.

The collected data will shed light on the whales' acoustic behavior, which researchers will use to inform mitigation strategies — including passive acoustic monitoring — to protect this endangered species from the potential impacts of offshore wind-energy activities. "BOEM is pleased to be able to fund this important research. Our Environmental Studies Program looks for innovative solutions to resource management challenges," said Jacob Levenson, BOEM marine biologist. "Using UAVs allows scientists to collect data in a way that is safer for both the whales and researchers."

Very little is known about the sei whale, one of the most endangered large whales in the North Atlantic. Understanding how the whales behave and use their habitat is critical for BOEM to assess potential impacts resulting from bureau-permitted offshore activities and ensure responsible offshore wind energy development.

Digital acoustic tagging is a component of a larger BOEM study to address gaps in information on a variety of endangered large whale species — including sei, North Atlantic right, and fin whales — to better inform offshore wind-energy area selection.

UAVs enable researchers to target specific animals in a group or conduct multi-group taggings, and the collected data will also aid in conservation efforts. "The use of UAVs to tag whales is the first major innovation related to attaching tags to whales," said Dr. David Wiley, research ecologist at Stellwagen Bank National Marine Sanctuary. Wiley has used various suction cup-based, computer-equipped tags to study the underwater behavior of whales for almost 30 years.

MORE INFO www.boem.gov

INNOVATION

Stora Enso partners with Modvion on wood for turbine towers

Mass timber product supplier Stora Enso and wood technology company

Very little is known about the sei whale, one of the most endangered large whales in the North Atlantic. (Courtesy: National Marine Fisheries Service)

Using wood, a renewable resource, can reduce a tower's CO2 emissions by 90 percent. (Courtesy: Modvion)

Modvion are partnering to establish wood as the material of choice for wind-turbine towers. The collaboration's purpose is to demonstrate the possibilities in using wood in demanding constructions.

Modvion builds wind-turbine towers with laminated veneer lumber (LVL), which proportionate to its weight, is stronger than steel. The towers are built in lightweight modules, enabling taller towers and easy transportation on public roads without permits or road reconstructions. Taller towers reach stronger winds, leading to more cost-efficient energy production.

"We are proud to enter into partnership with Modvion who, like us, strive to push boundaries and demonstrate the possibilities with wood," said Lars Völkel, executive vice president, Division Wood Products, Stora Enso.

"As one of the largest sawn wood producers and private forest owners in the world, we play an important role in the transformation to a greener society.

By contributing our expertise to Modvion we can further help make a difference in mitigating climate change and supporting the EU's drive to increase renewable energy production."

Using wood, a renewable resource, can reduce the CO2 emissions for the tower by 90 percent while also storing carbon dioxide that has been taken up by trees during their growth.

The wood used for advanced con-

structions such as wind-turbine towers can be reused in new wood-based products, which provides further long-term climate benefits.

"The commitment of Stora Enso to replace fossil-based materials with renewables is a perfect match for Modvion," said Otto Lundman, CEO of Modvion.

"To solve the climate crisis, we need more renewable energy as well as increased use of sustainable, wooden constructions. Together with Stora Enso, we can enable both."

MORE INFO www.storaenso.com/en/products/wood-products

MAINTENANCE

Snap-on introduces flat jaw locking pliers

Snap-on Industrial has introduced new flat jaw locking pliers with a patent-pending power ring that increases thread strength and delivers a clamping force up to 5,000 pounds.

The tool is made in the U.S. Features include a pinned and brazed upper jaw, an oversized adjustment screw, a textured body and lever that increases the grip when being used by oily hands, and a nickel finish for a classic look and feel. The pliers come in 10-inch and 7-inch lengths with optional cutters. The 10-inch pliers deliver a 5,000-pound clamping force, while the 7-inch version delivers 4,000 pounds of force.

MORE INFO b2b.snapon.com

MAINTENANCE

Bitbloom to supply wind-asset analytics in North America

Bitbloom, a provider of software and analytics services for the wind industry, has signed a contract with Cubico Sustainable Investments (Cubico) for the supply of wind-asset analytics in North America. The contract will see an expansion of Bitbloom's service provision to include Cubico's first U.S. wind farm, the 46.5 MW Wind Fall 1 project in California.

