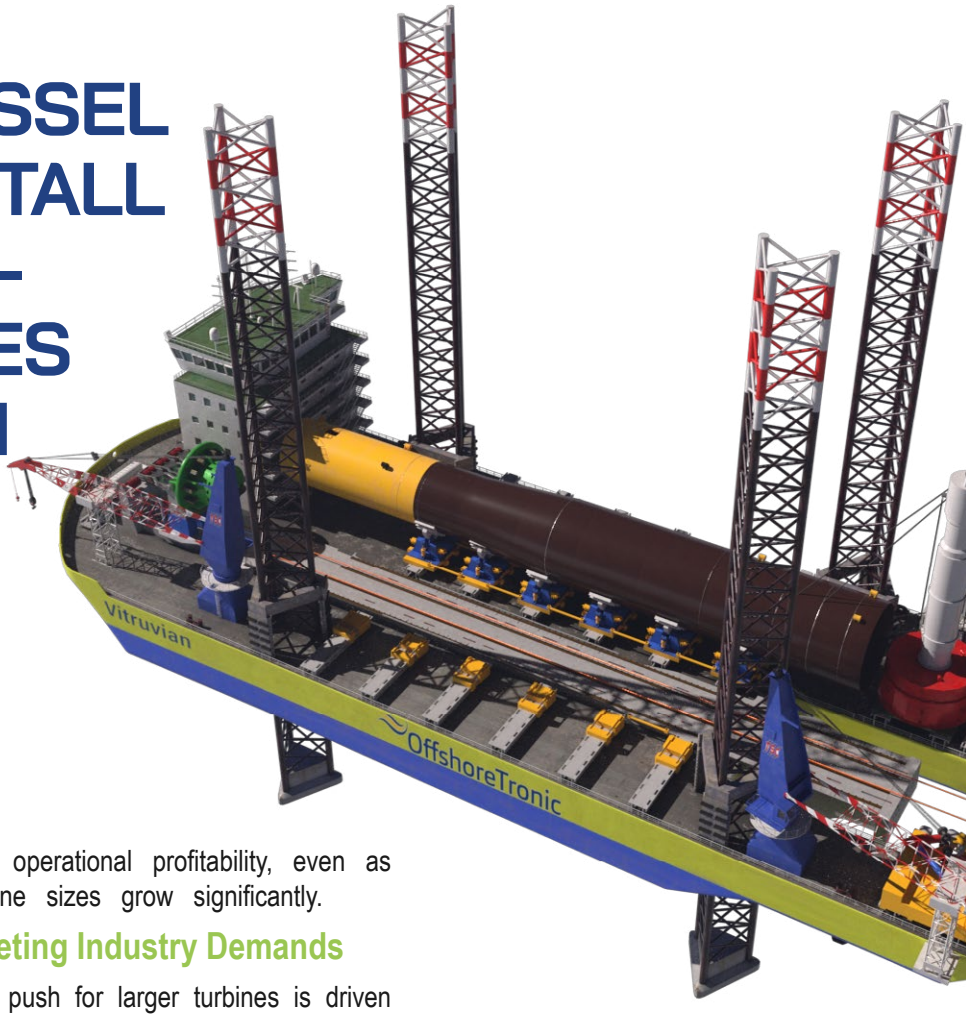
ADVANCED OFFSHORE VESSEL POISED TO INSTALL 5,000-METRIC-TON MONOPILES FOR NEXT-GEN TURBINES



A new-generation offshore vessel, the Vitruvian, has been introduced as a major step forward in wind turbine installation capabilities. Developed by OFFSHORETRONIC, a maritime technology firm based in Barcelona, the vessel was engineered in collaboration with TSC Offshore Group Corporation, a subsidiary of Hong Kong's CMIC Ocean En-Tech Holding. It has been purpose-built to support the growing size and weight demands of modern offshore wind installations.

Engineered for the Future

The Vitruvian has been designed to manage the transportation and installation of ultra-large monopiles—those exceeding 3,000 metric tons—with a capacity to handle components up to 5,000 metric tons. This makes it one of the few vessels on the market prepared to meet the evolving requirements for offshore infrastructure, particularly in light of the anticipated deployment of 20–30 MW wind turbines in the coming years.

