Press Release

Marine Energy Gain with Less Pain

A Scottish-based project, TeraWatt, that will help to minimise the environmental impact of marine renewable energy projects has been awarded £1m funding.

TeraWatt, is coordinated by MASTS (The Marine Alliance for Science and Technology for Scotland) and funded by Research Councils UK (RCUK). The three year project will develop computer based numerical models to simulate the effects of extracting energy using wave and tidal renewable energy devices on the marine environment. Led by Heriot-Watt University, in partnership with the Universities of Edinburgh, Strathclyde, Swansea, the Highlands and Islands and Marine Scotland Science, TeraWatt will provide a vital tool for licensing authorities and decision makers about the potential siting of marine renewable energy devices and arrays.

Professor Jon Side, of Heriot-Watt's International Centre for Island Technology in Orkney, said, "Scotland's coastline offers great potential for wave and tidal energy production, and Scotland is at the forefront of the development of marine renewable technologies and ocean energy exploitation, but it's important that in the move to renewable energy we take care to avoid developments which might harm our marine eco-systems."

"Any proposed marine renewable energy device or array will be subject to an environmental impact assessment, and TeraWatt will offer decision maker's specific, targeted predictions of the impact individual developments may have, and where they should be allowed to go ahead. Careful and informed selection of sites will allow the optimum exploitation of available wave and tidal energy whilst minimising any potential environmental impacts. "Professor David Paterson, MASTS Executive Director, said, "The TeraWatt project is an excellent example of what the Scottish marine research community can achieve by working in partnership. It is vital to assess in advance the probable impact of what happens when wave and tidal energy devices extract energy from the sea. TeraWatt will use the Pentland Firth and the waters around Orkney to develop models which will help to predict the physical and ecological consequences of wave and tidal energy extraction. The project represents another important step forward in Scotland's ambition to become a world leader in renewables technology development.

TeraWatt is part of a national programme of research co-ordinated through the SUPERGEN UK Centre for Marine Energy Research led by Edinburgh University. This virtual Centre conducts world-class fundamental and applied research that assists the marine energy sector in the UK to reliably and dependably accelerate deployment rates and ensure sustained growth in generating capacity to meet the 2020 targets.

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Notes:

Scotland has substantial wave and tidal energy resources and is at the forefront of the development of marine renewable technologies and ocean energy exploitation. The next phase will see these wave and tidal devices deployed in arrays, with many sites being developed. Although developers have entered into agreements with The Crown Estate for seabed leases, all projects remain subject to licensing requirements under the Marine Scotland Act (2010).

MASTS

The Marine Alliance for Science and Technology for Scotland (MASTS) pools the research talent, involving about 700 researchers, and the management of resources, consisting of over £66 million annually, in marine science from across Scotland. It strives to ensure that marine science in Scotland can remain internationally competitive. It provides the academic platform and knowledge for marine governance and commerce by helping to establish a Scottish strategy for marine science that will deliver increased value to the public from its investments.

MASTS is funded by the Scottish Funding Council together with its member institutions. It is organised around three major Research Themes that cover regions from the coasts to the deep oceans and subjects ranging from the effects of global climate change to marine energy, fisheries and aquaculture. MASTS represents the majority of Scotland's marine research capacity and is designed to deliver a new approach to shared sovereignty and a shift away from a system involving competition between a large number of small research centres to one where there is strong strategic collaboration.

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In future, all our investment decisions will be based on the international excellence of the research and its national importance, while continuing to encourage the free generation of ideas and curiosity-based research.