



A Bat Deterrent Unit installed on a wind turbine at Red Horse 2. (Courtesy: NRG Systems)

## INNOVATION

### NRG provides bat deterrent solution to Arizona wind farm

NRG Systems, Inc. recently announced that Red Horse 2 in Cochise County, Arizona, has installed Bat Deterrent Systems on its 15 turbines. Located 80 miles east of Tucson, Arizona, Red Horse 2 is one of the first combined wind and solar projects in the United States.

Red Horse 2 is owned and operated by D. E. Shaw Renewable Investments (DESRI), the first commercial adopters of NRG's Bat Deterrent System. DESRI previously installed

Bat Deterrent Systems on all 30 turbines at its Kawaioloa Wind facility in Hawaii.

"After a smooth procurement and installation process at Kawaioloa Wind, we are excited to be deepening our commitment to wildlife conservation, as well as our collaboration with NRG Systems, by implementing this pioneering technology at Red Horse 2," said Bryan Martin, chief executive officer for DESRI.

"Our goal has always been to minimize the impact of renewable energy production on surrounding habitats," said Brita Woeck, environmental compliance officer for Red Horse 2. "By installing NRG's Bat Deterrent Systems at Red Horse 2, we are hopeful that we can further reduce bat take

at the farm."

"DESRI has been a strong ally for us, and we are eager to help them protect bats," said Brogan Morton, senior product manager at NRG Systems. "It is exciting to see our vision of how the wind industry can play a part in bat conservation coming to life."

Energy generated at Red Horse 2 is purchased by Tucson Electric Power and is playing a key role in helping the utility achieve its goal of getting 30 percent of its electricity from renewables by 2030.

A growing number of wind farms are seeking solutions to bat fatalities that NRG's pioneering bat deterrent technology can address.

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

## INNOVATION

### LUTZE expands its cable entry system offering

LUTZE Inc. recently introduced the new Cablefix® X cable entry system to complement its existing cable and cable management portfolio. Featuring multi-layered X-seal technology, Cablefix® X is designed to simplify installation without compromising ingress protection.

The X membrane seals are closed by default, eliminating the need to plug unused entry points. These innovative cable entry systems achieve Type 4X, 12, and 13 with a protection class of IP65.

Cablefix® X is available with 12 or 23 entry points and provides a great space saving alternative to traditional cable glands. Cablefix® X requires only one enclosure cut out and can be installed onto enclosures of any wall thickness with four mounting bolts. For enclosures with a wall thickness of 1.5mm, Cablefix® X is available with a snap-in mounting option.

Cablefix® X innovative features include:

- Cables install easily by pushing the end through the seal from the front.
- Saves up to 50 percent installation space and 80 percent installation time vs. using individual cable glands.
- Standard 112mm x 36mm cutout makes cabinet preparation easy.
- Compatible with all major control cabinets and electrical enclosures.

LUTZE Inc. designs and manufactures control products for factory automation and specializes in flexible industrial control and power cables such as LUTZE Silflex®, LUTZE Superflex®, and DRIVEFLEX® VFD cables.

The company also offers grounding and wire management products, compact power supplies, LOCC-Box-intelligent DC circuit protection device, LSC-wiring systems

for control cabinets, and relays for industrial applications.

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

## CONSTRUCTION

### Transport experience enables time-saving move for wind farm

Mauritania's lengthy shoreline has considerable wind-power potential and so the country is looking to increase its ratio of renewable energy. This has led to the commissioning of the 122 million euro Boulenour Wind Power Project.

ALE mobilized its specialist transport services to complete the transportation and installation of two electrical transformers, saving time and

costs for a 100-MW wind-farm project near Nouadhibou, Mauritania. Its experience in transportation across a range of sectors enabled it to eliminate a third from the operation's schedule, which also saved costs.

The abnormal load transport of the electrical transformers, weighing 95 metric tons each, crossed more than 100 kilometers. The route began at the Port of Nouadhibou and finished at a transformation center.

Once on site, the transformers were unloaded using heavy-duty lifting equipment and discharged directly onto rails embedded in concrete. This enabled the transformers to be rolled on their own wheels to their final position.

