

Portugal Advances Towards Its First Floating Offshore Wind Auction with 2 GW Target

Portugal took a significant step in the development of its floating offshore wind sector when the government approved its National Maritime Spatial Plan (PAER) in January 2026, formally designating more than 2,700 square kilometres of Atlantic waters for offshore wind development. The country is now preparing its first major floating offshore wind auction, targeting an initial allocation of around 2 GW, with the auction process expected to progress through 2026 and into 2027.

Portugal's deep Atlantic waters and consistently strong wind resources make it particularly well suited for floating technology, which allows turbines to be installed in water depths where fixed-bottom foundations are not practical. The country already has one operational offshore wind farm, the 25 MW WindFloat Atlantic project off Viana do Castelo, which was commissioned in 2020 and holds the distinction of being the world's first commercial semi-submersible floating wind farm. That project, operated by Ocean Winds, a joint venture between EDP Renovaveis and Engie, has provided Portugal with valuable operational experience that now supports its push toward commercial-scale development.

The PAER covers four main maritime zones at Viana do Castelo, Leixoes, Figueira da Foz and Sines, with a combined developable area that could accommodate significantly more than the initial 2 GW auction target. More than 50 organisations have expressed interest in the upcoming auction process, and Copenhagen Infrastructure Partners has already revealed plans for a proposed 2 GW floating wind project called Nortada off Figueira da Foz, opening a Porto office through Copenhagen Offshore Partners to support its development. Portugal's government has stated longer-term ambitions of licensing up to 10 GW of offshore wind capacity in total.

For the broader European floating wind industry, Portugal's auction represents another significant commercial market beginning to open up alongside the Celtic Sea, the Mediterranean and Norway. Whether the auction can attract competitive bids and deliver projects at economically viable costs will be closely watched, given that floating wind cost reduction remains one of the sector's central challenges.



Dutch ocean current energy company Equinox Ocean Turbines (EQOT) completed open-water testing of its Mobula 5 prototype at Marsdiep near Texel in the Netherlands on 22 July 2026, following a testing campaign that began on 11 July in Friesland. The completion of the campaign marked the first time the turbine had been deployed and operated outside a controlled testing environment, and the company subsequently confirmed on 25 August 2026 that it had achieved Technology Readiness Level 6 (TRL 6), meaning a prototype system has been successfully demonstrated in a relevant operational environment.

The 1:10-scale Mobula 5 prototype was successfully deployed and recovered during the campaign, with the team demonstrating controlled diving and surfacing to validate the attitude-control system. The rotor was started and stopped in real ocean conditions, and the device generated electrical power, validating the drivetrain, power take-off and generator as an integrated system. Data was collected on turbine controllability, power production and acoustic performance, which will be analysed and shared to support the next development phase. The testing also assessed supporting systems including communications, grid connection and auxiliary equipment, all of which are critical components for any future commercial marine energy device.

Ocean current energy occupies a distinctive position within the renewable energy sector. Unlike wind and solar, ocean currents flow continuously and predictably, which means a device capable of capturing them efficiently could deliver baseload electricity rather than the intermittent output associated with other marine renewable sources. EQOT estimates the global addressable market at over 700 GW of stable clean energy potential, with early commercial target markets identified in Japan, South Africa and the United States.

The successful Mobula 5 campaign positions EQOT to advance toward its next-generation systems. The company is now developing the Mobula 25 minimum viable product, a larger-scale demonstrator with a planned deployment in 2028, to be followed by the full-scale Mobula 50 turbine. EQOT's backers include InnoEnergy, Damen Maritime Ventures, NOM and FOM.

Ocean current energy is one of several emerging marine energy technologies that GRS Group monitors alongside offshore wind. As vessel requirements evolve across new energy sectors, understanding what assets are needed and when is becoming increasingly valuable for both owners and charterers. GRS Group provides specialist market intelligence and shipbroking services across the offshore renewable energy sector. Reach us at [grs.group](mailto:info@grs.group) or info@grs.group.

A yellow and grey ocean current turbine prototype, the Mobula 5, is shown being lowered into the water by a crane. The turbine has a yellow cylindrical body, a grey rotor hub, and three grey blades. It is suspended by a yellow cable. The background shows a calm sea and a clear sky.

