



# FIRST JACKET FOUNDATION INSTALLED AT ZHONG NENG OFFSHORE WIND FARM

Green Jade, the first Taiwan-built offshore wind installation vessel, operated by CSBC-DEME Wind Engineering (CDWE), has installed the first jacket foundation at the 298 MW Zhong Neng offshore wind farm.

The 298 MW Zhong Neng offshore wind farm is being built some 13 kilometres off Changhua County on the west coast of Taiwan by a joint venture between Copenhagen Infrastructure Partners (CIP) and China Steel Corporation (CSC), who contracted CDWE for the transportation and installation of the 31 jacket foundations and the accompanying pin piles.





# SHORT STOPOVER IN THE NETHERLANDS FOR OUR BOKALIFT2

Three months after the Bokalift 2 left Rotterdam for the installation of XXL monopiles along the east coast of the United States, our newest crane vessel returned to the Netherlands. During this stopover she will be prepared for her next project: installing XXL monopiles and offshore substations for the Moray West offshore wind farm in Scotland. To reach the port of Amsterdam, our Bokalift 2 sailed through the IJmuiden sea lock, the largest sea lock in the world that was opened last year and to which Boskalis contributed in multiple ways. With our trailing suction hopper dredgers Strandway and Shoalway, we carried out dredging work for the new lock and our colleagues from Boskalis' Inshore and Nearshore Diving Services team executed preparatory work for pouring 30,000 cubic meters of underwater concrete. Last but not least, one of our heavy transport vessels transported three steel lock doors weighing around 2,900 tons each.





# ULSTEIN VERFT SIGNS NEW SHIPBUILDING CONTRACT ON A CABLE LAYING VESSEL FOR NEXANS

On 19 September 2023, Nexans Marine Operations AS and Ulstein Verft entered into a contract on the construction of a large DP3 cable laying vessel.

The vessel, an ST-297 CLV design by Skipsteknisk, is an updated version of the Nexans Aurora, delivered in 2021.

We awarded the contract for a new vessel to Ulstein after an extensive tendering process, where Ulstein's track record, including the delivery of Nexans Aurora, was important factors in deciding on the shipyard Ulstein Verft yet again. We are looking forward to working with Ulstein for this new exciting project,

says Pascal Radue, Nexans EVP Generation & Transmission.

Ulstein is excited to see Nexans return to Ulstein Verft for the construction of a new cable laying vessel. In 2021, we delivered the Nexans Aurora on time despite the challenges we faced with handling the Covid pandemic. This adds to our long history of delivering vessels to the agreed quality and time. We look forward to continuing our close collaboration with Nexans and are very pleased that Nexans again trusts Ulstein Verft with the new addition to its fleet,

states Ulstein Group's CEO, Cathrine Kristiseter Marti.

The new vessel is based on the Nexans Aurora design, as developed by Skipsteknisk, which is now playing an important role in Nexans' turn-key supply of advanced subsea high voltage systems to support the electrification of the world,

including providing vital connections between countries and regions, offshore renewable solutions as well as electrification solutions for other offshore installations.

The vessel is specially designed to carry out the transport and laying of various types of subsea cables, including cable bundles as well as recovery and repair. It can perform effectively even in challenging weather conditions and boasts exceptional manoeuvrability and station-keeping capabilities. Ulstein Verft is responsible for the vessel's construction and the preparation of its topside equipment.

This cutting-edge cable laying vessel features a split turntable on deck capable of holding up to 10,000t of cable, an under-deck turntable with a 3,500t cable capacity, and a fibre optic basket holding 450t. The vessel measures 31 metres in width, 149.9 metres in length, and is accommodated for a crew of 90.

We are experienced in constructing large and complex vessels and we look forward to commencing the work on the cable laying vessel for Nexans,

says Lars Lühr Olsen, managing director at Ulstein Verft.

# FÉCAMP OFFSHORE WIND PROJECT

Enbridge and its partner EDF Renouvelables are developing the Fécamp Offshore Wind Project off France's northwest coast, not far from Dieppe.