ALE was able to mobilize a team at short notice for the operation. For the specialist transport and installation, ALE used 6 axle lines of conventional trailer with a 250 metric ton capacity

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tractor, then 90 metric ton capacity hydraulic jacks for the unloading.

**MORE INFO** [www.ale-heavylift.com](http://www.ale-heavylift.com)

## CONSTRUCTION

### Collett delivers final components to Clocaenog Wind Farm

Since the first deliveries in January, for the past six months Collett & Sons Ltd has been traveling the 70-mile route from Ellesmere Port to Clocaenog Forest Wind Farm, steadily delivering the turbine components to the North Wales site.

Collett has made the final journey from the port to the development site, delivering the final tower sections to complete the project.

Through the snow of January, the storms of February, and the record-breaking heat of July, Collett methodically delivered each of the 270 components. With a total of 121 abnormal load convoys and 15 self-escorted convoys, Collett covered a staggering 16,929 miles with a total of 12,420 metric tons.

Construction is now underway of the 27 V105 Vestas turbines, which will form Innogy Renewable UK's North Wales site. Once operational, Clocaenog Forest will have an installed capacity of 96 MW and will generate enough renewable energy for the equivalent domestic needs of up to 63,800 average households per year.

**MORE INFO** [www.collett.co.uk](http://www.collett.co.uk)

## MAINTENANCE

### Snap-on's new torque wrench can achieve faster speeds

The new SpinTORQ 360 Continuous Rotation Torque Wrench from Snap-on Industrial is a continuously spin-



The SpinTORQ 360 is built for heavy duty bolting, heavy equipment maintenance, and more. (Courtesy: Snap-on Industrial)

ning, low profile torque wrench and is 80 percent faster than ratcheting hydraulic wrenches.

The pneumatic-powered SpinTORQ 360 can access tight spaces, thanks to its low-profile head that continuously rotates 360 degrees to provide maximum torque in both forward and reverse directions. With continuous rotation, the SpinTORQ 360 locks into position when energized and is securely in place until the tool stalls — increasing safety compared to ratcheting wrenches, which may fall off the nut when the cylinder retracts.

The SpinTORQ 360's highly efficient epicyclic gearbox and double-enveloping worm gear design provides reliable, repeatable performance, and its automatic two-speed operation allows for fast rundown speeds, as well as precise final torque speeds.

The SpinTORQ 360 is engineered and built for heavy duty bolting, heavy equipment maintenance, and it is designed to standard ANSI and API piping flange dimensions, so the tool rests against adjacent nuts during use. An assortment of stack sockets and inserts are available to cover a wide range of hex sizes.

Features and benefits of the new SpinTORQ 360 include:

- Accuracy of applied torque:  $\pm 5$  percent; torque range between 200 and 8,000-foot pounds.

- Wrench head indexes independently from the tool's gearbox, allowing the handle to be ergonomically positioned during operation.

- Secondary safety trigger requires the operator's hands to be

placed safely away from pinch points during operation.

- Three motor sizes; 10 wrenches sizes.

- Manual or robotic control.

- Durable powder coating ideal for demanding work environments.

- Hydraulic models available.

- A filter/regulator/lubricator (part number PTMFRL) is required to operate the SpinTORQ 360.

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

## MAINTENANCE

### Chartwell confirms second Seacat Services CTV order

Class-leading offshore energy support vessel (OESV) operator, Seacat Services, has taken up its option to build a second multi-million-pound Chartwell 24 catamaran for the offshore wind sector. Seacat Rainbow, designed by Chartwell Marine, a pioneer in next generation vessel design, will enter construction immediately at Isle of Wight shipyard Diverse Marine.

Recent multi-vessel contract wins and charter extensions from valued long-term customers have led to high levels of forward utilization for the Seacat Services fleet, creating a strong commercial case for further expansion. Seacat Rainbow will join sister Chartwell 24 vessel Seacat Weatherly, which is currently being built at Diverse Marine, on track for delivery and due to be completed in April 2020.

With the next generation of OESVs now progressing from the drawing board into build, vessel operators are making decisions that will determine the future make-up of offshore wind fleets in Europe, the U.S., and Asia. Seacat Services' second order of the Chartwell 24 demonstrates utmost confidence from the OESV operator that the Chartwell Marine design is best-placed to meet the logistical demands of project construction and operation.