**Equinox Ocean
Turbines
Completes
Open-Water
Testing of
Mobula 5
& Reaches
Technology
Readiness
Level 6**

NEDO Selects Japanese Consortium to Advance Concrete Floating Foundation Technology for Offshore Wind

Japan's New Energy and Industrial Technology Development Organisation (NEDO) selected a consortium comprising TAISEI Corporation, Tokyo Electric Power (TEPCO) and Hokkaido Electric Power in September 2026 for a project aimed at reducing the cost of floating offshore wind power through the development of concrete semi-submersible foundations. The selection builds on earlier work by the three companies in a previous NEDO project conducted in 2024 and 2025, during which they developed and evaluated key technologies for concrete floating foundations and deep-water mooring systems.

Japan's geography makes floating wind technology particularly relevant. With deep waters close to shore across much of the country, the seabed areas suited to conventional fixed-bottom foundations are relatively limited, and floating turbines offer a way to access the stronger and more consistent wind resources available at greater distances from the coast. Japan's government has set a target of 10 GW of offshore wind capacity by 2030 and up to 45 GW by 2040, with floating wind expected to account for at least 15 GW of that longer-term

pipeline.

The new initiative will further develop the technology validated during the earlier project and work toward the commercialisation of Japan's first concrete semi-submersible floating foundation for offshore wind turbines. The use of concrete rather than steel as the primary structural material is intended to support a largely domestic supply chain, given Japan's established cement and concrete industries, while reducing costs relative to steel platforms that typically rely on specialised fabrication yards.

Japan's floating wind ambitions are also receiving backing at a policy level. In January 2026, Japan's first commercial floating wind farm, the 16.8 MW Goto Offshore Wind Farm in Nagasaki, entered full commercial operation under a consortium led by Toda Corporation, marking the world's first commercial deployment of hybrid spar-type floating foundation technology. The NEDO consortium represents the next wave of investment aimed at making larger-scale, cost-competitive floating wind viable across Japan's exclusive economic zone.



Dajin Heavy Industry Selects ULSTEIN HX122 Design to Enter Offshore Wind Installation Market

Chinese offshore wind foundation manufacturer Dajin Heavy Industry announced on 22 September 2026 that it had selected the ULSTEIN HX122 design, featuring Ulstein's U-STERN hull solution, for the development of a new offshore installation vessel. The announcement was made at the WindEnergy Hamburg 2026 trade fair and marks a significant strategic shift for Dajin, which has until now been focused on offshore wind foundation manufacturing, logistics and transportation rather than offshore installation.

The ULSTEIN HX122 was designed by Ulstein Design and Solutions in the Netherlands and was first introduced in 2022 in response to what Ulstein identified as a growing shortage of specialist vessels capable of installing next-generation offshore wind foundations. The vessel is designed to handle monopile foundations, jacket structures and offshore substations, and is being developed with the capability to install future 4XL monopiles, reflecting the direction in which offshore wind foundations are scaling as turbine ratings continue to increase. The U-STERN arrangement places the stern at the centre of operations for monopile handling, providing a centreline configuration for longitudinal storage and upending of

foundations. Combined with Ulstein's X-BOW hull, the vessel is designed to improve operability and widen the available weather window for installation work.

Dajin's Vice President Feng Qi said at the announcement that offshore wind has entered a new development phase in which installation capacity is the core bottleneck for project delivery. The ULSTEIN HX122 project is described by the company as the final link in a strategy to connect its existing foundation manufacturing, transportation and installation activities into a single integrated delivery model, reducing the number of contractual and logistical interfaces that typically exist between foundation suppliers, transport contractors and offshore installation companies.

Over the past year Dajin has also added two newbuild heavy cargo vessels capable of transporting extra-large monopile foundations to its transport fleet, with a third vessel expected to be delivered by the end of September 2026. The addition of an installation vessel would complete a vertically integrated offshore wind foundation delivery capability spanning production, transport and installation under one operator.

