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Anniversary of wave energy machine project marks next phase of wave farm reality in Orkney waters

The world's first wave power machine to be sold to a utility company has celebrated its first anniversary since grid connection at the European Marine Energy Centre (EMEC) with a series of technical achievements and no lost time incidents.

The achievements include the completion of some 260,000 man-hours of construction, commissioning and testing with no lost time incidents; proven rapid installation and removal systems; proving of the machine function across a range of weather conditions; and measuring conversion efficiencies better than design targets.

The E.ON machine, manufactured by the world's most advanced wave energy company, Pelamis Wave Power, was installed in October 2010. Since then a dedicated team of four Pelamis engineers, based permanently in Orkney, have helped implement a progressive testing programme, putting the machine through its paces in increasingly energetic sea conditions and progressing through a rigorous inspection regime. During each installation period the E.ON machine has been generating electricity into the national grid.

Amaan Lafayette, Marine Development Manager at E.ON, said: "Over the past year we've learned a lot about how wave machines act in real operating conditions. It's been a challenging, but really exciting 12 months. Wave power creates a significant generating opportunity for a company like E.ON, by broadening our renewable portfolio and potentially helping with the intermittency of other technologies. I'm, personally, very excited to be working on this project and now with the proposed 5ROC support for marine renewables, wave farms are looking increasingly likely."

The E.ON Pelamis machine has reached a number of significant milestones, including:

- A collective 260,000 man-hours have been put into the construction, commissioning and testing of the machine, with no lost time incidents.
- Successful functional testing of the Pelamis machine and its associated systems, including development of remote machine monitoring from Pelamis headquarters in Leith.
- Establishing use of the improved machine connection and disconnection system, with connection achieved in less than 100 minutes and disconnection in 12 minutes.
- The tests have measured conversion efficiencies of greater than 70% in a range of conditions and for sustained periods.

Ed Maycock, the Orkney Project Manager for Pelamis, said: "This project has been a great success so far, with many challenges overcome and with many technical achievements outstripping our

expectations. We're committed to working with the local community on the development of wave energy off the shores of Orkney and bringing further employment to the Islands."

Liam McArthur, MSP for Orkney, said: "Orkney is proud to be at the forefront of this exciting new industry with the potential to be a significant new form of electricity generation and a future source of prosperity and employment for the Islands. We wish both Pelamis and E.ON continued success."

Alistair Carmichael, MP for Orkney, said: "Orkney and Shetland are at the forefront of the UK renewable energy industry and this successful first year of testing underlines how important the sector could be to our local economy in years to come. I would like to congratulate E.ON on the progress that they have made and will look forward to seeing what can be achieved with the Pelamis machine over the next year."

The last 12 months have also enabled Pelamis to put into practice its unique, patented 'plug and play' system, which enables Pelamis machines to be maintained in sheltered harbours rather than at sea, and allows a progressive and controlled testing programme to be implemented.

Per Hornung Pedersen, Chief Executive Officer of Pelamis, said: "Our 'plug and play' system has enabled E.ON and Pelamis to implement a strategy that allows us to conduct maintenance in a safe environment. E.ON's bold vision for our technology means wave energy has every chance of success in becoming an important source of renewable electricity and a new manufacturing industry for Scotland."

The E.ON Pelamis machine's construction, commissioning and testing has been supported by funding from the UK government's Marine Renewable Proving Fund, managed by the Carbon Trust.

The E.ON Pelamis project was recently shortlisted for the best project award at the Scottish Green Energy Awards to be held in December 2011.

Ends

Notes to editors

- Pelamis Press Pack available on request
- Images available on request

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About Pelamis Wave Power:

- Pelamis Wave Power is a world leader in wave power development. The Scottish company designs, manufactures and operates the Pelamis wave energy converter, a unique machine which generates electricity from ocean waves. In the past 13 years the company has achieved a number of world firsts including; first export of power from an offshore wave energy converter (2004) and first deployment of a wave farm (2008).
- In 2010 PWP delivered the first Pelamis P2 generation machine to utility customer E.ON for demonstration and testing, which is currently underway at the European Marine Energy Centre in Stromness, Orkney. This machine has been joined in November 2011 by a second P2 delivered under supply contract to customers ScottishPower Renewables.
- www.pelamiswave.com

About E.ON UK:

- E.ON is one of the UK's leading power and gas companies – generating electricity, and retailing power and gas – and is part of the E.ON group, one of the world's largest investor-owned power and gas companies. We employ around 12,000 people in the UK and more than 79,000 worldwide;
- E.ON supplies power and gas to over 5 million domestic, small and medium-sized enterprise and industrial customers across the country. E.ON also offers innovative energy services and technologies tailored to meet its customers' needs, and is helping customers become energy fit by encouraging them to insulate their homes, moderate their energy usage and even to generate their own power through micro generation systems such as ground source heat pumps and solar panels for both homes and businesses;
- The generation business produces enough electricity to cater for the needs of around eight million homes from a portfolio of world-class gas-, coal- and oil-fired power stations;
- We're one of the leading green generators in the UK, with 21 wind farms located from Cambridgeshire to Kintyre;
- We have 1,500MW of renewable capacity under development in the UK;
- E.ON Group aims to invest up to €3bn between 2011 and 2013 on renewable generation and climate protection activities.