

Dexa Wave Energy gets public funding for testing its concept

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[The wave power technology developer has received support from Energinet.dk to test a 1:5 scale version of its machine in the stormy coastal waters off Jutland](#)

Danish wave power technology developer Dexa Wave Energy has received DKK 5m (USD 1m) in support from the state owned infrastructure operator Energinet.dk to test a 1:5 scale version of its machine in the stormy coastal waters off the north west coast of Jutland, reports professional journal Ingeniøren (The Engineer).

This is the first time that the company has received Public Sector Obligation support. Up to this point, the company has itself paid for tests conducted with a 1:10 scale model in a test tank model at Aalborg University and at a coastal water location where conditions are moderate. Dexa Wave Energy's director Lars Elbæk commented to Ingeniøren: "With the 1:5 scale model we can test efficiency in relation to the upscaling of the concept, and also test our anchoring system as well as general operation and maintenance in harsh conditions."

Dexa's wave machine is quite simple in concept, consisting of two rigid pontoons hinged down the middle so that the one can pivot in relation to the other, with a hydraulic power take-off system placed in between.

The floating pontoon design from Dexa is the fourth Danish wave machine concept to be tested, the others being Wave Dragon, Wave Star Energy and Floating Power Plant. Being a floating design, Dexa's concept is in principal best suited for deep water locations with their commensurately larger waves.

The energy in waves is affected by many more factors than the energy in wind. This explains why there are many more designs and technologies being explored compared with wind energy, which is essentially based on a single technology. It also explains why wave energy is a generally more slowly evolving renewable energy sector than the wind industry.

On the subject of pilot scale vs. full scale plants, readers may like to know that wind turbines and wave power machines do not share the same scalability factor. If you double the diameter of a wind turbine rotor, you get four times more power. But if you double the size of a wave power plant, you get 11 times more power.