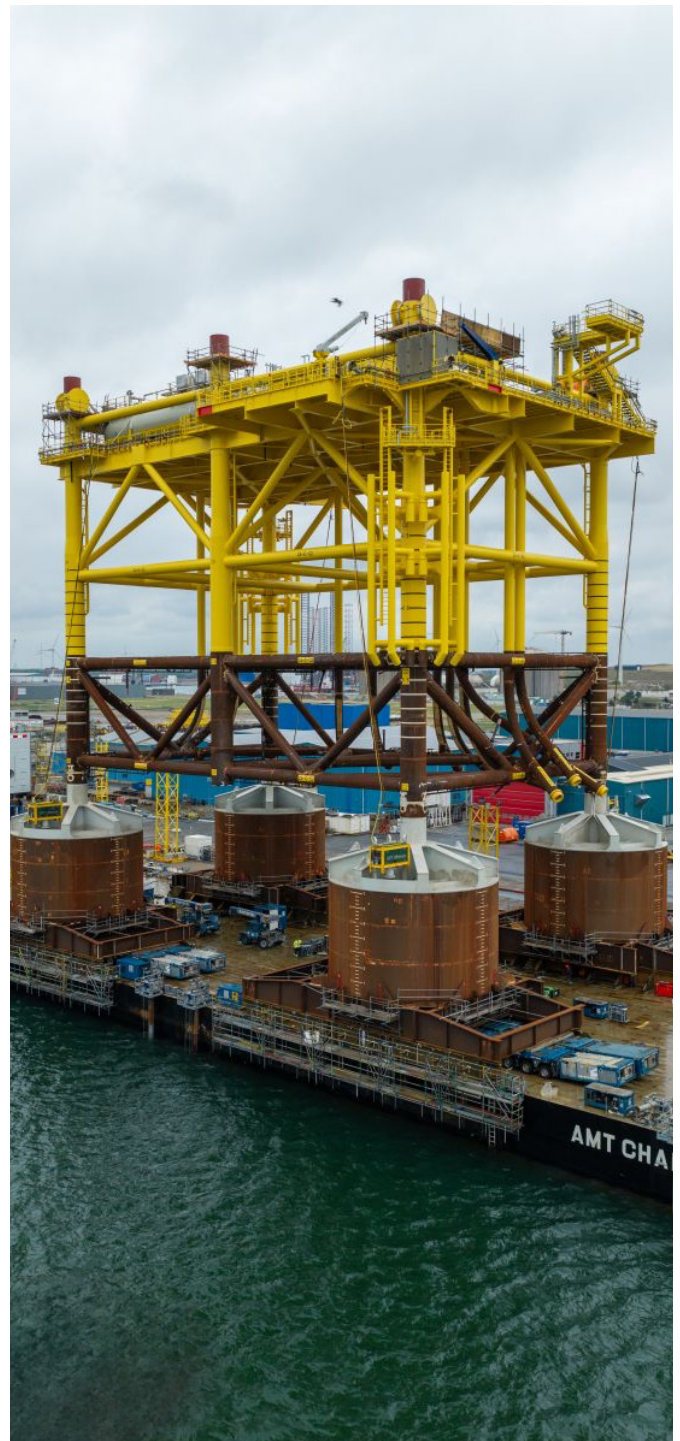
Gennaker Substation Jackets and Toppers Complete Load-Out Ahead of Offshore Installation

The jacket foundations and topsides for the two offshore substations serving the 927 MW Gennaker offshore wind farm in the German Baltic Sea completed their load-out operations from Dutch fabrication yards in September 2026, advancing the project toward its offshore installation phase. The OSS Zingst jacket was loaded out at HSM Offshore Energy's yard in Schiedam on 16 September, while the OSS Darss jacket was loaded out at the Smulders yard in Vlissingen on the same date. The topsides for both platforms followed five days later, with OSS Zingst loading out in Schiedam and OSS Darss in Vlissingen on 21 September.

The Zingst jacket weighs 3,700 tonnes and measures 40 by 28 by 33 metres, with a 900-tonne cable deck installed on top during an operation completed earlier in 2026. The OSS Zingst topside, measuring 48 by 33 by 17.5 metres and weighing around 4,700 tonnes, will transform up to 450 MW of the wind farm's electricity output. Both substations are part of 50Hertz's OST-6-1 grid connection, a 220 kV alternating current transmission system that will carry the wind farm's power approximately 53 kilometres offshore to shore and 35 kilometres onshore to the new Gnewitz substation. The two platforms together have a combined grid connection capacity of 927 MW.

The two structures were fabricated by the HSI Joint Venture, a partnership comprising HSM Offshore Energy (now Smulders HSM following a merger), Smulders and engineering firm Iv, under an engineering, procurement, construction, installation and commissioning contract. Allseas has been contracted to transport and install both substations and their jacket foundations using its heavy-lift vessel *Pioneering Spirit*, with the offshore installation campaign expected to follow the load-out and sail-away in the coming weeks.

Gennaker is being developed by Skyborn Renewables and is located approximately 15 kilometres north of the Fischland-Darss-Zingst peninsula in Mecklenburg-Western Pomerania. The wind farm will ultimately comprise 63 Siemens Gamesa turbines with a maximum individual capacity of 15.5 MW, giving a total installed capacity of up to 976.5 MW. Offshore foundation installation is scheduled to begin in 2027, with full commissioning targeted for 2028.



