



## Tideland LED warning lights for Portuguese test of floating wind turbine

Tideland Signal has supplied Principle Power with a comprehensive package of LED warning lights to warn shipping when the revolutionary “WindFloat” floating wind turbine is stationed off the coast of Portugal.

Windfloat is the focal point of a US \$23 million programme for testing the potential of the design in a location with plenty of wind but inhibited by difficult offshore accessibility. Designed by Marine Innovation and Technology, WindFloat consists of a triangular platform which can operate in depths which were previously unattainable (more than 50m), employing wave dampening and turbine-induced motion. The platform is largely assembled onshore, eliminating the expense of jack-up barges, and is compatible with current wind turbine technology, but profits by the better wind conditions further offshore.



Principle Power's WindFloat is based on a triangular platform which can operate in previously unattainable depths, employing wave dampening and turbine-induced motion

On station, WindFloat will be marked by three Tideland MLED-155 lanterns with on-board GPS synchronisation and a MaxiHALO-EFF producing a white flashing light of at least 15 candela and Morse code U. In addition, Tideland is supplying three ship navigation lights to mark port, starboard and stern of the structure during tow-out. A single photocell switches power to these lights during night time.

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For additional information regarding Tideland Signal Corporation, Aids to Navigation, and VTS and AIS solutions, please contact Christine Clark at +44 1444 872240 ,  
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Tideland's MLED-155 is designed for use with an external power source, in this case 9-36VDC, and offers minimal maintenance requirements and a service life of 25 years on station in the most demanding environments. Long-life LEDs and high-integrity electronics housed in a tough UV-resistant polycarbonate enclosure ensure that lantern will not need to be opened during its service life.



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WindFloat is a semi-submersible design with the turbine pylon carried asymmetrically on a triangular structure of three linked columns moored to the seabed via anchors. Along with ballasting, water-entrapment or “heave” plates at the base of the columns reduce pitch and yaw in waves, while a closed-loop trim system mitigates wind-induced thrust forces. The hull has a draught of 20m and, with ballast, displaces up to 5,500 tonnes. A Vestas V80-2.0MW offshore wind turbine on top of a 80m tower and fitted with a 120m rotor will deliver 2MW of energy.

Participants in the Portuguese project include Principle Power, Inc., Energias de Portugal, or EDP, and InovCapital – Sociedade de Capital de Risco, SA., Vestas+ Wind Systems A/S, A. Silva Matos (ASM), and Fundo de Apoio a Inovacao (FAI).

Tideland previously supplied three MLED-155 light stations, with a range of 5 NM to mark Statoil's Hywind floating wind turbine which is mounted on a spar buoy, as well as lights and sound signals for many of the more traditional offshore wind farms.

*Founded in 1954, Tideland Signal Corporation is committed to meeting and exceeding the requirements for marine aids to navigation to the maritime industry.*

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