While existing wind farm installation vessels are becoming increasingly outdated due to their limited capacity, the Vitruvian presents a forward-looking solution. It addresses the offshore sector's need for long-term asset viability and operational profitability, even as turbine sizes grow significantly.

Meeting Industry Demands

The push for larger turbines is driven by the goal of lowering the Levelized Cost of Energy (LCOE), with projections indicating a potential 20–30% reduction through the adoption of 20–30 MW machines. As a result, the industry is placing strong emphasis on installation efficiencies and advanced logistics solutions.

In response, the Vitruvian was conceived as a multi-functional, high-capacity vessel capable of supporting these next-generation developments. Its ability to manage extremely heavy loads ensures it remains relevant in a fast-evolving energy landscape, supporting the sector's long-term goals for cost-effectiveness and sustainability.

By offering a vessel capable of both large-scale transport and precise installation of oversized monopiles, the Vitruvian stands to play a key role in shaping the future of offshore wind development.

SAL HEAVY LIFT TRANSPORTS XXL MONOPILES FOR EAST ANGLIA THREE PROJECT

A major milestone in offshore wind logistics is underway as SAL Heavy Lift undertakes the complex transportation of monopiles for the East Anglia THREE offshore wind project. The operation, one of the largest of its kind to date, involves the shipment of 95 XXL monopiles—each weighing nearly 2,000 metric tons—from Spain to the Netherlands.

The project highlights SAL's capabilities in delivering large-scale transport solutions for the renewables sector. Utilizing its MV Zhong Ren 121 and Zhong Ren 122 vessels, the company is executing the transportation from the ports of Fene and Bilbao to Flushing (Vlissingen), setting new benchmarks in offshore wind logistics.

Efficiency Through Innovation: Lashless Seafastening

A key innovation in this campaign is SAL's use of the Lashless Seafastening system. This solution eliminates the need for traditional lashing materials, significantly cutting down loading and unloading times while reducing operational waste. Instead of relying on disposable securing elements, SAL has deployed custom-engineered grillage and seafastening structures to safely stabilize the monopiles during sea transit.

Compliant with DNVGL classification standards, the system ensures optimal safety and structural integrity throughout the transport process. This approach exemplifies the industry's move toward more sustainable and efficient logistics solutions in offshore energy development.

Supporting the Global Energy Transition

The East Anglia THREE project is a pivotal part of the broader shift toward renewable energy, and SAL's contribution is critical in advancing this transition. By streamlining the transportation of core wind turbine components, SAL not only reduces overall project timelines but also minimizes the carbon footprint associated with heavy-lift operations.

As the offshore wind sector scales up globally, the demand for specialized maritime logistics continues to rise. SAL's experience in managing high-volume, high-complexity cargo positions it as a key enabler in the renewable energy supply chain.

INNOVATIVE FLOATING WIND PLATFORM MOVES TOWARD REAL-WORLD TESTING

A new floating wind platform developed for deepwater offshore deployment has taken a major step forward, transitioning into the testing and demonstration phase. Jointly developed by ECO TLP and Mocean Offshore, the platform has successfully received Front-End Engineering Design (FEED) approval from the American Bureau of Shipping (ABS), marking a significant advancement toward future commercial operations.

The FEED approval, granted for a non-site-specific design, broadens the platform's application potential across a variety of turbine sizes and water depths. ECO TLP CEO Nicole Johnson Murphy noted that the certification not only helps expedite future approvals but also enhances confidence in the platform's operational safety and its alignment with financial and insurance standards.

This milestone builds on previous progress made in 2023, when the platform received Approval in Principle (AiP) from ABS. With the FEED phase now completed, the development team is poised to adapt the structure to specific offshore locations, setting the stage for a demonstration at sea.

