

WORLD'S FIRST UNMANNED HVDC OFFSHORE PLATFORM INSTALLED AT WORLD'S LARGEST OFFSHORE WIND FARM

- Dogger Bank Wind Farm will be first UK High Voltage Direct Current (HVDC) connected offshore wind farm
- 70% reduction in topside weight per MW for offshore platforms

Construction of what will be the world's largest offshore wind farm, Dogger Bank, has reached another milestone with the installation of the world's first unmanned High Voltage Direct Current (HVDC) offshore substation.

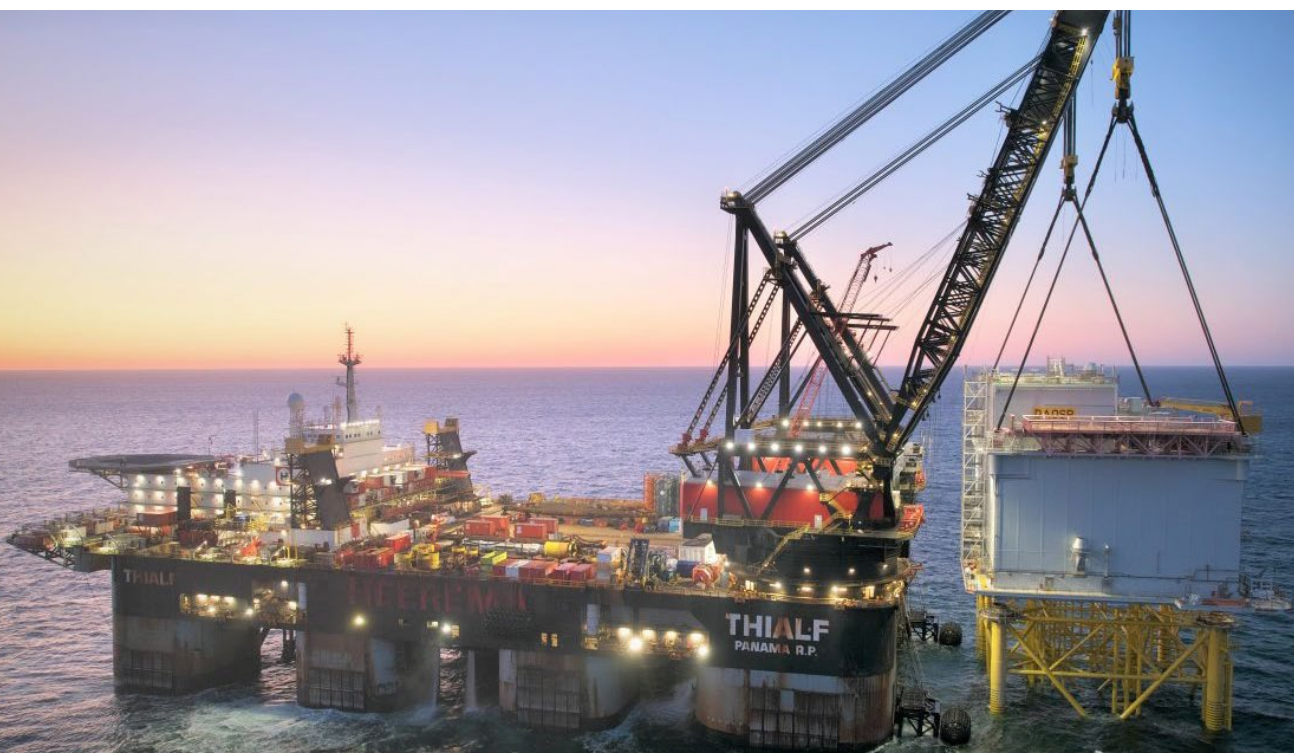
The substation is the first of three platforms, supplied by Aibel, to be installed at Dogger Bank, which is being constructed in three 1.2GW phases known as A, B and C.

The Dogger Bank A platform measures 65 x 36 metres across and 39 metres high and sits on a four-legged steel jacket foundation structure which is fixed to the seabed, at a water depth of around 28m.

Approximately 146km from the nearest point of land at Flamborough Head, near Bridlington in East Riding of Yorkshire, the platform installation was delivered by principal contractor Sapiem.

