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**THE WORLD'S FIRST TELESCOPIC OFFSHORE WIND TURBINE INSTALLED IN GRAN CANARIA**



Coordinated by ESTEYCO, the ELICAN project aims to develop a disruptive technology for offshore wind substructures. The concept uses a self-floating GBS and a self-lifting telescopic tower, both made of concrete, which can be fully assembled onshore, turbine included, and conventionally towed to the site.

ALE's innovative and safer heavylifting techniques have been demonstrated when they completed the tower lifting operations, coupling and offshore installation of the world's first self-installing telescopic offshore wind turbine in Arinaga and the Plataforma Oceánica de Canarias (PLOCAN), Gran Canaria.

This is the first offshore wind turbine of its kind; it does not need large, costly offshore equipment for its installation, thus reducing the overall installation cost (about 30%). All of the wind turbine's components are assembled onshore in the port, then the turbine is towed into its offshore position by tugs – making it a more efficient and economic methodology.

The prototype uses a Siemens-Gamesa 5MW wind turbine. The tower consists of three sections, and the upper two are lifted with ALE's equipment: T1 weighing 360t and T2 weighing 240t, with both measuring 33m high.

ALE was responsible for lifting the two sections as well as removing the transportation, installation and maintenance (TIM) platform of the tower, which gives greater stability for the prototype.

As a safer installation solution, ALE controlled all the equipment used for the offshore manoeuvres via Wi-Fi from a vessel, specially developed by ALE. In June 2018, ALE's new horizontal guidance system was used to perform the lifting of the T2 section with nacelle, weighing 540t, and the final lifting of the T1 and T2 sections with nacelle, weighing 960t, was completed in July 2018. Finally, the 5MW turbine will be connected to the electrical cable.

"It is fantastic to be involved in such a unique and complex project. Esteyco, as coordinator of the project, chose ALE because of our reputation in the industry to complete projects involving heavy pieces and a combination of different techniques successfully," said Cecilio Barahona, Project Engineer for ALE's Spanish branch.

"We have developed specific solutions for all the challenges resulting from the project and reduced risk thanks to our engineering designs. This project has really demonstrated our capabilities in the renewables sector and the confidence our clients have in our innovative methodologies for us to carry out more projects involving these type of towers, both in offshore and onshore", he added.

Once completed, the wind turbine will be the first of its kind. Energy production is expected to start during Q4 2018.

This is part of the H2020 ELICAN project led by ESTEYCO, where ALE is part of the consortium building the first self-installing telescopic offshore 5MW wind turbine with reduced installation costs in the Canary Islands.

The ELICAN Project has been partially funded (70%) by the European Commission under the Horizon 2020 programme, taking place over three years. The project counts with the collaboration of five European partners world-leaders in their respective fields such as: ESTEYCO SA (project leader) GAMESA EÓLICA, S.L.U., ALE Heavy-Lift (R&D) BV, UL INTERNATIONAL GMBH and PLOCAN.

## ENDS

*Issued by the ALE Press Office. For more information, please contact Sarah Maia, Group PR Officer, 01782 977 146 or [s.maia@ale-heavylift.com](mailto:s.maia@ale-heavylift.com).*

## NOTES FOR EDITORS:

**Images 1 and 2: The completed wind turbine prototype.**

### **ABOUT ALE**

ALE delivers a highly tailored, end-to-end service covering every aspect of the handling, transportation and installation of heavy, indivisible loads, including lifting, transporting, installing, ballasting, jacking and weighing.

ALE provides strategic heavy-lift services to a wide range of sectors, including civil, oil and gas, energy, nuclear, offshore, renewables, petrochemical, ports, marine, minerals and metals and mining.

ALE has a presence in 40 countries worldwide. It is fully compliant with international standards of safety and excellence, including Quality standard ISO 9001:2015, Environmental standard

ISO 14001:2015, and Health and Safety Standard OHSAS 18001:2007. Further information can be found on the ALE website at [www.ale-heavylift.com](http://www.ale-heavylift.com).

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