



Floating turbine platform gets initial assessment from ABS

ABS, a global standards and verification society for marine facilities, is evaluating Principle Power's floating support structure for off-shore wind turbines.

WindFloat, as Principle's design is known, underwent a hazard identification study, which seeks to identify "what can go wrong" with the novel system. The feedback from the study is being incorporated into Principle's engineering design as it seeks "approval in principle" from ABS.

Principle describes WindFloat, design of which was purchased from Marine Innovation and Technology, as a semi-submersible, three-column structure, with a turbine tower, truss and "water entrapment heave plates" at each column's base, designed to reduce pitch and yaw, and make the entire structure smaller. It aims to support deployment of large capacity wind turbines (3.6 megawatts to 10MW) in deep water (50 metres or greater).

ABS, the American Bureau of Shipping classification society, has been developing and verifying marine facility standards since 1862. Its subsidiary, ABS Consulting, conducted the hazard study.

"For ABS, this renewable energy design review provides us with the opportunity to extend established offshore industry practices," states ABS manager of corporate energy development Stephen Newell.

In evaluating the hazards, ABS Consulting queried what would happen in a collision, or if the structure's legs were damaged. Newell says the key issues with the platform from the society's perspective are "hull strength and fatigue, stability of the unit under tow and in-place, the mooring system and dynamic loading of the wind turbine".

Principle, based in Seattle, Washington, positions its concept as easier to install than other off-shore wind platforms because it could be assembled on shore and towed into place, negating the need for specialised installation equipment.

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