The 497-megawatt (MW) wind project will feature 71 Siemens Gamesa Renewable Energy 7 MW turbines to be manufactured in France. The project will generate electricity equivalent to the power needs of more than 416,000 homes.

Turbines will be located between 13 and 22 kilometres off Fécamp's coast, at depths around 30 metres, and deployed in an area of about 60 square km.

Enbridge has a 17.9% ownership stake in the Fécamp Offshore Wind Project, which is expected to enter operation in 2023.

*Photo: Dougie Cecil*



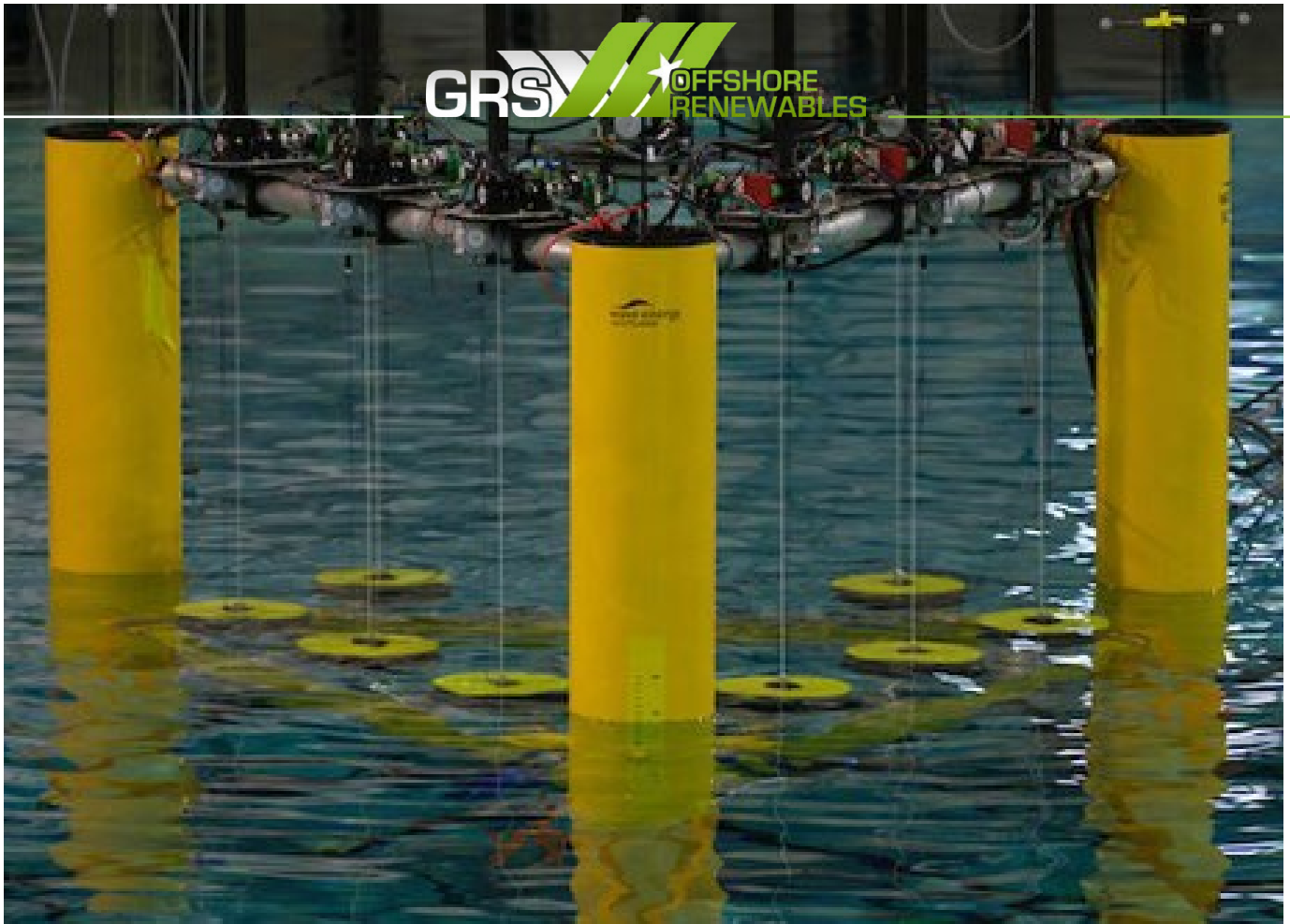


# RED7MARINE COMPLETES THE UK'S FIRST INSTALLATION OF ARTIFICIAL NESTING STRUCTURES FOR THE OFFSHORE WIND INDUSTRY

Red7Marine has recently completed the installation of three nearshore artificial nesting structures along the East Coast of England on behalf of Ørsted, the global leader in offshore wind. The structures are required as a part of the Development Consent Order for the Hornsea 3 Offshore Windfarm as an ecological compensation measure for a vulnerable seabird species– the Black-legged kittiwake (*Rissa tridactyla*).

Red7Marine has been involved with the project since August 2022 managing the fabrication and installation process, working with Ørsted and its designers. Two of the artificial nesting structures (ANS) are located approximately 1km from the shoreline of South Beach, Lowestoft, and the third is 1.4 km from the shoreline of the RSPB Minsmere Nature Reserve.

This nearshore artificial nesting structure project is the first of its kind. Each structure is purpose-built, bespoke, and specific to the landscape characteristics of each location. The structures also present an educational opportunity, allowing researchers to better understand kittiwake. The structures comprise of a monopile foundation and internal grouted jacket, each monopile weighs in excess of 30t and has an embedded depth below seabed of 30m. The upper pile sleeve is fitted with two vertical steel tubes for vessel berthing and the final component is the topside nesting structure.



## WES INVESTIGATING THE POTENTIAL OF COMBINED WIND/WAVE STRUCTURES

Following the promising range of potential benefits identified in the scenarios within the “Wave and Floating Wind Energy - Opportunities for Sharing Infrastructure, Services and Supply Chain” report supplied by Offshore Wind Consultants (OWC) Ltd, Wave Energy Scotland (WES) has begun a series of tank tests at the University of Edinburgh’s FloWave facility. There