50Hertz Awards NSC2 Contract to Siemens Energy and NSORe for Germany's First 2 GW Offshore HVDC Platform

German transmission system operator 50Hertz awarded a contract to a consortium comprising Siemens Energy and Neptun Smulders Offshore Renewables (NSORe) on 17 June 2026 for the delivery of a 2 GW offshore HVDC converter system as part of the North Sea Connector 2 (NSC2) project. The contract marks the first time that an offshore converter platform of this scale will be built predominantly in Germany, with approximately 95 percent of Siemens Energy's project scope to be delivered from German facilities.

NSC2 combines the LanWin6 offshore grid connection and the DC32 HVDC link, both forming part of the broader NordOstLink transmission corridor connecting the North Sea to eastern Germany. The offshore converter platform will be located approximately 200 kilometres west of the island of Sylt. NSORe, a joint venture between Neptun Werft, part of the Meyer Werft Group, and Belgian offshore construction specialist Smulders, will fabricate the platform primarily at the Neptun Werft shipyard in Rostock-Warnemunde. Siemens Energy will supply the core HVDC electrical technology, including transformers, converter systems and SF6-free gas-insulated switchgear, with

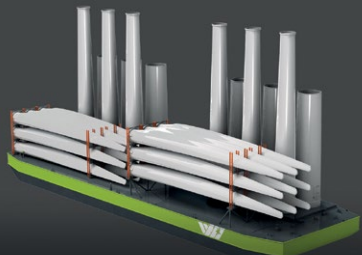
transformers and converters manufactured in Nuremberg and switchgear from Berlin.

The consortium has been awarded full turnkey responsibility for the project, covering engineering, procurement, construction, offshore and onshore installation and commissioning. Siemens Energy has also secured a long-term service agreement covering maintenance, IT services and on-call support. The company expects to fully book the order in its fiscal year beginning 1 October 2026. The project is scheduled to enter service by the end of 2034.

50Hertz CEO Stefan Kapferer noted that the project will see key components manufactured at a shipyard within the transmission operator's own control area, reinforcing the importance of regional supply chain development for Germany's offshore grid expansion. The award of NSC2 also comes as 50Hertz has entered negotiations with NSORe for a second converter platform of similar scale linked to the North Sea Connector 1 project, suggesting the two companies could become central to a substantial programme of German offshore grid infrastructure development over the coming decade.



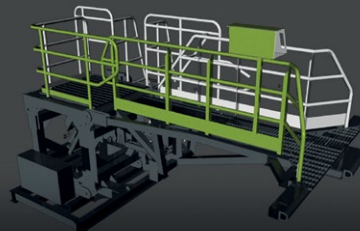
OFFSHORE EQUIPMENT



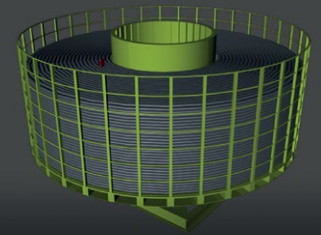
BARGE / PONTOON



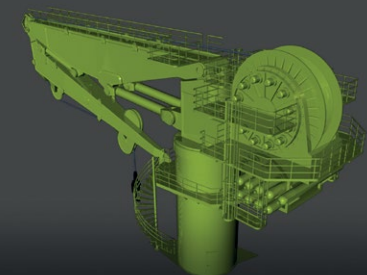
ACCOMMODATION MODULE



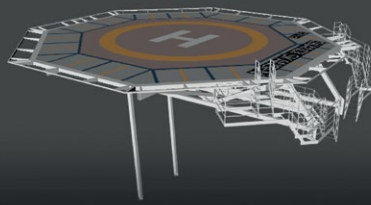
TRANSFER SYSTEM / GANGWAY



CABLE CAROUSEL / TURNTABLE



CRANE



HELICOPTER DECK



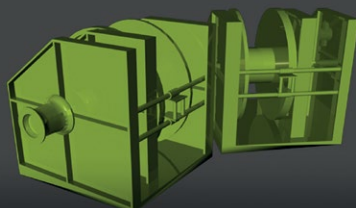
OFFSHORE CONTAINER



CABLE INSTALLATION EQUIPMENT



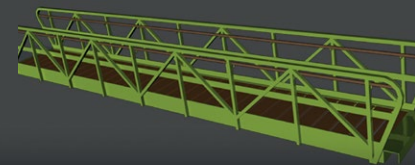
REMOTE OPERATING VEHICLE (ROV)



MOORING SYSTEM / WINCH



A-FRAME



MISCELLANEOUS EQUIPMENT

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