

Delta 1000 Demonstrator

Publieke samenvatting / Public summary

Aanleiding

Offshore windfarms are gradually moving further offshore. For remote windfarms, significant cost reductions can be realized by replacing the installation vessels by a relatively cheap feeder-barge, for the transit of the turbines between the harbour to the installation site. For windfarms closer to shore, cost decreases occur, once the added cost of the feeder-barge spread including the offshore transfer, is offset by the cost reduction of deploying the installation vessel for onsite installation only. The two obvious value drivers are the fixed distance between the harbour and the windfarm, and the difference between the cost of crane vessel and the feeder barge spread, which can as well be considered fixed at a certain point in time.¹ The third key value driver is the performance of the feeder barge spread, summarized as safe and reliable transfer operations between the feeder-barge and the installation vessel, with a workability as high as possible. The offshore tests of the Delta 600 Prototype have indicated the technology could be an enabler for such transfers, with a workability of 75-85% (preliminary estimate).

Doelstelling

The project aims to demonstrate of the feeder-barge concept in general, and the ability to transferring turbines from a floating feeder-barge to a fixed (jacked up) crane vessel in relevant weather conditions by the Delta 1000 Demonstrator in particular. This will convince the market of the potential cost savings of the feeder barge concept and as for the Delta 1000 Demonstrator, its readiness for commercial deployment. The project

Projectinformatie / Project information

Projectnummer / Project number

HER+21-02587071

Subsidiebedrag / Grant amount

€ 6.000.000,00

Algemene informatie / General information

Penvoerder / Secretariat

Sequalize B.V.

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will define the design parameters for its commercially viable successor, to be brought to market shortly after the project. The project aims to be a pathway for further innovation driving additional cost savings for installation-, O&M, decommissioning operations for both fixed and floating windfarms.

Korte omschrijving

Offshore windfarms are gradually moving further away from the coastline. Cost reductions can be realized by replacing installation vessels with relatively cheap feeder-barges for the transit of the turbines from the harbour to the installation site. Seaqualize will build the Delta 1000 Demonstrator, to enable offshore transfer of the turbine parts from the (floating) feeder-barge to the (fixed) jack-up crane vessel, in relevant weather conditions. Its demonstration will be done together with DEME, during the installation of a full offshore windfarm of around 700MW or more. In addition to such floating to fixed transfers, the Delta will as well be suitable for floating to fixed and floating to floating transfers. This will drive further cost reductions for installation-, O&M-, and decommissioning operations on both fixed and floating windfarms. The Delta 1000 Demonstrator will be based on the Delta 600 Prototype, as successfully tested together with Van Oord Offshore Wind in November 2021.

Resultaat

The project will validate the Delta 1000 demonstrator up to TRL7/8, enabling Seaqualize to introduce a technically and commercially validated product to the market before the end of 2024. The project will demonstrate the feeder-barge concept, as a commercially viable alternative to the traditional installation by jack-up's only. It will provide knowledge for further deployment of the feeder-barge concept for both remote and more near-shore windfarms. The project will decrease the cost of offshore wind energy in the market segments installation, O&M and decommissioning for both fixed and floating turbines.

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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