

BlueSATH: Saitec's first offshore wind deployment in Spain



[Saitec Engineering](#), one of the leading engineering firms in Spain, is launching its first offshore wind medium-scale prototype: **BlueSATH**. This project is scheduled to go online during the first quarter of 2020 in the open sea waters of Santander (Spain) for a 12 months period after which the prototype will be completely decommissioned.

Testing will take place in real sea environment with the deployment of a **1:6 scaled prototype** of a 10 MW wind turbine using **SATH floating technology**, acronym of Swinging Around Twin Hull, an innovative, competitive and cost efficient solution for offshore wind industry, which has been validated in several water tank tests since 2014.

The main objectives of BlueSATH project cover SATH platform **validation** of its response and **dynamic behavior**. The aim is to obtain models that allow for structural optimization, enabling cost reduction and validating structural turbine integrity.

Additionally, the variables which better predict damage on different structure elements would be identified so the structural life cycle can be appropriately forecasted through a series of sensors. Furthermore, demonstrator's logistic

and transport challenges and risks would be monitored in the course of its transport from manufacturing/assembly setting to its final operation location.

Regarding wind turbine operation and maintenance, the necessary operations would be established, in order to ensure its optimal performance owing to platform accessibility system.

The obtained results and findings will be applied in the following real-scale model (2MW), to be installed on the Basque Marine Energy Platform (BIMEP) in 2021.

The Abra of Sardinero, in the city of Santander (Spain) is the selected deployment location due to its meteoceanic conditions (wind, waves, currents and depth) which make it suitable to create a real scaled environment. This project has significant local content, with many companies from Cantabria Region taking part such as: Santander Port, IHCantabria, DEGIMA, ASTANDER y ACORDE.

To sum up, BlueSATH will promote the development of renewable energy, contributing to achieve the global sustainability objectives through the use of wind at greater depths to generate energy. In this way, offshore wind is positioned as one of the most dynamic and with higher potential sources at the present. This is confirmed by *Offshore Wind Outlook 2019 report*, which indicates that the offshore market has grown by about 30% a year in the period between 2010 and 2018 and its capacity is expected to increase 15 times in the next two decades.

Technical features

Wind Turbine	AE-30kW (Aeolos)
Rotor Diameter	15m
Hub Height	17,45m (m.s.w.l.)
Mooring	3 x 150m (40mm grade 3 chain)
Anchors	3 x Stevpris® Mk6 anchor 2 mTons
Mass	50T (steel + concrete)



Co-funded by the COSME programme of the European Union

About Saitec Engineering

Founded in 1988, SAITEC is one of the most prestigious engineering firms in Spain at present. It carries out its activities from a professional and independent standpoint, with a strong commitment to innovation, sustainable development and respect for the environment.

Its main activity involves the development of transport infrastructure projects (railways, roads), water engineering, architecture, town planning, environment and industry & energy. Its scope of action covers the entire engineering value chain (planning, design, construction and operation), providing services to public and private companies, and joint ventures.

Also provides consultancy services in highly specialised fields such as tunnels and underground works, geology and geotechnical engineering, structural engineering, innovation, construction and computer engineering.

Since 2008, shares its experience and know-how in other markets with strong growth potential. The firm has set up in United Kingdom, Sweden, Qatar, Australia, Panama, Peru and Colombia.

More information



Head of communications and marketing

Coral Jaén

Parque Empresarial Ibarraerri / Edificio A2 / 48940 Leioa-Bizkaia

T. (34) 94 464 65 11 / M. (34) 627 79 17 67

coraljaen@saitec.es / www.saitec.es /