The MonobaseWind gravity base foundation has been developed for deeper water (+40 m) and larger turbines (10+ MW) and to provide for an assembly of the entire base, tower, turbine and blade system inshore thereby increasing safety, saving cost, reducing CO2 footprint and avoiding multiple offshore campaigns to assemble these components. Heavy lift vessels or jack-up rigs are no longer required for installation offshore. This approach also minimizes the exposure of the delicate marine environment to the industrial work required to build an offshore wind farm.

**Design**

The MonobaseWind design has matured over the years from a full steel structure to a more efficient hybrid steel concrete structure. The Naval Architectural design forms an important part of the feasibility of the concept. For that reason a full model test campaign has been performed in cooperation with MARIN.

**Construction**

A dedicated production site has been designed which can be setup at any yard around the world. Solutions for horizontal and vertical transport are available and will be cost efficient for large volume production.

**Potential**

A gravity based foundation will become the preferred concept for the next generation wind turbines which will be in the range of 12 to 18 MW. The specific increased dynamic loads and heavy structural weights of these units will shift the foundations from monopiles and jackets towards the more robust gravity base solutions.

Costs engineering has shown that for the current largest turbine, in the range of 9.5 MW and waterdepth around 40 m, the gravity base is already more cost effective than a jacket.

The increased weights and size of the next generation wind turbine will also increase the offshore installation challenge. The conventional method using jack-up platforms will be out performed by floating equipment and the integrated self installing concepts like the MonobaseWind.

**Demonstrator Borssele Kavel V**

A basic design for the Borssele Kavel V demonstrator has been performed with support from the Dutch government. The work has been done together with our partners. A consortium has been formed to prepare for the bid on this project which will be awarded Q1 2018.

**Environment**

The concept does not need any hammering of piles and requires only a minimal offshore vessel spread keeping the disturbance to the environment to acceptable levels. The design of the foundation also considers the period after the technical or economical life of the wind turbine. Various options are available which can be included pending the local environmental conditions.

**About**

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