The floating foundation design reflects a growing trend within the offshore wind sector, where scalable and versatile solutions are increasingly necessary to meet rising global energy demands. With their latest achievement, ECO TLP and Mocean Offshore are emerging as leaders in the transition toward cost-effective, deepwater floating wind installations—technology that is expected to play a vital role in expanding access to clean energy from the ocean.

AKER SOLUTIONS INTRODUCES THREE ADVANCED FLOATING WIND FOUNDATION CONCEPTS

Aker Solutions has revealed three innovative floating wind foundation designs—YFloat™, CONFloat™-Omega, and CONFloat™-7C—developed to enhance power generation, streamline construction processes, and reduce long-term maintenance. Leveraging over five decades of offshore engineering expertise, the new concepts are tailored for turbines of 15 MW and above and incorporate passive ballast systems for improved performance.

“These new foundation concepts reflect Aker Solutions’ continued growth in the offshore wind space,” said Henrik Inadomi, Executive Vice President for New Energies at Aker Solutions. “They build on our legacy in concrete and steel floaters and demonstrate our commitment to developing cost-effective and scalable infrastructure for future offshore wind projects.”

Key Foundation Designs:

- **YFloat™:** A steel-based substructure with a symmetrical configuration optimized for prefabrication and modular assembly. The design minimizes material use and supports larger turbines, offering enhanced scalability and a lower levelized cost of energy (LCOE).
- **CONFloat™-Omega:** Featuring a circular concrete structure with a central moonpool and offset turbine positioning, this foundation is designed for deployment in high-energy environments. Its robust concrete composition ensures resistance to fatigue and reduces the need for extensive maintenance.
- **CONFloat™-7C:** Inspired by the established CONDEEP™ designs, this version includes a 7-cell layout with a centrally located turbine and tower. It is engineered to lower the integration and completion draught, allowing for installation at a broader range of port facilities.

Aker Solutions’ portfolio includes a wide array of offshore wind infrastructure such as jackets, gravity-based foundations, and topsides. The company’s integrated, data-driven project approach further supports cost-efficient delivery from engineering through to deployment.

FIRST OFFSHORE SUBSTATION SUCCESSFULLY INSTALLED AT COASTAL VIRGINIA OFFSHORE WIND PROJECT

The Coastal Virginia Offshore Wind (CVOW) project has reached a major construction milestone with the successful installation of its first offshore substation. The substation, weighing approximately 3,907 metric tonnes, was lifted and placed onto a pre-installed jacket foundation—marking one of the heaviest offshore lifts in the project to date.

The operation was carried out by DEME Group using its offshore installation vessel Orion, which had previously installed the jacket foundation. The lift sets another benchmark for the vessel, underscoring its capability in handling large-scale offshore components.

This achievement reflects effective collaboration among DEME, Dominion Energy, subcontractors, American suppliers, and union labor, highlighting a strong partnership model in the execution of utility-scale offshore wind infrastructure.

Following this milestone, the Orion will continue with the installation of transition pieces before beginning the second phase of monopile installation. The full CVOW development will feature three offshore substations and 2.6 GW of installed capacity, helping advance clean energy efforts along the U.S. East Coast.

MONOPILE TRANSPORT COMPLETED FOR DENMARK'S LARGEST OFFSHORE WIND FARM

COSCO Shipping and Guangzhou Offshore Heavy Transport Co., Ltd. (CSGS) announced the successful conclusion of their monopile transport operations for the Thor Offshore Wind Farm—Denmark's largest offshore wind energy project, led by RWE.

A total of 36 monopiles, each weighing approximately 1,400 metric tons, were delivered over four meticulously planned voyages. The semi-submersible vessels Xiang Rui Kou and Hua Yang Long handled the transcontinental logistics, transporting the massive components from Penglai, China, to Eemshaven in the Netherlands via the Suez Canal.

The Hua Yang Long managed the first and third sailings, while the Xiang Rui Kou completed the second and fourth, ensuring continuous operational flow. The project highlighted both vessels' advanced heavy-lift capabilities and adaptability in complex offshore logistics.

Key to the successful transport were specialized technical solutions, including custom mooring modifications and the efficient use of Self-Propelled Modular Transporters (SPMTs) for roll-on/roll-off procedures. Strict scheduling requirements were met, reinforcing both companies' reputations for reliability in global offshore wind logistics.

