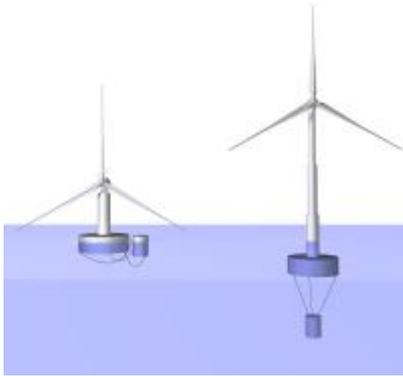


TELWIND

INTEGRATED TELESCOPIC TOWER AND EVOLVED SPAR FLOATING SUBSTRUCTURE FOR LOW-COST DEEP OFFSHORE WIND AND NEXT GENERATION OF 10MW+ TURBINES 654634



Programme:
H2020 Energy

Topic:
LCE-02-2015

Call for proposals:
H2020-LCE-2015-1-two-stage

Duration:
01/12/2015 to 30/11/2018

Funding scheme:
RIA

Total cost:
€3,498,530

EU contribution:
€3,498,530

Coordinator:
ESTEYCO SA

Project website:
<http://www.telwindoffshore.com/>

Project description on CORDIS:
http://cordis.europa.eu/project/rcn/199267_en.html

The TELWIND project will elaborate and test in a lab environment a novel floating substructure with a self-erecting telescopic tower. Together they should enable the effective development of the next generation of extremely large (10MW+) offshore wind turbines, which are key to further reducing the costs of energy production.

The TELWIND concept integrates a novel floating substructure and a pioneering self-erecting telescopic tower. The former provides all the performance advantages of a spar-buoy substructure while allowing for lower material usage, the latter enables a full onshore preassembly of the overall system and a highly beneficial reduction of offshore works and auxiliary means. Together they overcome the limitations imposed by the available inshore infrastructure and offshore heavy lift vessels, and thus generate a fully scalable system, perfectly fitted for the effective integration of the next generation of extremely large (10MW+) offshore wind turbines which are key to reduce the levelised cost of energy (LCOE). The concept, which has already undergone trial tank testing with overly positive results, will enable a radical cost reduction both in terms of material usage and required means and operations.

The system will also profit from the proven structural efficiency and economy of precast concrete, a material particularly well suited for low-cost industrialized production of repetitive units. Robust, reliable and virtually maintenance-free marine constructions result, reducing OPEX costs, greatly increasing durability and fatigue tolerance, and setting the ground for extended service life of the infrastructure, which could further magnify the system's capacity for drastic reduction of the LCOE.

Participants:

ESTEYCO
ALE
Mecal WTD
UC-IHC
CEDEX
COBRA
DYWIDAG
TUM

Country:

ES
NL
NL
ES
ES
ES
DE
DE

EU contribution (in €):

€1,784,875.00
€200,250.00
€355,000.00
€503,125.00
€223,967.50
€108,875.00
€168,750.00
€153,687.50