

Record-Breaking Heavy Lift: 7,500-Tonne Offshore Foundation Relocated in China

In a remarkable feat of offshore engineering, Vastwin Engineering Logistics has successfully completed the transport of one of the world's heaviest steel foundations — a 7,500-tonne base structure for China Three Gorges Corporation's 16 MW "Navigator" offshore wind turbine.

The complex operation took place at Blueocean Wind's expansive fabrication facility in Guangxi, China, marking a new milestone in the handling of ultra-large offshore components. Vastwin utilized 244 axle lines of Scheuerle SPMTs, powered by 13 power pack units, with an additional 92 axle lines reinforcing high-stress areas.


Measuring over 80 meters in length and 91 meters in width, the foundation was carefully maneuvered from the quayside

onto a barge in a precision-controlled move. This process demonstrated the growing capability of China's offshore logistics sector to manage increasingly large and complex components for next-generation turbines.

Construction of the structure began in April 2025 and was completed within five months — a testament to Blueocean Wind's 8,000-strong workforce and its 1.5 million tonnes annual steel fabrication capacity.

This achievement underlines China's global leadership in offshore wind infrastructure, paving the way for larger turbine designs and more efficient logistics workflows to support the country's ambitious renewable energy expansion.





French startup Seaturns has achieved a major milestone in its decade-long pursuit of wave energy technology with the launch of Phase 1 full-scale testing at the Port of Nantes Saint-Nazaire.


After six months of fabrication, the 42-ton steel demonstrator, measuring 15 meters in length and 6 meters in diameter, is now operational. Designed to deliver 200 kW of nominal power, the prototype represents the culmination of ten years of research and engineering development.

Early port trials successfully validated critical operations including buoyancy checks, access safety, and maintenance simulation — all completed using lightweight tools and a small crew, demonstrating the technology's efficiency and low operational cost.

Backed by the French government's #France2030 program and Bpifrance's i-Nov competition, Seaturns' system aims to provide cost-effective renewable energy with minimal environmental impact.

The next testing phase, planned for early 2026, will take the demonstrator offshore for one year of real-world performance validation under marine conditions.

This project positions Seaturns and France at the forefront of wave energy commercialization and the development of a broader European marine energy sector.



Seaturns Reaches Full-Scale Testing Phase in French Wave Energy Breakthrough

Construction Advances on World's First Offshore Energy Island in Belgium

In September 2025, construction reached another critical milestone on Belgium's Princess Elisabeth Energy Island, the world's first artificial offshore energy hub. The final caisson for this construction season was successfully installed, completing the 2025 offshore campaign.

Located 45 kilometers off the Belgian coast, the island's perimeter is made up of massive 22,000-ton concrete caissons, forming protective walls that will enclose the facility. Once completed, the island will serve as a power hub, connecting surrounding offshore wind farms to Belgium's electricity grid and potentially linking with other European countries through interconnectors.

The project, developed by Elia Transmission Belgium and executed by TM Edison — a joint venture between DEME and Jan De Nul — involves more than 300 workers and 15 specialized vessels.

With the 2025 offshore work wrapped up, focus now shifts to preparing for the next phase of construction, scheduled to resume in spring 2026, when the remaining infrastructure and technical installations will begin.

Upon completion, the Princess Elisabeth Island will become a cornerstone of Europe's integrated offshore energy grid, designed to help balance renewable energy flows across the continent.