Cubico will benefit from Bitbloom's proprietary Sift Monitor analysis platform, that provides automated analytics and reporting. (Courtesy: Bitbloom)

"We're delighted to be expanding our work with the Bitbloom team, not only is their service first-class, but we were really impressed by their ongoing agility and flexibility to optimize as new requirements and information are obtained," said Charlie Plumley, Cubico performance manager. "The

transparency of their insights mean that reports are easily shared and understood within our internal teams ensuring actions are made that can add value to our portfolio."

Cubico will benefit from Bitbloom's proprietary Sift Monitor analysis platform, that provides automated analytics and reporting. Bitbloom will deploy a range of automated and targeted analytics and ongoing monitoring services, to optimize both operating performance and the health of wind assets.

"As we enter the American wind market, we're really pleased to be able to bring such a valued partner along with us," Plumley said. "We've been delivering monitoring services for Cubico in Europe for around 12 months now, and we're really excited to be expanding our remit with them in North America," said Steffan Lindahl, Bitbloom co-founder. "Our ability to be responsive and deliver transparent insights in collaborative optimization projects is what sets us apart. These qualities are the cornerstones in how we build our software and services for customers." Bitbloom provides ongoing operational monitoring services for Cubico's European wind-farm portfolio, and the American contract began in April.

MORE INFO bitbloom.tech

MANUFACTURING

Remee Wire expands line of renewable energy cables

Remee Wire and Cable, manufacturer of electronic wire and cable, has introduced Renewables by Remee, its expanded line of renewable energy cables.

The cables have been designed for power collection and distribution in solar- and wind-power generation systems. Remee's experience in manufacturing rugged cables for use in harsh outdoor environments provides assurance of signal integrity and continued performance.

Remee's cables have been designed for power collection and distribution in solar and wind power generation systems (Courtesy: Remee Wire and Cable)

For wind towers, Remee provides cables for blade grounding, cabling from the nacelle to the intermediary collection point, and collection cable from the many intermediary collection boxes to the substation.

For solar power, Renewables by Re-

mee include photovoltaic (PV) cables for interconnecting solar arrays, collection cables to connect the panels with intermediary collection points, and medium voltage cables in copper or aluminum to transmit power to substations.

Renewables by Remee includes the following cable families:

- **Solar array cables:** Copper PV wire rated at 2,000V with cross-linked polyethylene (XLPE) jackets for durability.
- **Collection cables:** Aluminum PV wire rated at 2,000V, also with cross-linked polyethylene (XLPE) jackets for durability.
- **Medium voltage cables:** Both the aluminum and copper MV Series are rated 35kv; they feature tree-retardant cross-linked polyethylene (TR-XLPE) insulation and a cross-linked polyethylene (XLPE) jacket.

The cable is designed for use in three-phase systems with voltage not exceeding 35,000 volts phase-to-phase and conductor temperatures not exceeding 105°C for normal operation. Suitable for direct burial.

- **Fiber-optic cables:** Interference-free fiber-optic cables are available with loose tube construction featuring gel-free AquaLock; available with and without armor. Fiber in duct available upon request.

MORE INFO remee.com

MANUFACTURING

Vestas gets 101-MW order in Italy

ERG, an Italian independent operator producing energy from renewable sources, recently placed a 101 MW order for the Mineo Militello Vizzini wind park in Sicily, Italy.

The contract includes the supply and installation of 24 V136-4.2 MW wind turbines as well as a multi-year active output management (AOM 5000) service agreement.

"We are very happy to announce our partnership with ERG for this project, which is the largest one we have signed in the last 15 years in Italy," said Francesco Amati, Vestas Head of Italy. "This signature highlights the versatility of our 4-MW platform and adds more than 100 MW of clean energy to the Italian energy mix, supporting, once again, the country's energy transition toward a more sustainable future."

Turbine delivery is planned for the second quarter of 2023 while commissioning will take place in the second half of 2023.

The project adds to more than 5.4 GW wind turbines installed or under construction by Vestas in Italy, a market share of more than 40 percent.

MORE INFO www.vestas.com/en