

Scandinavian cooperation launches novel one-stop maintenance concept for offshore wind farms

Integrated Wind Solutions' subsidiaries ProCon Wind Energy, IWS Services and IWS Fleet with O&M concept for foundations and substations; maintenance vessels

AALBORG, DENMARK, April 20, 2023 /EINPresswire.com/ -- A Scandinavian cooperation with the technical lead from [ProCon](#) Wind Energy (ProCon) with [IWS Fleet](#) and [IWS Services](#) has developed an efficient one-stop Operations and Maintenance (O&M) concept for offshore foundations and substations.



Sketch of custom-built hybrid maintenance vessel which has several industry firsts

Integrating IWS Fleet's new service vessels, IWS Services' supply chain management and ProCon's inhouse maintenance skills into a comprehensive service package, the new concept, now being demonstrated to offshore wind farm operators, offers significant potential cost savings as well as a reduced carbon footprint.

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Thomas Padfield, Head of Strategic Business Development, ProCon

With a bundle of maintenance services in one package that eliminates the need for multiple sub-suppliers and interfaces, the O&M concept features customized hybrid vessels fitted with a new gangway system for safe and easy access to the offshore foundation, and a well-equipped team of specialized technicians with mechanical, electronics and electrical maintenance skills among others. The concept is underpinned by ProCon's extensive project management expertise over more than 50 offshore

projects, and IWS Services' know-how in supply chain and project optimization.

“This new concept, jointly developed by three leading offshore specialists over the past 18 months, will be the first in the industry to offer all necessary competencies inhouse, from the sophisticated, custom-built ships, to the full taskforce of skilled technicians, through to project management,” says Thomas Padfield, Head of Strategic Business Development, ProCon.

The solution will offer international wind farm operators a maintenance concept that is efficient and above all offers predictability. “We are already in advanced negotiations with customers, with the feedback being that this one-stop concept comes at exactly the right time when capacity in the maintenance sector is insufficient,” adds Padfield.

With each contributing their accumulated O&M expertise, the companies in the Scandinavian cooperation are majority owned by Norway's Integrated Wind Solutions (IWS), which is stocklisted in Oslo and was established in 2020 by Norwegian shipping and offshore specialist Awilco group with the objective of supporting offshore wind farms with dedicated, reliable services and logistics, including required warranties.

“This O&M concept was developed using the joint expertise of Denmark’s ProCon and IWS Services and Norway’s IWS Fleet and is in line with our strategy to offer efficient services to the offshore wind industry. The companies in the cooperation are already providing design, engineering, assembly, installation, commissioning, maintenance, and vessel services for offshore projects, including the Dogger Bank offshore wind farm. The new O&M one-stop shop will bring together that kind of applied experience into one package,” says Christopher Andersen Heidenreich, COO of Integrated Wind Solutions.



Maintenance team getting ready to board



Transition pieces destined for Borssele offshore windfarm located near Belgium and the Netherlands

With increasing size and complexity, each offshore wind farm foundation and substation has a unique design, requiring an individual maintenance strategy. The O&M concept led by ProCon makes use of its standardization approach whereby above and below water line inspection and maintenance methods of the many varied systems and components follow a logical order and efficient schedule, which is adaptable across all wind farm types.

Servicing the Balance of Plants (BOP) requires advanced system integration capability and inspections of highly diverse systems, from high voltage switchgear, and corrosion prevention to SCADA systems for computer-based control and monitoring. "This maintenance requires specific skills and tools to be onboard at the right time and, when planned optimally, we minimize downtime," explains Padfield.

With traditional O&M concepts, an average of 10 sub-suppliers are involved in each operation, a complexity that is reduced in the new one-stop concept. "Considerable cost savings are possible, through our efficient handling of the many suppliers operating in widely different technical segments. There needs to be one interface which oversees it all, managing the financial and health and safety risks," concludes Padfield.

Vessels with industry firsts and capable of zero emission

Capable of zero-emission operations, the hybrid vessels for the O&M concept have several industry firsts, including the largest battery pack with a capacity of 2200 kW-hr and additional photovoltaic charging. The hull and propulsion design increases the operability of the vessel and further reduces emissions, with the energy consumption estimated to be 20 percent lower than comparable service operations vessels. With "DNV SILENT" certification, another industry first, the vessels minimize the impact on marine life. The vessels, which have a motioned controlled crane for the stable transfer of equipment from ship to platform, can house a team of 120 technicians with the full amenities required for weeks at sea.

While the first contract is expected to be signed this year, offshore wind farm operators in Europe and Asia have this year been previewing the Scandinavian-developed O&M concept, which also includes ProCon's local content approach with regional sites and existing training of local maintenance staff, increasingly required from customers worldwide.

Taking the technical lead for contracts, ProCon has worked on one third of the world's offshore foundations, including monopile-TP, monopile-SIP, jackets and floating, providing construction and engineering expertise, which include the design of electrical systems and technical interface as well as assembly, installation, commissioning and maintenance.

About ProCon

Headquartered in Aalborg, Denmark and with seven regional hubs on three continents, ProCon Group provides electrical, technical and interface solutions to the global wind industry. ProCon's business units Engineering, Construction and Service has been delivering specialist solutions for

the design, engineering, pre-assembly, installation (Low Voltage/Medium Voltage /High Voltage), commissioning, service, maintenance and retro-fit to more than 2,000 transition pieces, jackets, substations and wind turbine generators.

Integrated Wind Solutions ASA (Euronext Growth, Oslo: IWS) holds 75% ownership of ProCon A/S.

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