Enhancing Marine Biodiversity Beneath France's Floating Wind Turbines

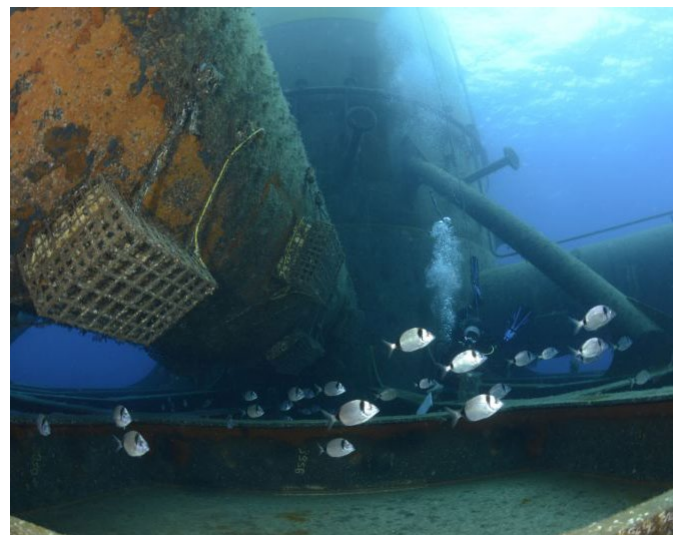
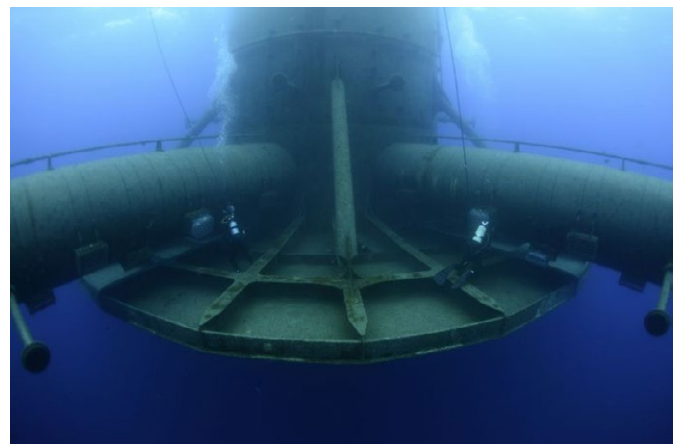
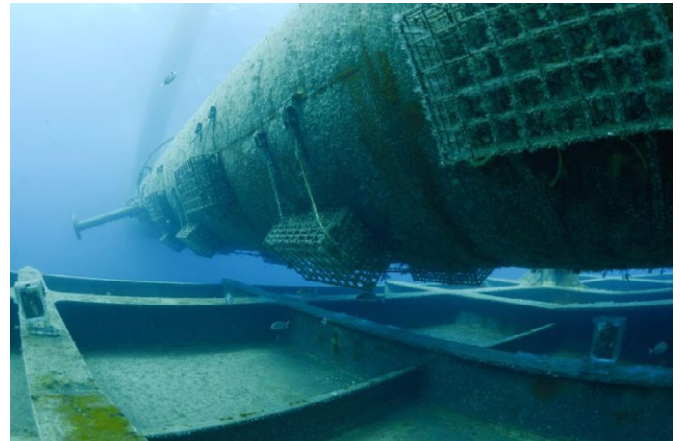
In a unique initiative combining renewable energy with marine conservation, ECOCEAN and Principle Power have joined forces to enhance biodiversity beneath floating wind turbines at the Les Éoliennes Flottantes du Golfe du Lion (EFGL) project off southern France.

The collaboration introduces ECOCEAN's BioHut® modules, artificial reef structures designed to act as nurseries for juvenile marine life, providing shelter and feeding grounds under WindFloat® platforms developed by Principle Power.

This initiative builds on findings from the Biodiversity Observation Buoy (BoB) program — a four-year study that documented strong marine life presence around EFGL's offshore area, including a 20-fold increase in sea urchins and rich acoustic evidence of fish populations.

So far, 32 BioHut® units have been installed beneath one of the floating platforms to test their ecological benefits. Preliminary assessments show minimal impact on turbine performance or hydrodynamics, with all electrical and corrosion-protection systems operating as designed.

By blending offshore engineering with environmental science, the project underscores the potential for renewable energy infrastructure to coexist with thriving marine ecosystems, setting a precedent for sustainable offshore development worldwide.



Mammoet Giant Streamlines Foundation Logistics for Taiwan's Offshore Wind Expansion

At Taiwan's Port of Taichung, heavy-lift specialist Mammoet Giant has completed the efficient marshalling of 66 suction-bucket jacket (SBJ) foundations for the 920 MW Greater Changhua 2b & 4a offshore wind farms.

Instead of using conventional roll-on/roll-off operations — which would have been limited by tidal variations of up to six meters — Mammoet employed its 5,000-tonne SK350 ring crane to lift the 80-meter-tall, 2,400-tonne jackets directly from deck carriers onto quayside supports.

