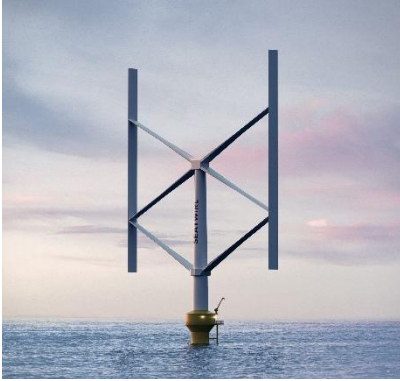


## The Horizon Europe project VERTI-GO redefines offshore wind with innovative floating vertical-axis turbines designed for deep waters

The new Horizon Europe project “VERTI-GO” was launched in October 2025 and is now more than six months underway, led by a consortium of 11 partners from across Europe. Co-funded by the European Union with € 14,988,373.30, this 4-year project set out to develop a 2 MW floating vertical-axis wind turbine (VAWT) designed for deep-water areas where fixed-bottom turbines cannot be installed.



To fully exploit the strong, consistent wind conditions in deep waters, the floating VAWT offers simplified maintenance and integrated design. Photo credits: SeaTwirl AB.

“Through VERTI-GO, we are demonstrating that floating vertical-axis wind is a step-change for unlocking deep-water wind resources. Our 2 MW VAWT will significantly reduce complexity, costs, and deployment barriers, while improving reliability. It will allow Europe to access vast offshore wind potential that remains untapped today, strengthening energy security and accelerating the transition to a more resilient, sustainable energy system,” says Project Coordinator, Dr. Fiona Devoy McAuliffe, University College Cork.

### Floating wind technology’s potential in Europe

As Europe ramps up towards 300 GW of offshore renewable energy capacity by 2050, floating wind will be required alongside fixed-bottom installations. However, current floating wind solutions simply adapt horizontal-axis wind turbines from onshore and fixed-bottom offshore designs, a method that fails to fully optimise efficiency for floating environments. Floating offshore wind has the capability to tap into 80% of the world’s offshore wind resources currently out of reach, located in waters deeper than 60 meters. VERTI-GO aims to exploit this potential, supporting Europe’s transition to clean, resilient energy.

### Developing a system where the turbine tower and floating structure form a single unit

VERTI-GO develops a floating wind system in which the turbine tower and the floating structure form a single unit. This reduces the number of components and simplifies manufacturing and assembly, and results in lower needs for infrastructure, enhanced reliability, and improved offshore O&M. Having already reached TRL5 performance with a 30kW demonstrator, the project will scale up to a 2 MW demonstrator, bringing together key actors across the offshore value chain to collaborate from design and fabrication through to installation and operation, paving the way for large-scale deployment.

### The objectives of VERTI-GO

- Develop and validate a full-scale 2 MW floating VAWT at a grid connected deepwater site, with a 15-month operational period to collect performance data, improve O&M and work towards a levelized cost of energy of €85-100 per MWh at farm level.
- Strengthen European supply chains by using at least 25% recycled or low-carbon materials and sourcing at least 50% of components by weight from within the EU.
- Develop a digital twin combining structural, aerodynamic and weather models to improve reliability and design optimisation.
- Carry out environmental assessment aimed at reducing the carbon footprint by 15% and noise emissions by 10%.
- Engage stakeholders and develop business models to support future commercialisation use.

### Reduces the need for specialised port infrastructure and heavy-lift vessels

VERTI-GO's floating applications contributes to European competitiveness, as it reduces the need for specialised port infrastructure and heavy-lift vessels, which can lower deployment barriers in regions with limited offshore support capabilities. The VAWT components can be assembled by European manufacturers onshore and transported worldwide in smaller sections, which simplifies logistics and costs. This makes floating wind easier to deploy in emerging offshore markets where port facilities, skilled labour or marine construction infrastructure are limited.

### Development of the digital twin software architecture

During the first six months, the consortium has advanced the engineering design; engaged with potential suppliers (e.g., shipyard, EPCI, offshore operation) for the construction and deployment phase; begun a techno-economic feasibility study of the design to inform the final design and operational strategy; built a number of use-cases to demonstrate the practical applications; and conceptualised the initial digital twin software architecture that will be used to monitor and analyse the floating turbine structure during later stages of the project.

The project aims to advance the technology to TRL8, and the design phase is expected to conclude by the end of 2026, followed by construction and operational activities running until the end of 2029.

### For more information, please contact:

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More information about VERTI-GO on the project's website: [www.vertigo-project.eu/](http://www.vertigo-project.eu/) and LinkedIn: [www.linkedin.com/company/verti-go-project/](https://www.linkedin.com/company/verti-go-project/)

### The full consortium

The project is coordinated by University College Cork, with SeaTwirl serving as Technical Coordinator. The remaining consortium consists of Bureau Veritas Solutions UK, EDP R&D (CNET Centre for New Energy Technologies SA), Greenov, Next Fabrication, PNO Innovation Belgium, Reliability and Safety Technical Center (RSTER), Sub Connected AB, Sowento, and Zorlu Enerji.

