

Skybox Phase 2

Publieke samenvatting / Public summary

Aanleiding

The demand for renewable energy and alternative sustainable-based resources is constantly growing. The Dutch government, focusing on offshore wind energy, has increased the capacity goals to 21 GW by 2030 with the aim to drive sustainability further. Operating offshore is costly when compared to onshore wind farm developments which renders innovations in that direction necessary for reducing the levelized cost of energy. Currently, the monopile in combination with a transition piece is the most widely used foundation for offshore wind turbines. However, the transition piece requires a large amount of resources to be produced as well as time consuming procedures during installation which encounter for cost increase. As a cost efficient alternative, the transition piece-less concept has been introduced but the installation remains challenging. To overcome the complexities and further reduce the energy costs, the Skybox platform is proposed as an all-encompassing solution. With the reduction of the materials use and based on the slip joint connection, the Skybox platform aims to optimize the installation procedure and further reduce the foundation costs.

Doelstelling

The goal of this project is to prove the installability of the Skybox platform in the relevant offshore environment. To perform the installation and reduce the time required for positioning the platform on top of a monopile, an installation tool will be developed which will also integrate an airtight platform. In that context, the ultimate aim is to demonstrate the workability of an all-encompassing platform solution

Projectinformatie / Project information

Projectnummer / Project number

HER+23-03537923

Subsidiebedrag / Grant amount

€ 1.810.385,00

Algemene informatie / General information

Penvoerder / Secretariat

Delft Offshore Turbine B.V.

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based on the single lift concept and address areas for improvement while preparing for market launch.

Korte omschrijving

To perform a successful project the following steps should be followed. In first place, the installation tool and the airtight platform will be designed specifying the requirements and the engineering parameters. The engineering, simulation and analysis of the equipment follows where the developed tools are being defined from a technical standpoint. After the completion of the analysis, the procurement and the actual construction of the tools will be performed. The testing of the equipment integrated with the Skybox platform follows in order to prove its overall functionality. As an addition for safety purposes, a wave runup assessment will be also performed. On top, substantial as well as administrative project management activities are also included to keep track and monitor the overall progress of the project.

Resultaat

The results of this project focus on the creation of knowledge on the installability of the Skybox platform in the relevant environment with the assistance. The deliverables of the present project include a fully designed and tested installation tool, an integrated airtight platform, proof of the installation concept in the relevant environment as well as a detailed report with the installation procedure, the performance and the testing parameters encountered. In addition a report of the wave run-up assessment will be included.

De data in deze applicatie is afkomstig van de Rijksdienst voor Ondernemend Nederland (RVO) en wordt in samenwerking met de Topsector Energie ontsloten.

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