are some clear synergies between the technical requirements and suitable locations for floating wind and wave energy. To maximise the future cost reduction in both sectors, it may be effective to share some of the sub-systems and infrastructure between these two technology types. Versatile wind and wave platforms (where projects are in the same region and use common platform designs) may therefore provide an attractive solution to both sectors.

The overall improvement in the physical and numerical understanding of the design drivers will enhance the support WES can offer to developers to optimise their design solutions and to enable future MW-scale multi wave absorber platform systems to be developed.

Alongside this, offshore energy in Scotland was recently bolstered by the leasing of 30GW of ScotWind projects, and

several of these leased sites have an attractive wave energy resource which may support versatile wind and wave platforms in the future.

The tank tests currently being completed by WES use sea states which are representative of one of these future floating wind lease sites on the west coast of Scotland, leased through the ScotWind programme and which has an appropriate water depth and wave resource for large scale wave energy exploitation.

The physical model used for the testing incorporates multiple identical wave energy absorbers mounted onto a semi-submerged, triangular floating platform. The platform is generic but similar to many concepts under development within the floating wind sector, while each absorber is a simplified version of a submerged pressure differential device. The absorbers have taken inspiration from AWS Ocean Energy’s Archimedes Waveswing; a submerged wave power buoy which has been developed and funded through WES’s Novel Wave Energy Converter Programme.

# AN EXTENSIVE DATABASE OF OFFSHORE VESSELS



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## VESSEL OF THE MONTH

PSV for Sale #1049694

A DP II multi-purpose supply vessel for sale. The Vessel has been converted for IMR/ROV/Subsea operations with the addition of 60T AHC Crane, mezzanine deck, ROV, LARS, and USBL through-hull penetration. It provides accommodations for 32 persons. Contact us for more details and inquiries, referencing the unique identifier #1049694.



*Our team is dedicated to providing further insights and addressing any questions related to these offerings.*

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