

Press Release from SENSEWind

SENSEWind awards industry-first triple rail tower contract to SM Industries for 2 MW BEIS demonstration project

UK onshore demonstration project advances with milestone contract award to Denmark-based SM Industries (formerly Valmont) with installation slated for late 2023.

21 February 2023 - SENSEWind has selected SM Industries (formerly Valmont) to produce a first-of-its-kind, triple rail wind turbine tower for its flagship 2 MW onshore demonstration project – a single turbine plan partially funded by UK Government (BEIS) FOW grant scheme.

The onshore project will be used to demonstrate and refine the SENSE SET (Self-Erecting Tower) system and the SENSE RNA (Rotor Nacelle Assembly) system.

Notably, this same technology will also be scaled for a 15 MW floating offshore wind turbine as part of the BEIS project, with both systems expected to be ready for INTOG and ScotWind projects in the UK.

“SM Industries is one of the world’s leading and most experienced wind turbine tower manufacturers, so we are thrilled to welcome them as a key partner on the project,” said SENSEWind Chair, Julian Brown. “Working in collaboration with Aerotrope, a UK-based renewables engineering company, we look forward to SM Industries bringing Danish know-how and best-in-class insights to the tower design for serial production.”

“We were thrilled when SENSEWind asked SM Industries to become a key partner in both maturing the new 2 MW tower design as well as preparing it for serial manufacturing by making it as cost-effective in the supply chain as possible,” said SM Industries Head of Project Development, Erhard Frederiksen. “Once commercialised (10-15 MW), the scale of this ‘standard’ tower will fit our manufacturing capabilities perfectly.”

“Aerotrope is delighted to be working on the realisation of the integrated tower and rail system for SENSEWind’s cutting edge self-installing technology demonstrator,” said Aerotrope Founder & CEO Chris Hornzee-Jones. “The collaboration with SM Industries enables us to ensure that efficient manufacturing approaches are considered at every stage of the design process.”

The three rails incorporated into the tower structure enable the tower and rotor nacelle assembly to 'self install', dramatically saving the cost of large cranes. The project will be constructed later in 2023 with testing to run through late 2024.

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About SENSEWind

SENSEWind Limited (SWL) is a tech innovation company developing solutions for the wind industry to enable rapid turbine installation, major maintenance of large wind turbines, and cost-effective re-powering. With the development of the SENSE concept (Self Erecting Nacelle & Service System), SENSEWind aims to drive down costs and increase the commercial viability of more wind projects across the globe, both onshore and offshore. By design, the concept reduces project risk and scales at the speed of turbine innovation - the larger and more remote wind turbines become, the more value the SENSE concept provides. Modelling forecasts show levelised cost of energy (LCoE) reduction between 6-9% depending on location. The SENSE concept has been successfully demonstrated with an onshore turbine in Ireland and is readying for a larger onshore demonstration project in the UK in late 2023. For more information visit www.senswind.com.

About the SENSE System

The SENSE (Self-Erecting Nacelle & Service) System installs, services, and decommissions large wind turbines without extra-large special cranes or crane vessels. The technology is aimed at the sector's otherwise inaccessible sites - onshore tall towers and deep waters offshore.

The SENSE System simplifies operations and reduces costs during development, construction, and operations, and increases revenue through higher availability. The value delivered to a project comes in many forms:

- Use standard construction vessel for RNA transport and transfer to tower
- Undertake inspections and maintenance without tall cranes
- No large expensive cranes or crane vessels for RNA installation

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- Reduces number of lifting operations during installation
 - Eliminates the need for handling systems within the turbine to repair/replace major components

About SM Industries A/S

SM Industries A/S is an experienced and leading supplier of components to the renewable energy sector. With highly automated production, SM Industries A/S has one of the world's most advanced coating plants for industrial surface treatment. The automated and high-tech plant specializes in the construction and production of large complex steel structures, towers, and rotor houses for on- and offshore wind turbines - as well as other serial manufacturing for the green energy sector. SM Industries is wholly owned by the Danish parent company Euro-Steel A/S. For more information, please visit <https://sm-industries.dk/>

About Aerotrope

Aerotrope is a fully independent design engineering consultancy based in the UK, specialising in renewable energy technology development. **Christopher Hornzee-Jones** founded Aerotrope in 2005. He is an engineer and designer with over 33 years of industry experience worldwide and he heads a multi-disciplinary team of specialist engineers, with applications in wind energy, tidal energy, airborne and marine low carbon vehicles as well as large-scale artworks.

Aerotrope's capabilities encompass concept development, optimisation using state of the art analytical tools, detail design for manufacture as well as testing oversight and results interpretation.