Feng Miao 1 Moves Into the Construction Phase

Taiwan's Fengmiao I offshore wind farm reached a cluster of major construction milestones in late July 2026, when the project confirmed the completion of all 99 pin pile installations, the installation of the offshore substation by CDWE's heavy-lift vessel Green Jade, and the final pull-in and connection of both high-voltage export cables by Jan De Nul's cable-laying vessel Willem de Vlamingh. The three milestones together represent the completion of the offshore electrical infrastructure needed to receive the project's wind turbines, which are scheduled to follow.

The offshore substation, which comprises a 3,400-tonne topside and an 8,000-tonne jacket and piles package, was constructed by a consortium of Semco Maritime and PTSC Mechanical and Construction under an EPC contract awarded in 2023. PTSC M&C completed construction and loadout of the structures on 29 July 2026, delivering on schedule after more than 2.5 million hours without a lost-time injury. The substation is the first offshore substation on any of CIP's three Taiwan projects and holds the record as the world's tallest installed jacket foundation for an offshore substation.

The two export cables, measuring 45 and 44 kilometres respectively and weighing more than 8,000 tonnes in total, had been installed and stored offshore by Jan De Nul earlier in the year pending the substation's arrival. The cable pull-in completed the offshore grid connection, leaving CDWE to proceed with the transport and installation of the 33 jacket foundations that will support the project's Vestas V236-15.0 MW wind turbines. Those jackets are being manufactured by Century Wind Power in Taiwan. Van Oord is responsible for the inter-array cable installation.

Fengmiao I is a 495 MW project developed by Copenhagen Offshore Partners on behalf of Copenhagen Infrastructure Partners, located approximately 35 kilometres off the coast of Taichung. It reached financial close in March 2025 as the first of Taiwan's Round 3 offshore wind projects and is scheduled for grid connection to Taiwan Power Company's Taichung Zhongqing substation in 2027.

GRS OFFSHORE RENEWABLES

Vattenfall Installs First Monopile at Nordlicht I, Germany's Largest Offshore Wind Project

DEME installed the first monopile foundation for Vattenfall's Nordlicht I offshore wind farm in the German North Sea on 1 July 2026, marking the start of the main offshore construction phase for what will become Germany's largest offshore wind project. The installation took place approximately 85 kilometres north of the island of Borkum, where Nordlicht I will ultimately comprise 68 monopile and transition piece foundations supporting 68 Vestas V236-15.0 MW turbines at a total capacity of around 980 MW.

DEME was awarded the contract to transport and install all foundations and transition pieces for both Nordlicht I and the adjacent Nordlicht II project, which has a planned capacity of around 630 MW. Together the two projects form the Nordlicht cluster, with a combined capacity exceeding 1.6 GW. The monopiles are being manufactured by EEW Special Pipe Constructions at its facility in Rostock, while the transition pieces are being supplied by CS Wind in Aalborg. Each Nordlicht I monopile is up to 80.5 metres in length and weighs up to 1,290 tonnes. Ahead of the offshore campaign, Vattenfall carried out onshore installation trials earlier in 2026 to prepare interfaces, processes and safety procedures before work moved to sea.

Once both phases of the cluster are fully operational, Nordlicht is expected to generate around 6 TWh of electricity per year, equivalent to the annual electricity consumption of approximately 1.7 million German households. Both projects are expected to become operational in 2028 and 2029 respectively. As part of Vattenfall's sustainability commitments, the wind farms will use turbine towers partially manufactured with low-emission steel, which the company estimates will reduce the towers' overall carbon footprint by around 16 percent. Vattenfall also recently secured approval for a large-scale battery storage facility in Brunsbüttel to complement its growing wind portfolio.

Neretek Launches BC90 Foundation Concept to Bridge the Gap Between Fixed-Bottom and Floating Wind

A new offshore wind technology company named Neretek was launched in London on 7 July 2026 by offshore engineering firm Wood Thilsted and COP Frontier, a sister company to Copenhagen Offshore Partners. The company was established to commercialise the Neretek BC90, a foundation concept designed to make fixed-bottom offshore wind economically viable in water depths of 60 to 90 metres, a range that currently sits beyond the practical reach of conventional monopiles and jackets but where floating wind remains costly and not yet fully industrialised. Industry veteran Jonathan Cole, a former chair of the Global Wind Energy Council, was appointed executive chair of the new company.

The BC90 has been developed over a decade of research by offshore structural designers at Wood Thilsted, with COP Frontier contributing development expertise. The concept aims to deliver the manufacturing simplicity associated with monopiles while extending deployment into transitional water depths, using existing supply chains, current port infrastructure and proven fabrication techniques without reliance on large specialist installation vessels. According to the company, the design offers materially lower capital costs than deepwater monopiles or jackets at equivalent depths.