This milestone contributes significantly to the progress of the Thor Offshore Wind Farm, a critical part of Denmark's renewable energy ambitions.

CADELER

CADELER EXPANDS OFFSHORE WIND CAPABILITIES WITH DELIVERY OF WIND PACE

Cadeler has officially added another powerful asset to its fleet with the successful delivery of Wind Pace, its latest next-generation jack-up wind turbine installation vessel. The vessel was completed on time, within budget, and adds to Cadeler's now seven-strong fleet of offshore wind installation vessels.

Built at the COSCO Shipping Heavy Industry shipyard in Qidong, China, Wind Pace was named during a ceremony held on 12 March 2025. The vessel is the second of Cadeler's advanced P-class series, designed to meet the evolving demands of increasingly large offshore wind turbines and more complex project requirements.

Following its handover, Wind Pace is scheduled to begin operations in the United States from Q2 2025 through Q1 2026, supporting Cadeler's second major offshore wind project in American waters.

The vessel's sister ship, Wind Peak, was delivered in August 2024 and is currently engaged in turbine installation work at the Sofia Offshore Wind Farm—one of the world's largest offshore wind developments—off the coast of the UK.

Purpose-Built for the Next Generation of Wind Projects

Wind Pace is equipped to transport and install up to seven full sets of 15 MW turbines or five turbines in the 20+ MW class in a single voyage. This capability allows for fewer transit operations, reducing overall installation time and operational costs. The vessel features a hybrid power system and is prepared for future conversion to dual-fuel green methanol operations, underlining Cadeler's commitment to decarbonization and energy efficiency.

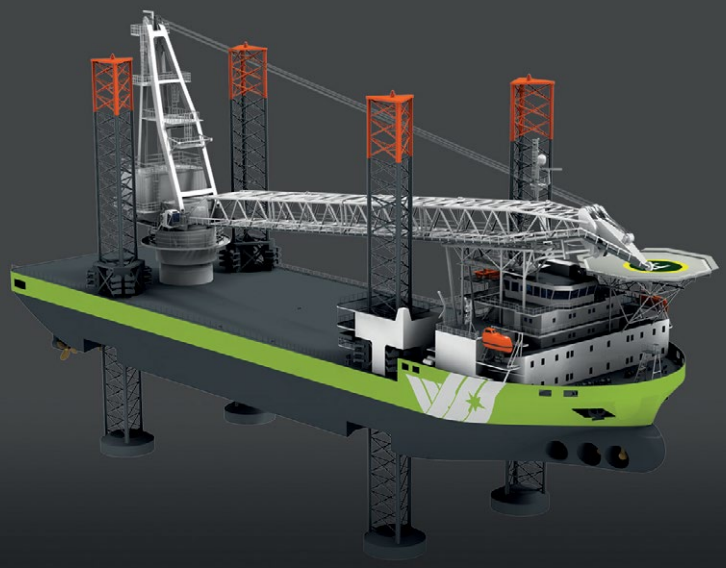
The P-class series incorporates expansive deck space of 5,600 square meters, a payload capacity of over 17,600 tonnes, and a main crane with a lifting capacity of 2,600 tonnes at 47 meters. Designed for challenging offshore environments, these vessels can accommodate up to 130 personnel, including installation crews and technicians.

Mikkel Gleerup, CEO of Cadeler, emphasized the significance of this fleet expansion: "Wind Pace follows the success of Wind Peak in delivering faster, more efficient offshore wind turbine installations. These P-class vessels represent our forward-looking strategy—developing versatile, future-ready assets that support both our clients' needs and broader sustainability goals."

Developed through close collaboration with partners including COSCO, GustoMSC, NOV, Huisman, Kongsberg, and MAN Energy, the P-class vessels position Cadeler to meet increasing global demand for robust offshore wind infrastructure in the years ahead.

GRS OFFSHORE RENEWABLES

AN EXTENSIVE DATABASE OF OFFSHORE VESSELS



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