This lifting strategy eliminated tidal constraints, reduced

vessel waiting times, and improved overall safety. The jackets were later transferred via self-propelled modular transporters (SPMTs) to storage areas on reinforced bamboo mats before being loaded out again for offshore installation.

This innovative logistical approach optimized the supply chain for Taiwan's growing offshore wind sector while supporting the first major use of suction-bucket technology in Asia-Pacific. The operation highlights how precision logistics engineering is reshaping foundation deployment strategies for large-scale wind projects worldwide.



Second Batch of XXL Monopiles En Route to Scotland's Inch Cape Wind Farm

The construction of Scotland's 1.1 GW Inch Cape Offshore Wind Farm has reached another key milestone, as CNOOD-Wenchong Heavy Industries (CWHI) dispatched the second shipment of eight XXL monopiles from its Qinzhou fabrication yard in China.

Transported aboard the ZHENHUA 33, operated by COSCO Shipping Heavy Transport, the monopiles are now bound for Forth Ports, Leith, where installation activities are scheduled to continue later this year.

Each massive monopile measures several meters in diameter and weighs hundreds of tons, representing the latest generation of offshore foundations engineered for deep-water, high-capacity turbines.

This shipment follows the successful first batch delivered earlier in 2025, reinforcing the collaboration between Chinese and UK supply chains in accelerating renewable energy development. Once completed, Inch Cape will supply clean electricity to over 1 million homes, cementing its role as one of Scotland's flagship offshore wind projects.



World's First Subsidy-Free Floating Solar Farm Operates in the Dutch North Sea

In a world-first for offshore renewables, the Netherlands has launched a floating solar pilot operating within an offshore wind farm — entirely without government subsidies.

The 0.5 MW “Nymphaea Aurora” project, developed by Oceans of Energy in partnership with CrossWind (a joint venture between Shell and Eneco), was successfully deployed in mid-2025 inside the Hollandse Kust Noord offshore wind area, 18.5 km off the Dutch coast.

Despite earlier challenges from severe weather and equipment damage, the installation now operates stably, providing valuable real-world data on the coexistence of solar and wind systems at sea. The pilot aims to demonstrate how hybrid offshore

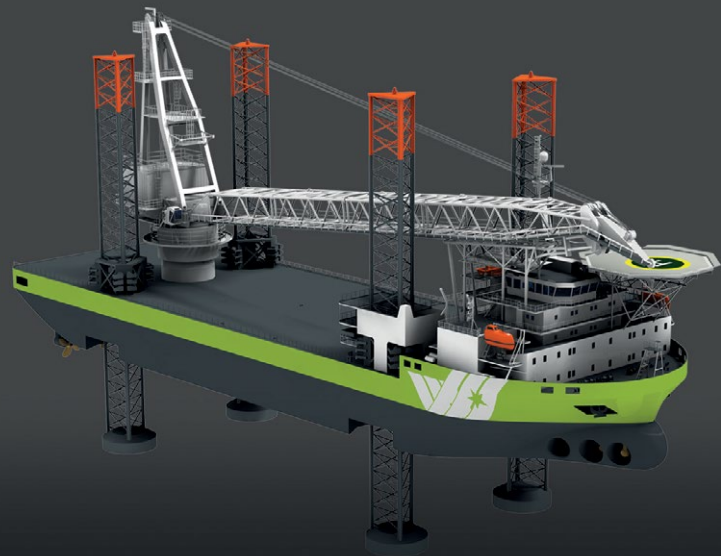
energy setups can maximize output per square kilometer while minimizing environmental footprint.

According to the Dutch Ministry for Climate and Green Growth, the project proves the commercial viability of subsidy-free offshore solar, a major step toward integrated hybrid energy parks. Lessons learned from Nymphaea Aurora are expected to inform future multi-technology offshore platforms across Europe.

By merging wind and solar generation offshore, the Netherlands continues to position itself at the forefront of hybrid renewable innovation, advancing Europe's pursuit of sustainable, space-efficient energy systems.



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**GRS.OFFSHORE RENEWABLES GMBH
– STADTHAUSBRUECKE 7 – 20355
HAMBURG**

**MANAGING DIRECTOR:
P. SCHOENEFELD, M. MROSS, U. KRIETE**

**COURT OF REGISTRY:
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