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Marine Current Turbines completes endurance testing at the National Renewable Energy Centre

The Offshore Renewable Energy Catapult's (ORE Catapult), National Renewable Energy Centre has completed a multi-axis onshore endurance test programme on Siemens-owned Marine Current Turbines' (MCT) first 1MW powertrain (gearbox, generator and power conditioning equipment) using the 3MW tidal turbine drive train testing facility.

During the 11 month test programme the 1MW turbine was exposed to the full range of power output and aggressive loadings the device would experience subsea, securing performance data equivalent to over 18 years' of operation in the worlds' harshest tidal cycles.

Working together, the technical teams conducted a complete range of tests on the power train and its key components including the gearbox, power electronics and grid connection, in a controlled environment simulating the thrust and oscillating torque of extreme sea conditions. This type of testing was essential to understand how the whole system would be expected to perform in real offshore conditions before first array deployment.

Sven Stoye, Chief Executive Officer of MCT said:

"We are very pleased to announce the successful completion of this

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significant milestone. In demonstrating an equivalent life in excess of 18 years we have completed another industry first. Together with over six year's successful deployment of SeaGen in Strangford Lough and more than 9GWh of electricity generation, we are confident that the technology that is planned for the Skerries Array in 2016 will be world-class."

"We would like to thank National Renewable Energy Centre for their work and foresight in providing the sector with the Nautilus testing facility, which has demonstrated its extensive capabilities in this testing programme".

Tony Quinn, operations director, ORE Catapult said:

"This has been a tremendous learning experience for everyone involved, and has provided vital information to aid our knowledge and understanding of the capabilities of the 3MW capacity drive train test facility."

"For the first time, we have been able to utilise the capability of the Force Actuation System (FAS) to simulate extremely aggressive accelerated lifecycle tests. Proving the performance and efficiency of the technology is pivotal in helping the tidal current industry to gain substantial confidence in new marine energy devices and spearhead the industry's expansion."

-ENDS-

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* Data includes intercompany revenue. Data may not be comparable with revenue reported in annual

Offshore Renewable Energy Catapult (ORE Catapult)
ORE Catapult is one of seven Catapult centres established by the Technology Strategy Board with over £1.4bn of public and private sector investment expected over the next five years. The Catapults bridge the gap between business, academia, research and government to promote and nurture technology innovation.

The ORE Catapult has merged with the National Renewable Energy Centre (Narec), creating a unique organisation that combines deep technical knowledge with world-class testing facilities. It works in collaboration with industry and academia to provide engineering, technical and commercial expertise and facilities to speed up the delivery, commercialisation and scalability of technology innovation to meet the challenges of harnessing low-carbon power from offshore wind, wave and tidal energy.

www.ore.catapult.org.uk