Vertiwind: Floating wind turbine project launched

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(PhysOrg.com) -- Technip, a French-based oil and gas engineering company, and Nenuphar, a wind-power startup, announced that they will soon launch Vertiwind, a newly designed wind turbine.

The turbine's design hopes to reduce the hefty cost associated with tethering deep-water installations by turning the turbine on its side. Instead of the traditional horizontal-axis design the Vertiwind has its main rotor shaft set vertically. The motion will be more akin to a spinning top, which has the advantage of a lower center of gravity.

While the Vertiwind design stands 100 meters tall the real weight, a 50 ton generator, is only 20 meters above the sea. When compared to a standard 100 meter wind turbine, which houses the generator 60 meters above the sea, the Vertiwind's design has a much lower center of gravity. This allows for a flotation system that extends only nine meters below the surface of the ocean. The two-megawatt turbine is expected to be in service in the Mediterranean waters by the end of 2013.

Some scientists, such as Walter Musial, the leader of the offshore wind energy research activities for the U.S. Department of Energy's National Renewable Energy Laboratory, have expressed concern about the turbines straight blades and potential for damage caused by centrifugal force during normal rotation. The concern is compounded by the fact that the blades will only be attached by two supports near the bottom of the blade, instead of more evenly distributing the load.

A 0.5-scale prototype, built in the laboratories of Arts and Crafts school in Lille, is currently going through land-based testing on the "Carrieres" site, in Boulonnais. Once land-based testing has ended the prototype will be tested at sea.

More information:
www.technip.com/en/press/techn … wind-turbine-project