“The offshore wind sector is at a pivotal point, where lessons learned from development and operation to date must quickly be applied to achieve true global scale,” said Andy Page, managing director, Chartwell Marine. “Seacat Services continues to demonstrate that it is not willing to compromise on the attributes that make a safe, reliable, and efficient offshore energy support vessel.”

“Chartwell Marine’s pioneering approach, backed up by strong technical R&D expertise and extensive dialogue with operators and wind-farm stakeholders, gives us enormous confidence in the design,” said Ian Baylis, managing director of Seacat Services. “The investment case for this second vessel was clear cut, and we look forward to bringing both Rainbow and Weatherly into the fleet to show how this translates into the highest levels of performance and service for our customers.”

Seacat Rainbow will be identical in specification to Seacat Weatherly, showing Seacat Services’ belief in the design and ingredients which make up the Chartwell 24. These include a number of market-first innovations to optimize the safety of crew and cargo transfers, and maximize the performance and technical availability of the vessel – ultimately translating to more “time on turbine” for wind-farm technicians.

**MORE INFO** [www.seacatservices.co.uk](http://www.seacatservices.co.uk)

## MAINTENANCE

### Altitec Academy earns GWO blade-repair certification

Altitec Academy, the rotor blade technician training program from Altitec, a leading wind-turbine blade repair and inspection specialist, has secured the blade repair certification from the Global Wind Organization (GWO) for its training centers in London and Cape Town. The certification also allows Altitec to conduct GWO training



DNV-GL hands over the GWO certification to the Altitec team. (Courtesy: Altitec)

in Australia. Altitec Academy trains upwards of 150 new rotor blade technicians a year in their training centers around the world. The new certification builds on the successful assessment of the training program by DNV GL in 2018, and long-standing industry endorsement for the Altitec Academy.

Industry-wide accreditation for blade-repair training is needed to reassure job-seekers of a future in wind energy and encourage more people to consider blade-repair roles. As a provider of training and blade-repair services, Altitec has been a strong advocate of certification for a number of years. This independent and widely recognized qualification for blade repair from the GWO, together with high-quality training and a commitment to excellence by blade servicing teams, will help to reduce the skills gap in the industry while the demand for blade repair services continues to expand.

The GWO certification has benefits for both technicians and employers. The introduction of the certification will make it easier for technicians to work across multiple sites and contractors over their careers, while for employers, it will provide reassurance that the technicians they hire have the knowledge required to safely perform their jobs.

“Our rotor-blade technicians spend

their careers learning,” said Tom Dyffort, managing director, Altitec Group. “As blade technology develops and wind farms are built in unusual locations, blade technicians have to evolve approaches to deal with new forms of wear, tear, and weathering of blades. Fundamental to this career-long learning process is a solid foundation of the processes and skills needed for blade repair. As a basis for that, we are pleased to be able to demonstrate we meet the GWO standards for blade repair in the Altitec Academy.”

**MORE INFO** [www.altitec.co.uk](http://www.altitec.co.uk)

## MAINTENANCE

### Dropsafe: Guidelines show how to prevent offshore drops

The publication of the *Reliable Securing Booklet for Offshore Wind* by G+, the global health and safety organization for the offshore wind industry, has provided much-needed safety recommendations for wind-farm owners and operators grappling with the risks posed by dropped objects.

This is according to Dropsafe, the global leader in dropped-object prevention. Dropsafe has highlighted that these new guidelines constitute an essential first step in transferring lessons learnt from other high-risk offshore industries such as oil & gas.

Publication of the reliable securing guidelines has come off the back of 2018 safety statistics released by G+, which demonstrate a 60 percent reduction in dropped object incidents on offshore wind farms compared to 2017. This highlights an increasingly diligent response to the risks posed by dropped objects, but the industry still has a long way to go in adopting best practice prevention systems.

Dropsafe attests that the G+ reliable securing guidelines will address a longstanding gap in industry safety. They will inform sector decision makers not only of the specific dropped-ob-

ject risks entailed in offshore-wind development and operation, but also — critically — of the prevention systems they should install.