The launch came one day after the UK government announced Allocation Round 8 on 6 July, which includes an Other Deepwater Offshore Wind category specifically targeting sites in water depths beyond the range of conventional fixed-bottom technology. Neretek's BC90 has been developed with this category in mind, and the company is positioning the technology as a commercially practical solution for UK sites where some of the country's strongest wind resources currently remain untapped. Wood Thilsted founder and chief executive Alastair Muir Wood described the BC90 as a solution to one of offshore wind engineering's most difficult problems, developed through rigorous research, design and testing.

Whether the concept can deliver at commercial scale will depend on further engineering progression, project development and, ultimately, a first full-scale deployment. But as offshore wind developers push into deeper waters and governments seek to accelerate build-out, the case for a viable intermediate foundation solution between fixed-bottom and floating technology is becoming harder to ignore.

Argo Nautica:

Ocean Wind Services Introduces Semi-Submersible Wind Turbine Installation Vessel Concept

Norwegian company Ocean Wind Services has introduced the Argo Nautica, a next-generation semi-submersible wind turbine installation vessel (WTIV) concept designed to operate in increasingly challenging offshore environments. The vessel concept is intended to support both offshore wind and offshore oil and gas developments, reflecting a broader trend toward more flexible and multi-purpose offshore assets capable of serving the evolving demands of the energy sector.

The semi-submersible configuration is particularly relevant to offshore wind installation, where vessel stability, lifting capability and safe operation in open-sea conditions are critical considerations. As turbines continue to grow in size and installed locations move into deeper and more exposed waters, installation vessels must be capable of handling larger components while maintaining operational flexibility and acceptable weather windows. The Argo Nautica concept brings together marine engineering, heavy-lift capability and offshore installation experience in a platform designed to meet these evolving requirements.

Ocean Wind Services brings more than 40 years of offshore oil and gas engineering experience and more than two decades of offshore wind involvement to the project. The company says this combination of traditional offshore expertise with the technical demands of the rapidly growing wind installation market is at the heart of the Argo Nautica concept. The project has attracted attention from Norway's engineering and technology sector, including coverage by Teknisk Ukeblad, and the vessel has been highlighted as an example of how the offshore supply chain is adapting to the next generation of renewable energy installation requirements.

For Ocean Wind Services, the Argo Nautica represents more than a new vessel design. The company describes it as part of a broader strategy to apply decades of offshore experience to a changing energy market where flexibility, engineering expertise and multi-purpose capabilities are becoming increasingly valuable as both the scale and complexity of offshore projects continue to grow.

China's CNOOC Switches On World's First 16 MW TLP Floating Wind Platform in the South China Sea

China National Offshore Oil Corporation (CNOOC) connected the world's first 16-megawatt tension-leg platform (TLP) floating wind power facility to the Lufeng Oilfield grid on 6 August 2026, beginning commercial electricity supply to offshore oil operations in the South China Sea. The platform, named Haiyou Anlan, departed its assembly site in Zhuhai on 28 June 2026 and was installed in the Pearl River Mouth Basin approximately 136 kilometres from the coast of Guangdong Province, in water depths of 136 metres.

Unlike China's earlier floating wind projects, which used semi-submersible platforms that float on the ocean surface, the Haiyou Anlan uses a tension-leg platform configuration. In a TLP, buoyancy in the hull is counterbalanced by nine steel tendons anchored vertically to the seabed, keeping the platform largely stationary and limiting tilt to no more than one degree even under Level 17 typhoon conditions with sustained wind speeds of around 220 kilometres per hour. CNOOC says the TLP approach requires less steel per megawatt than semi-submersible alternatives while offering greater stability in extreme sea states.

Standing nearly as tall as a 110-storey building and weighing 7,800 tonnes, the platform has a swept area equivalent to 7.5 standard football fields. Power is transmitted to the Lufeng Oilfield grid via a 4.3-kilometre subsea cable, and the facility is expected to generate 54 million kilowatt-hours of green electricity annually, saving approximately 15,000 cubic metres of fuel oil and reducing CO2 emissions by around 35,000 tonnes per year. The project also sets three global records in its category: the deepest water depth, the greatest distance from shore and the largest single-unit capacity for a TLP floating wind platform.

The project is notable not only as a technical milestone but also as a demonstration of a new deployment model, integrating floating offshore wind directly with offshore oil and gas infrastructure rather than connecting to an onshore grid. CNOOC described the achievement as a major step forward for China's deep-sea floating wind technology and a new pathway for the country's offshore wind development beyond conventional shallow-water fixed-bottom projects.

Windeed Secures Enova Funding for Full-Scale Floating Wind Demonstrator Feasibility Study in Norway

Norwegian technology company Windeed received funding from Enova, Norway's government agency for the energy transition, to carry out a comprehensive feasibility study for a full-scale floating offshore wind demonstrator in Norway. The study will be conducted in collaboration with Aibel and AF Gruppen, two established Norwegian industrial partners with complementary fabrication, construction and offshore capabilities, and is supported by a broader network of Norwegian industrial and research partners.

