

DIRECTION

THE FUTURE OF WIND



The E1000 system can switch from personnel to cargo transfer mode in less than a minute.
(Courtesy: Ampelmann)

Ampelmann signs 13 contracts in European offshore wind

Dutch offshore wind access company Ampelmann signed 13 contracts in 2021 to provide motion-compensated gangway solutions for personnel and cargo transfer in Europe.

"Securing these projects has brought us new opportunities to deliver the highest level of safety to offshore operations," said Bob Rollerman, business developer for Europe at Ampelmann.

Ampelmann will use its A-type and E1000 systems for all 13 campaigns. Two will use the company's A-hoist, an innovation that allows the A-type to efficiently and safely lift and transfer up to 240kg of cargo.

For larger cargo operations, Ampelmann is using the E1000, which can transfer loads up to 1 ton, as well as compensate for vessels' motions in the high seas.

"Safety and efficiency are at the core of what we do at Ampelmann and the E1000 delivers on both. It significantly improves the efficiency of our client's operations, with its ability to switch between cargo and personnel transfer in less than a minute and with the push of a button," Rollerman said.

One of the projects is the company's first in France, supporting the installation of a wind farm's foundation.

"Every commissioning operation in offshore wind is a step in the right direction and entering new geographical areas in that market is particularly exciting," Rollerman said.

Apart from the installation and commissioning of wind farms, Ampelmann's systems are also supporting multiple maintenance operations. Most of the contracts are with returning customers.

The company has introduced Insights, its data-driven platform that gives clients a detailed look into their day-to-day operations, including transfer numbers, performance, and workability forecasts based on sea and weather conditions.

According to some of the latest data, Ampelmann has enabled the safe



The British Consulate-General in Boston, Massachusetts, commissioned a U.S. offshore wind industry analysis and found opportunities available for U.K. companies to enter the growing U.S. market. (Courtesy: Xodus)

transfer of more than 22,000 people and close to 1.5 million kg of cargo so far in the new projects.

MORE INFO www.ampelmann.nl

Study: Opportunities abound for U.K. in U.S. offshore wind

The British Consulate-General in Boston, Mass. commissioned a US offshore wind industry analysis and found opportunities available for U.K. companies to enter the growing U.S. market. The analysis by global consultancy firm Xodus researched the local and regional supply chain around Massachusetts and carried out an assessment and gap analysis for Hampton Roads and the southern Virginia region.

"I'm delighted that the Xodus analysis has identified so many opportunities for U.K. companies to support the growing US offshore wind industry

with their experience and expertise," said Dr. Peter Abbott OBE, New England's British consul general.

"There is a significant benefit from first mover advantage in the developing the U.S. supply chain. The ambitious federal offshore wind capacity targets are creating project demand to warrant a long-term U.S. supply chain. There are significant export opportunities for U.K. supply chain companies throughout the offshore wind project phases, however these appear to be strongest in project development, construction and O&M services where U.K. companies can offer both established and innovative solutions based on their experience supporting domestic offshore wind projects," said Hillary Bright, U.S. VP for Renewables at Xodus.

All contracted offshore wind farms under development in the US are located on the east coast. It is anticipated that \$80 billion in CAPEX expenditures will be made in developing



About 14,000 wind-turbine blades are expected to reach the end of their usable life within the next three years. (Courtesy: Net Zero Technology Centre)

the industry by 2030, and that up to 80,000 jobs will be created. With the recent Record of Decision granted to Vineyard Wind I, the first commercial scale U.S. offshore wind farm, it is anticipated that the approval of the other projects in the pipeline will accelerate.

There is a push to develop local content in the U.S. offshore wind industry, and states are eager to attract industries that support all phases of wind farm development, construction and operations. It is expected that these industries will cluster around eastern U.S. ports, and the growth of a supporting supply chain will quickly follow.

"A critical consideration for companies looking to enter the U.S. offshore wind market is where to establish a presence. Supply chain clusters in the U.K. have been seen to support the development of unique skills and technology solutions in the offshore wind sector," said Hannah Webb, trade officer of offshore wind and clean energy for the U.K. Department for International Trade.

"With the intel that Xodus is providing, we are working to understand the location and strengths of potential US supply chain hubs and strategizing successful market entry for companies from the Northern Powerhouse, U.K.

These companies have significant offshore wind development experience in the U.K., Europe, and even Asia, to offer to the US market and we are building impactful partnerships around the clusters and ports that Xodus has identified along the east coast of the U.S.," Webb added.

MORE INFO www.xodusgroup.com

U.K. could become leader in wind-turbine blade recycling

The wind sector offers a huge opportunity for the U.K. to become a global leader in wind turbine blade recycling if a cross-industry approach is taken, according to the Energy Transition Alliance, a collaboration between the Net Zero Technology Centre and Offshore Renewable Energy (ORE) Catapult.