Dropped objects — ranging from loose fixtures to dropped handheld tools and equipment — pose a threat to the safety of personnel, integrity of equipment, financial performance, and, ultimately, the reputation of offshore wind stakeholders. In Dropsafe's 2018 whitepaper, *The Neglected Hazard*, it was outlined that, for the offshore wind industry to maintain its fast growth rate, it must be able to show that offshore wind farms are safe places in which to work.

The G+ reliable securing guidelines recommend the use of dropped-object prevention technology, including barrier systems, tethering nets, and pouches, to mitigate the potential risks dropped objects pose. The guidelines are based on those originally developed by safety body DROPS and are a culmination of what has been learned over several years about dropped-object risk and prevention strategy in the offshore oil and gas industries.

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

## ► MANUFACTURING

### Siemens Gamesa awarded largest U.S. offshore order to date

Siemens Gamesa has been conditionally awarded the contract to deliver offshore wind turbines totaling 880 MW for the Sunrise Wind project, which will be the company's largest offshore wind project in the U.S. Ørsted and Eversource were awarded this capacity by New York State in July. SG 8.0-167 DD offshore wind turbines will be used at the project in federal waters about 30 miles off Montauk Point in New York. A service agreement is included. The Sunrise Wind project is expected to be operational in 2024.

The 704-MW Revolution Wind off-

shore project will be 15 miles off the coast of Rhode Island. The project will use SG 8.0-167 DD wind turbines and is expected to be online by 2023. Once operational, Revolution Wind will deliver power to Rhode Island and Connecticut.

Additionally, SGRE was conditionally awarded the contract to deliver SG 8.0-167 DD offshore wind turbines for the 130 MW South Fork offshore wind-power project. Located 35 miles off Long Island, New York, it is expected to be operational by the end of 2022 and will deliver power to the Long Island Power Authority.

▼ Siemens Gamesa has long been the global market leader in offshore wind with 12.5 GW installed. ▼

"An order of this size is a testament to the confidence which Ørsted and Eversource place in Siemens Gamesa," said Andreas Nauen, CEO of the Siemens Gamesa Offshore Business Unit. "Delivering clean energy for generations to come — now on a large-scale basis in the U.S. offshore market — is a goal we are proud to share with Ørsted and Eversource. We are committed to doing so safely and with a strong focus on reducing the levelized cost of energy from offshore wind in this rapidly developing market."

"We had already secured a U.S. construction pipeline of almost 1 GW before the end of 2018 and have been looking into further growth in the U.S. offshore wind market," said Anders Lindberg, executive vice president, EPC, at Ørsted. "We saw an opportunity to secure a bigger turbine volume early in order to gain economies of scale, and Siemens Gamesa was able to provide an attractive offering for this large volume."

"Siemens Gamesa has long been

the global market leader in offshore wind with 12.5 GW installed," said Steve Dayney, head of Offshore North America at Siemens Gamesa Renewable Energy. "This major order signals that we are well positioned to maintain this leadership role in the budding U.S. market. We have always believed in the potential of this market, and with the partnership of Ørsted and Eversource, we are excited to bring 1.7 GW of clean, reliable offshore wind electricity to American communities in the Northeast."

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

## ► MANUFACTURING

### Vestas to build new nacelle, hub assembly factory in India

The global demand for wind energy continues to grow both in volume and the number of markets where wind energy offers a sustainable and cost-competitive solution for meeting the world's energy needs.

To address this, improve competitiveness, and expand its supply chain footprint in India, Vestas intends to establish a new nacelle and hub assembly factory in Chennai in the state of Tamil Nadu. The new factory will combine Vestas' two existing facilities in the state of Tamil Nadu, creating an expanded, optimized, and scalable production hub with four times as many local manufacturing jobs in the state.

While the new facility will serve the growing wind market in the region, it will also act as a strategic export hub leveraging Vestas' global reach. The new factory is expected to be operational by the end of 2020, where it will add to Vestas' strong current presence across India, including a sales office in Mumbai, a R&D center in Chennai, and a blade-manufacturing facility in Ahmedabad. ↘

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