The innovative offshore platform has a lean design and is the first unmanned HVDC platform which will be operated from shore and accessed only by a Service Operations Vessel. The platform will receive 1.2GW of AC power from Dogger Bank A's 95 offshore wind turbines and convert it to DC, which will then be sent ashore to an onshore converter station near Beverley in East Riding of Yorkshire.

Fitted with Hitachi Energy's latest generation HVDC converter technology, Dogger Bank will be the first offshore wind project in the UK to use this technology to transmit the electricity produced back to shore, ensuring that the electricity is transmitted efficiently over long distances while minimising losses.



START OF OPERATIONS TO LAUNCH WIND TURBINE FLOATS IN PROVENCE GRAND LARGE

The first of the three giant foundations of floating wind turbines of the future Provence Grand Large pilot park was embarked Thursday, May 11 on a barge for its launch.

The transfer was carried out from the Eiffage Métal site in Fos-sur-Mer, in charge of producing these metal floats designed by SBM Offshore. They take the form of a metal tripod equipped at each of its three ends with two submersible buoys, between which is located an innovative taut line anchoring system (six in all) developed and installed by SBM and IFP Energies Nouvelles. The whole structure is 45 meters high, for about 80 meters on each side and a weight of nearly 3000 tons.





GAZELLE WIND POWER UNVEILS THIRD GENERATION FLOATING OFFSHORE WIND PLATFORM TECHNOLOGY



Gazelle Wind Power (Gazelle), the developer of a modular floating offshore wind platform, is unveiling third generation technology this week at WindEurope 2023 in Copenhagen, Denmark. The company's enhanced design further refines Gazelle's solution to address the primary challenges facing the offshore wind industry—such as cost, supply chain bottlenecks, and sustainability—by providing a lightweight, cheaper design that minimizes the impact on fragile marine environments while using existing port infrastructure.

As a third-generation technology, the platform delivers enhanced mooring innovation that enables serial production. The platform makes first generation technology—which was primarily designed to float and survive harsh ocean conditions—obsolete and improves on second generation designs that are focused on

industrialization. Instead, Gazelle's platform moves away from archaic models that are stationary, heavy, bulky, and difficult to assemble and transport while reducing costs by 30% compared to conventional semi-submersible designs. Part of this improvement comes from the reduction in steel versus traditional offshore platforms. For example, a one-gigawatt offshore wind farm using Gazelle's solution would save 71 kt of steel and reduce emissions of approximately 100 kt of carbon dioxide.

The company's platform can be quickly and simply installed at project sites because it requires no specialist cranes or vessels thanks to a cost-effective, innovative design using globally available components and a modular assembly process.

3060 WTIV-SERIES VESSEL WILL BE ONE OF LARGEST IN CHINA CAPABLE OF INSTALLING WIND TURBINES UP TO 20 MEGAWATTS

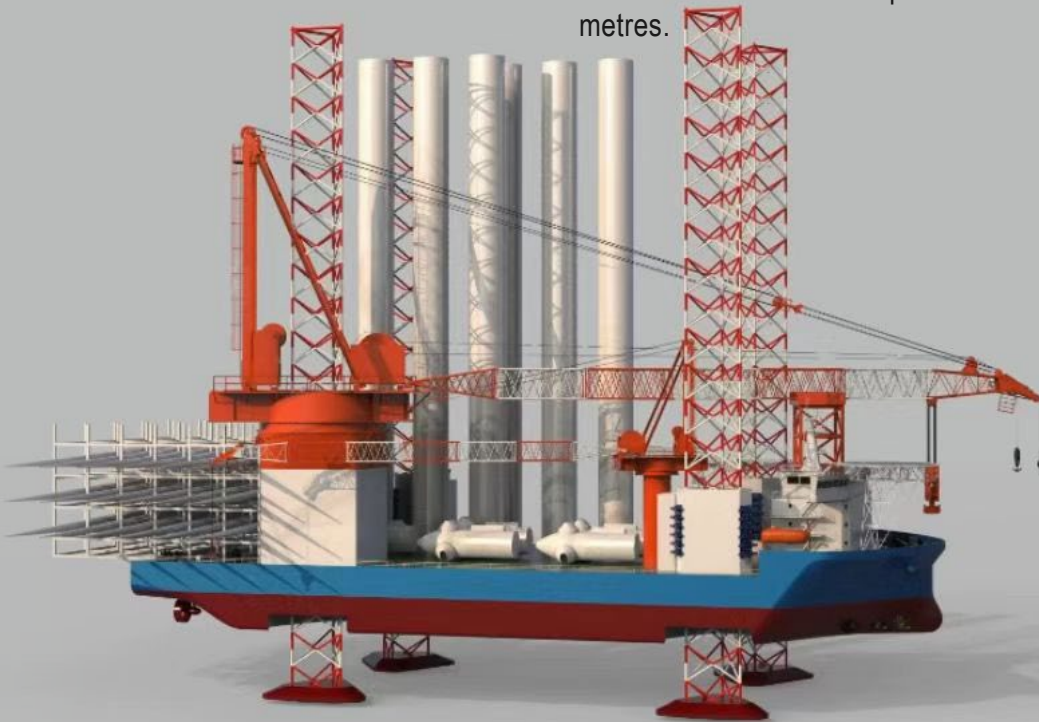
The vessel is costing 1.2 billion yuan (\$184.8 million).