The study will cover the full delivery chain for a potential demonstrator project, including engineering, fabrication, assembly, harbour logistics, transport and installation, offshore operations, lifecycle performance and risk analysis. It builds on an independent assessment by BVG Associates, which concluded that Windeed's floating foundation technology has the potential to achieve a materially lower levelised cost of energy than conventional floating wind solutions. Enova's head of offshore wind, Oskar Gardeman, described Windeed's technology as especially promising in the context of the agency's goal to support technologies capable of delivering step-change cost reductions.

Windeed's floating foundation system is designed with industrialisation and simplified logistics in mind. Rather than focusing solely on the foundation structure itself, the company takes a whole-lifecycle approach to cost reduction, considering fabrication methods, harbour requirements, installation procedures, and long-term operational and maintenance demands as a single integrated system. The design reduces material use and avoids dependence on specialised harbour facilities or large specialist offshore construction vessels, which Windeed argues can substantially lower both capital and operating costs compared with first-generation floating wind solutions.

As Norway debates the appropriate level of public support for floating wind projects such as those at Utsira Nord, where subsidies of up to NOK 35 billion have been discussed for 500 MW of capacity, technologies that can reduce the subsidy requirement per megawatt installed are attracting genuine policy and investor interest. If Windeed's feasibility study confirms the cost projections, the company aims to use the results to support the development of a full-scale demonstration project in Norwegian waters.

Flex2Future Completes Basin Testing of Hybrid Offshore Wind, Wave and Solar Platform

Norwegian technology company Flex2Future completed an extensive model test campaign in April 2026 at SINTEF Ocean's facilities in Trondheim, advancing its hybrid offshore energy platform toward a planned full-scale demonstration before 2030. The tests were carried out on a 1:25 scale model of the company's Flex2Power system, which combines a floating wind turbine, wave energy converters and solar panels on a single offshore structure.

The two-part campaign tested the complete module, including a fully modelled mooring system, in the Ocean Basin under combined waves, currents and wind to characterise the structure's hydrodynamic behaviour. A second campaign assessed the power take-off equipment in a towing tank. Sensors, cameras, wave probes and force transducers were used throughout to validate the numerical models underpinning the design. Flex2Future's CEO, Erik Svanes, said the results showed strong alignment between basin measurements and the company's numerical simulations, which supports the calculation methods being used as the project moves toward full scale.

The principle behind the Flex2Power concept is that combining multiple energy sources on a single platform can smooth power output and improve the utilisation of shared offshore infrastructure. When wind speeds drop, wave energy continues to contribute, while solar panels provide an additional source during daylight hours. At full scale, one module measures 136 by 136 metres and is projected to have an average output of around 8 MW, enough to cover the annual electricity consumption of approximately 4,500 average Norwegian households. The company is targeting a 19.2 MW pilot demonstration by 2030, comprising 5 MW of wind capacity, 14 MW of wave energy capacity and 0.2 MW of solar.

The technology still faces the commercial challenge that is common to all emerging floating renewable concepts: demonstrating reliable long-term operation at a cost that does not require indefinite public support. Flex2Future has submitted a licence application for a pilot site off Eigerøy and is working toward raising capital for a full-scale offshore demonstration. The broader concept reflects a growing trend across the offshore energy sector toward integrated multi-source platforms that can generate more power from a smaller offshore footprint.

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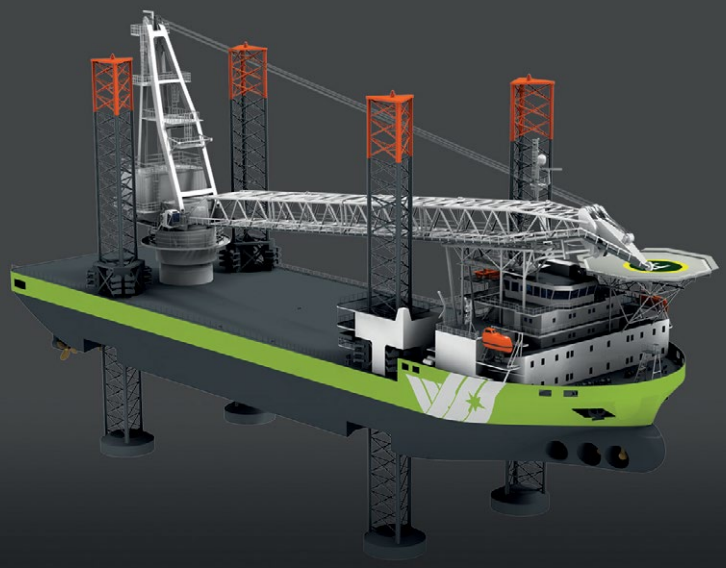
AN EXTENSIVE DATABASE OF OFFSHORE VESSELS



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