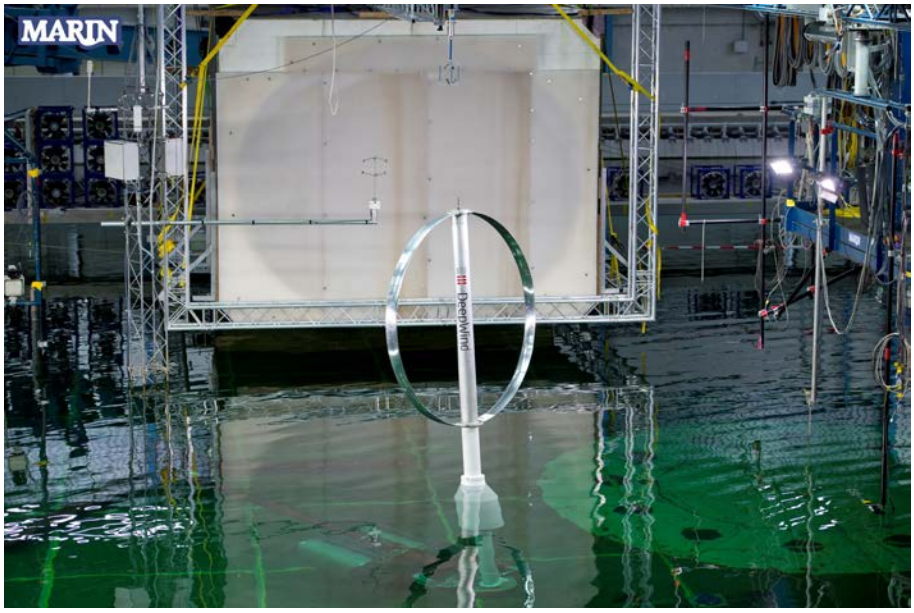
Press release
March 11th, 2013

Invitation for press conference
Tuesday the 12th of March at 09:30 am, Wageningen, The Netherlands
Visit unique model tests at MARIN

Unique vertical floating wind turbine model tests for DeepWind consortium at MARIN

Wageningen, the Netherlands – **MARIN (Maritime Research Institute Netherlands) is in the closing stages of testing a vertical floating wind turbine concept for the Deepwind Consortium, led by the Technical University of Denmark (DTU). Vertical floating wind turbines are considered to be the next step in development of offshore wind energy.**

Floating wind turbines allow wind energy generation in deeper areas with more wind and more space. The hypothesis of the DeepWind project is that a new wind turbine concept developed specifically for offshore application has potentials for better cost efficiency than existing offshore technology. Based on this hypothesis the project has the overall objective to explore the technologies needed for developing a new and simple floating offshore concept with a vertical axis rotor and a floating and rotating foundation. The concept consist of a long vertical tube that rotates in the water, a vertical axis rotor at the top, a bottom based generator and a sea-bed fixing system at the bottom. However, although being simple, the technology behind the concept presents extensive challenges needing explicit research.



The Deepwind floating wind turbine scale model in front of MARIN's dedicated wind setup

(picture: DeepWind, publication free).

Uwe Schmidt Paulsen coordinates the DeepWind project, and Troels Friis Pedersen is the task leader of the experimental program conducted on the DeepWind concept-the “demonstrator”.

Erik-Jan de Ridder, responsible Project Manager at MARIN, states that “a key point in these tests is that wind and waves are present simultaneously in a controlled environment, allowing the study of the complex motions and loads of the rotating wind turbine in wind, waves and current. Therefore these tests serve as high quality benchmark data to validate simulation methods for the coupling between aerodynamic and hydrodynamic behavior”.

After having conducted initial tests with the demonstrator in the fjord at Riso last Autumn, and the controlled test in the MARIN basin, the next step of the DeepWind consortium is to deploy the floating wind turbine at Riso for further testing in the fjord. Data from these tests and the model tests will be used to further look into the physics behind this concept and for further concept development.

DeepWind

DeepWind is a 4 year project, funded by FP7 - Future Emerging Technologies, and runs from 1 October 2010 to 30 September 2014. DTU is coordinating the consortium of 12 international members comprising DTU Mekanik, TUDelft, Institut for Energiteknik/Aalborg Universitet, DHI, MARINTEK, SINTEF Energy Research, Nenuphar SA, Statoil, Universita Degli Studi di Trento, MARIN, National Renewable Energy Laboratory (NREL), and VESTAS Wind Systems A/S. Offshore wind energy will play a steadily increasing role and calls for dedicated technology rather than being based on onshore technology that in principle just is transported to sea environments. The hypothesis of this project is that a new wind turbine concept developed specifically for offshore application has potentials for better cost efficiency than existing offshore technology. Based on this hypothesis the project has the overall objective to explore the technologies needed for development of a new and simple floating offshore concept with a vertical axis rotor and a floating and rotating foundation. Additionally, the objective is to develop calculation and design tools for development and evaluation of very large wind turbines based on this concept.

TU Delft

TU Delft is one of the DeepWind knowledge partners. DUWIND 2.0, the multidisciplinary wind energy research and education institute, is for example responsible for aerodynamic modeling and participates in the design of the blades and the safety systems for the DeepWind Vertical Axis wind turbine. DUWIND 2.0 is collaborating closely with industrial partners such as MARIN, Nenuphar SA and Statoil.

MARIN

For more than 75 years, the Maritime Research Institute Netherlands (MARIN) has been contributing to the development of safe and economic ships and offshore structures as independent advisor. Therefore MARIN sees it as its responsibility to contribute to the development of renewable energy offshore from waves, tides and wind. For this reason, MARIN started a special Renewable ENergy Team (RENT).

End of press release

Invitation for press conference Tuesday 12th March – Visit unique model tests at MARIN
Do you wish to attend these unique model tests on Tuesday the 12th of March? We will be pleased to welcome you at 09.30 a.m.

Visiting address:	MARIN Haagsteeg 2 6708 PM Wageningen The Netherlands
Contact person:	*Ingrid Wolfs*

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For more information:

More information and a movie of the test: see www.marin.nl

Or contact:

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