Huadian Heavy Industries is one of a number of Chinese offshore wind EPC contractors that have shown interest in the vessel.

Boqiang is also marketing the vessel for potential employment in Europe as the firm contract involves numerous options for similar units.

The vessel, with a dynamic positioning 2 (DP2) system, is designed to work in water depths of 65 metres, although this can be increased to around 80 metres if the legs are lengthened from 120 metres to 136 metres.

This vessel will be equipped with a giant crane — to be supplied by Husiman that will have lifting capacity of 2200 tonnes — a rack and pinion jacking system that will enable the vessel to operate in wave height of 2.5 metres.



SEATWIRL SIGNS MOU WITH KONTIKI WINDS



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The Energy-tech company SeaTwirl announces today on May 15th, that themselves and Kontiki Winds have signed a MoU (Memorandum of Understanding). The intention of the two companies will be to identify and discuss the upcoming opportunities to electrify offshore Oil and Gas assets and other offshore applications, with the use of SeaTwirl's floating wind turbines.


SeaTwirl has, together with Kontiki Winds, entered a MoU (Memorandum of Understanding) to explore new opportunities in the market, to implement offshore wind into new and existing Oil and Gas assets and micro grid applications such as the powering of fish farms, desalination plants and/or other small-scale applications that currently are based on fossil fuel electricity generation.

Kontiki Winds, a Havfram company, is an early-stage offshore wind technology developer and electrification enabler, focused on decarbonizing the global energy mix and driving a greener economy. Kontiki Winds recognises the increasing demands for electrification

over a wide range of industries, and has over the past year, entered into collaboration with a range of complementary technology and service companies to enhance their electrification capabilities.

"In Kontiki Winds we have a collaboration partner that really is the perfect match for us. Kontiki Winds and their partners knows everything there is to know about electrifying offshore assets with wind power and we have wind turbine technology that is ideal for such applications. It will be truly exciting to launch this collaboration and accelerate the decarbonization off Oil & Gas, fish farms, desalination plants and other suitable assets." Johan Sandberg, CEO.

"With SeaTwirl we have found a field tested solution for Offshore Wind Generation that fills a gap in the current market offering. We believe decentralised, easily installed and locally produced power will play a key role in the future energy mix and can't wait to start exploring this further with SeaTwirl." Eyvin Svendsen, VP Electrification Kontiki Winds.



ORBITAL MARINE POWER UNVEILS NEW 30MW TIDAL ENERGY PROJECT IN ORKNEY WATERS

ORBITAL
MARINE POWER

Orbital Marine Power (Orbital), the renewable energy company focused on the commercial deployment of its innovative floating tidal turbine technology, announced it has been awarded an Option Agreement from Crown Estate Scotland for a new tidal energy project in the Westray Firth.

Orkney-headquartered Orbital also confirmed it has a grid connection in place to service the pioneering project, which is located adjacent to the European Marine Energy Centre (EMEC) facility, where Orbital has already deployed the 2MW O2, the world's most powerful tidal turbine, under commercial operation. Renewable projects in Orkney were recently given a boost by Ofgem announcing it is minded to approve a new 220MW transmission connection, to be built from the Scottish mainland to service renewable power exports from the islands.

Following the award of contracts for difference (CfDs) in last year's AR4 process, Orbital is already targeting the installation of three more of its tidal turbines at the EMEC site, alongside the O2, to expand its tidal generation capacity in the coming years.