The alliance's report highlighted that around 14,000 wind turbine blades are expected to reach the end of their usable life within the next three years. By 2023, an estimate of up to 50,000 tons of composite material could be recovered and recycled for a variety of re-use applications. By driving forward a better understanding of

the circular economy, the possibility of disposal in landfill or incineration can be avoided and liability reduced.

While there has been significant investment within the renewable energy sector to improve installation, operations and maintenance, the focus is shifting to sustainable end-of-life management as the first offshore wind farms approach decommissioning in the next 10 years.

Over the next three decades the industry faces significant growth in the scale of turbines expected to be decommissioned. Solutions are being sought for lifetime extension and more sustainable end-of-life management, such as repowering and circular economy practices.

This new report identifies five areas that the sector must address to achieve a more circular economic model: Encouraging use of materials more compatible to recycling; developing processes that allow cheaper, easier recover of materials during decommissioning; creating pilot projects industry-wide for new recycling methods and technologies; establishing a supply chain for recycled material; and educating the marketplace about opportunities for wind turbines' recycled materials.

"The report illustrates what can be achieved in this industry if we can develop a collaborative approach that involves all sectors striving for sustainable decommissioning. With input from manufacturers through to end users, we can reinvent how wind turbines are recycled," said Pamela Lomoro, project manager at the Net Zero Technology Centre.

While wind turbines are widely expected to be up to 90 per cent recyclable, the blades, which are made from composite layers of stiff carbon or glass fibers in a resin matrix, are notoriously challenging to reclaim and reprocess, and remain the most significant hurdle to achieving full wind turbine recyclability.

"The innovation challenge to create a circular economy within the wind industry is vast, but hugely exciting. This is a significant opportunity for the supply chain, given the huge volume of decommissioning and industry expansion ahead," said Lorna Bennet, ORE Catapult project lead.

"The best solution is likely to come from a multi-sector approach because of the economies of scale required to create a market for recycled material. Likewise, the drive for better practices in recycling techniques and to develop better research and technologies will come from innovation and cross-industry collaboration," Bennet said.

MORE INFO www.netzerotc.com

Maritime Academy trains workers for jobs in clean energy

The Massachusetts Maritime Academy (MMA) is training workers who will build the wind farms that will provide clean energy to the northeast U.S.

"It's a fact that the clean energy industry is growing, and we are taking steps to be involved in this unique opportunity," said Rear Admiral Francis X. McDonald, USMS, president of the Massachusetts Maritime Academy.

"One of the most important ways we can contribute is by training the



"The opportunity to work in the clean-energy industry is great for our members," said Dave Borrus, Pile Drivers and Divers Local 56 business manager. (Courtesy: Massachusetts Maritime Academy)

men and women who will be on the front lines of this emerging industry," McDonald said.

The Massachusetts Clean Energy Center provided funding in 2018 for MMA to build its Global Wind Organization training facility at the Maritime Center for Responsibility Energy. The center consists of a waterfront crew transfer training facility, a 25-foot crew transfer training vessel, and a facility for training in working at height. MMA began in 2019 offering GWO basic safety training, becoming the first in the U.S. to offer all five modules of GWO basic safety training for offshore wind.

The course includes modules about working at height, first aid, fire awareness, manual handlings, and sea survival. Instructors' goals are to make workers familiar with wind industry work hazards and how to deal with them.

Three wind farms are in various stages of development in the Atlantic Ocean, about 20 miles south of Nantucket and Martha's Vineyard. Those farms' developers require the basic safety training course.

"MMA has the experience to deliver this critical course, ensuring quality training to the people who will be out on open water building the wind turbines," said Jenni Lewis, MD RelyOn Nutec Gulf of Mexico.

Members of Pile Drivers and Divers Local 56, the marine construction

local of the North Atlantic States Carpenters Union, are taking advantage of the course. "This training is critical to our members," said Dave Borrus, business manager of Pile Drivers & Divers Local 56. "The opportunity to work in the clean energy industry is great for our members but there are occupational risks, too. Safety must be at the forefront of each member's mind," said Borrus.

The Massachusetts Clean Energy Center is sponsoring Local 56 members' participation with a \$100,000 workforce development grant.

Training consists of both classroom and practical exercises. Participants acquire knowledge and confidence by learning the practical skills they need through practice. Students learn the proper use of personal protective equipment, emergency equipment, and procedures with the end result being able to appropriately respond in the event of an emergency.

Capt. Mike Burns, executive director of the Academy's MCRE, praised the maritime academy's training.

"Every group that has gone through the training has been exceptional. The participants are highly skilled professionals who understand the importance of safety in this industry. It's our honor to help them prepare for the next phase in their careers," he said. ↗

MORE INFO www.maritime.edu