

PRESS RELEASE

Oldenburg, Düsseldorf, Hamburg, September 9, 2009

## The largest crane vessel in the world is busy at alpha ventus: "Thialf" is placing the foundations for the REpower turbines

The superlative meets the pioneering spirit: "Thialf", the most powerful floating crane in the world is helping with the completion of Germany's first offshore wind farm, alpha ventus. Currently, the construction vessel is placing six steel foundations 30 metres deep on the seabed of the North Sea, approximately 45 kilometres north of the island of Borkum. Using these so-called 'jacket' foundations, the consortium of EWE, E.ON and Vattenfall will shortly erect six REpower 5M wind power turbines, each with a height of 155 metres above sea level. At completion, the alpha ventus wind farm will be comprised of a total of twelve wind power turbines. Six Areva Multibrid M5000 turbines have already been constructed and are in operation.

The Thialf is a deepwater construction vessel used in offshore industries. Its namesake is "Thialfi", the servant of the god of thunder, Thor. Its technical data is impressive: the overall length of the Thialf measures a good 200 metres, with a width of almost 90 metres – the equivalent of two football fields. The Thialf has two cranes at its disposal, which can lift up to 14,200 tonnes in tandem. For comparison, the steel construction of a wind power turbine at alpha ventus weighs around 1,000 tonnes. The Thialf is a so-called 'semi-submersible', meaning that it can change its draught in order to meet the environmental conditions of the site. The ship belongs to the Dutch shipyard of Heerema Marine Contractors (HMC).

The ongoing activities at sea can also be followed on the Internet. A webcam on the research platform FINO1 gives a direct view of the construction site. A link to the webcam can be found at [www.alpha-ventus.de](http://www.alpha-ventus.de).

With its successful construction of the offshore transformer station in September 2008, DOTI had already created the necessary prerequisites for the transmission of the generated wind



power ashore. An underwater cable, installed last year by transpower gmbh (formerly E.ON Netz), connects the offshore transformer station to the German power grid.

*Note to editors:*

**Current print-quality images** as well as illustrations of offshore wind turbine construction can be downloaded free of charge at: <http://bildarchiv.alpha-ventus.de>

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### alpha ventus

alpha ventus is the first German offshore wind farm constructed at sea by EWE, E.ON and Vattenfall. A total of 250 million euros has been invested in this pioneering project. The future production capacity of alpha ventus will be equivalent to the consumption of 50,000 households. This pilot project, situated roughly 45 kilometres off the coast of the island of Borkum, is producing fundamental knowledge on the construction and operation of an offshore wind farm. A total of 12 5-megawatt wind turbines will be employed at the alpha ventus test field – six Areva Multibrid M5000 turbines and six REpower 5M turbines. Furthermore, two types of steel foundations will be used for the wind turbines. While the Areva Multibrid turbines stand on tripods, so-called 'jacket' foundations are used for the REpower turbines.

For the first time, such turbines will be constructed and operate offshore in waters up to 30 metres deep. The research and development results are being integrated in the design, construction and operation of future offshore turbines. EWE, E.ON and Vattenfall have founded DOTI (Deutsche Offshore-Testfeld und Infrastruktur GmbH & Co. KG) for the realisation of the alpha ventus wind farm. DOTI has leased the licensing rights to the test field from the Stiftung der Deutschen Wirtschaft für die Nutzung und Erforschung der Windenergie auf See (Offshore Wind Energy Foundation) under the name 'Borkum West'.