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New design to capture ocean's motion gets Carbon Trust funding

Carbon Trust calls for further applications for its applied research grants

The Carbon Trust has awarded a Belfast-based company over £153,000 to accelerate the development of its innovative electricity-generating wave energy converter. The converter aims to improve the efficiency with which energy is captured from the sea by harnessing power from both the vertical and horizontal motion of waves.

The DUO WEC concept, developed by Pure Marine Gen Ltd, is designed to improve energy productivity and therefore drive down the cost of electricity generation. This should in turn accelerate the adoption of the technology.

The funding will be used to conduct mathematical modelling, carry out an iterative series of tank tests and produce design drawings for a prototype. In the longer term, Pure Marine plans to develop devices with a capacity of over 2MW which, deployed in large arrays, could have generating capacity of over 500MW, comparable with a small coal-fired power plant. A techno-economic analysis which also forms part of the project will provide a projection of energy costs from the device and a route map for further cost reductions.

The Carbon Trust is currently on the lookout for other technologies with significant carbon saving potential to receive up to £500k of grant funding through its Applied Research scheme. Three open calls are run each year and the deadline for the current one is 16th April 2009 at 5pm. Applications can be made at www.carbontrust.co.uk/appliedresearch.

Mark Williamson, Director of Innovations at Carbon Trust, said: "Pure Marine Gen's DUO WEC design addresses the major challenge facing the growing marine energy industry - how to produce more energy at a lower cost. The UK's marine energy sector is world-leading and by supporting innovative designs such as the DUO WEC the Carbon Trust is working to accelerate an industry which has huge economic and job creation potential."

He added:

“Pure Marine Gen is benefitting from our Applied Research grant scheme which provides vital support to promising low carbon technologies and we are currently on the lookout for new and innovative carbon saving ideas.”

Dr Paul Brewster of Pure Marine Gen said: “The Carbon Trust’s support has helped us expand our Engineering team and work with a wider range of engineering specialists, which has fast tracked the development of the DUO WEC wave energy technology. In addition to our DUO WEC research projects, we have identified the best sites for deploying wave energy technology. The increased productivity benefits of the DUO WEC will enable us to capitalise on harnessing the ocean’s huge, untapped, indigenous renewable energy resources.”

Since 2001, the Carbon Trust’s Applied Research scheme has invested a total of £21 million in 155 projects that have clearly demonstrated potential to develop into viable commercial technologies that could reduce UK carbon emissions.

The scheme has provided grant funding to a wide range of renewable energy and energy efficiency technologies including fuel cells, combined heat and power, bioenergy, solar power, low carbon building technologies, marine energy devices and more efficient industrial processes. Of the 95 projects completed to date, 70% have filed patents, secured follow-on funding or generated commercial sales, or are expecting to do so shortly.

In December the Carbon Trust announced five new projects to reduce the costs of marine energy component technologies by up to 20% as part of its £3.5m Marine Energy Accelerator programme. The Carbon Trust has previously provided applied research grants for 15 marine energy technologies, in addition to its £3m Marine Energy Challenge and providing £2m to support the operation of the European Marine Energy Centre (EMEC) in Orkney.

Ends

Notes to editors

For further information, please contact the Carbon Trust press office on 020 7544 3100 or carbontrust@fishburn-hedges.co.uk

The Carbon Trust

- The Carbon Trust is an independent company set up in 2001 by Government in response to the threat of climate change, to accelerate the move to a low carbon economy by working with organisations to reduce carbon emissions and develop commercial low carbon technologies.
- We cut carbon emissions *now* by providing business and the public sector with expert advice, finance and accreditation to help them reduce their carbon footprint and to stimulate demand for low carbon products and services. Through our work, we’ve already helped save over 17 million tonnes of carbon, delivering costs savings of over £1billion.

- We cut *future* carbon emissions by developing new low carbon technologies. We do this through project funding and management, investment and collaboration and by identifying market barriers and practical ways to overcome them. Our work on commercialising new technologies will save over 20 million tonnes of carbon a year by 2050.

Pure Marine Gen (www.puremarinegen.com)

- Pure Marine Gen provide specialist technical services to developers of wave & tidal energy projects in the UK & Ireland
- Pure Marine Gen has brought together an experienced marine energy team, lead by Dr Paul Brewster, focused on developing the technology and engineering solutions that will enable energy companies to advance their “Marine Renewables” developments.