In keeping with the company's strategy of carrying out major aspects of its manufacturing within the UK, the construction of the Westray project would be expected

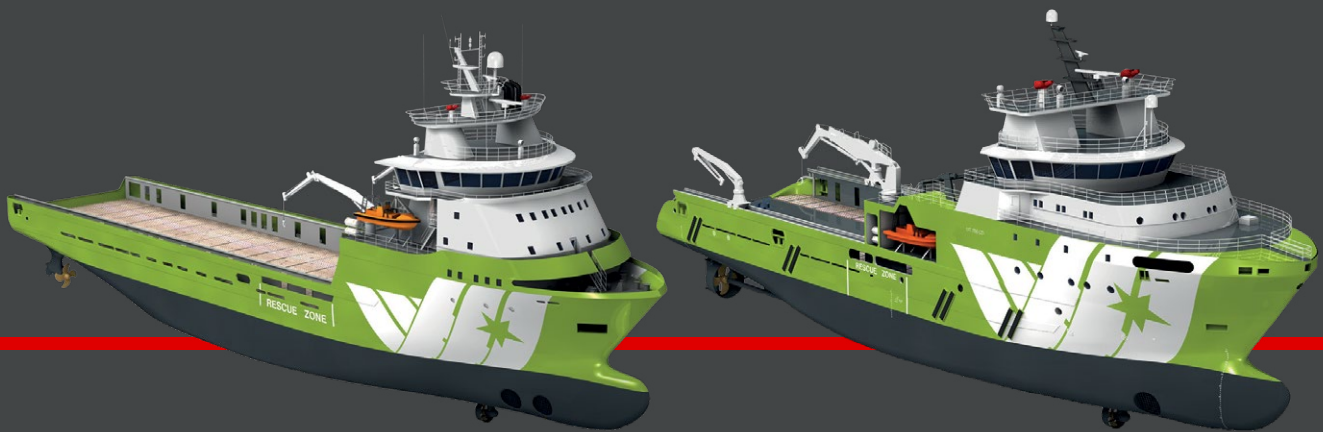
to result in over £120m of domestic supply chain spend and create hundreds of jobs across construction and around a dozen new permanent jobs locally to provide operations and maintenance services.

The Option Agreement is for 30MW, which would equate to approximately 12 Orbital devices installed across the site. The waters around Orkney have significant wider tidal stream energy potential and the Westray site offers just one example of how this can be harnessed to provide clean, predictable power.

The Orbital team is engaged with stakeholders and is progressing environmental studies, with a view to reaching consent application as soon as possible. The company also brings the benefit of extensive local operational and environmental data to help shape and inform optimal project design, having successfully installed, operated and monitored multiple floating tidal projects on the neighbouring EMEC site since 2011.

Andrew Scott, CEO at Orbital Marine Power, said: "As the UK looks to accelerate the decarbonisation of its energy system, we firmly believe tidal projects can bring unique benefits while harnessing a perfectly predictable and secure source of renewable energy. We're proud to be building that vision in Orkney with this investment in our Westray Project."

VESSELS OF THE MONTH



PSVS for Sale

1. New Building PSV UT 755 CDL design via GRS. Delivery in just 2 months! This vessel features a Rolls-Royce Icon DP2 Dynamic Positioning System and measures 81 meters in length overall (LOA). With a capacity for 40 passengers, it holds ABS-A1 classification and boasts Diesel Electric Propulsion for enhanced efficiency.

2. IMT 982 PSV, built in 2020 with an 83m length overall (LOA), is now available for purchase. Classed by LLOYD'S REGISTER, it features advanced DP2 technology for precise positioning. With a free deck area of approximately 900m², it offers ample space for various operations. Accommodating a total of 27 berths, it ensures comfortable on-board living.

AHTS for Sale

3. Highly capable and ready for action! For Sale: AHTS (Anchor Handling Tug Supply) vessel with a 74.5 meters length overall. This ABS+A1 class vsl offers a 498 sqm free deck area, perfect for handling heavy loads and equipment. Equipped with DP2 (Dynamic Positioning Level 2) technology, this powerhouse delivers maneuverability and stability. With a mighty 16,000 BHP (Brake Horsepower) under its hood, it's the ultimate workhorse for offshore operations.

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