

## Offshore and Coastal Renewable Energy *NERC Workshop 26<sup>th</sup> February 2009*

NERC are planning a specialist meeting looking towards developing the 2009 (and future) NERC Theme Action Plans. The meeting will be a full discussion workshop covering current states of knowledge within the area of offshore and coastal renewable energy. Critically, the workshop will seek to identify the science challenges and opportunities with a view to highlighting key science questions within any future actions in this area.

The 2008 Theme Action Plans are published at <http://www.nerc.ac.uk/research/themes/tap/>. The paragraph below taken from the proposed future action in this area identified in the Sustainable Use of Natural Resources theme action plan provides more detail on the background and challenges within the area of offshore and coastal renewable energy:

*The mixture of government support, high energy prices, carbon trading and concerns about the security of energy supplies combine to make renewable energy an attractive sector for investment: over £36 billion of new money was invested globally in clean or renewable energy or clean technology in 2007 (up 43% on 2006, FT 3 Jan 07). Land constraints favour less mature technologies such as offshore wind farms and tidal and wave energy (as being developed at the Cornwall Wave Hub). The UK has significant capacity to develop further its marine and estuarine renewable energy sources because of its extensive coastline, high winds and relatively high tides. Existing capability can forecast the impacts of climate change on the security of the renewable energy supply. However, the evidence base is poor for predicting the impact of large-scale investments in coastal and off-shore power generation on marine and coastal bioresources. Development of the knowledge base is needed to deliver a sustainable, environment-enhancing supply of energy from the marine environment from a range of sources (kinetic, wind, solar, thermal; marine bioenergy is a separate action). The objective of future actions in this area would be to understand the individual and cumulative impacts of renewable energy technologies (especially wave and tidal power) on estuarine, coastal and marine systems. Such impacts could include changes in marine sedimentary processes (e.g. from tidal energy schemes) and predicting co-benefits (e.g. partial/complete exclusion zones; 'designer-reefs', coastal protection) and risks (e.g. sedimentation, water quality) for bioresources. This action would compliment not duplicate existing programmes (e.g. Sustainable Marine Bioresources) and new initiatives (e.g. ETI pilot programme on marine energy) to meet cross-Council needs in the energy arena.*

This area cuts across a number of NERC Themes including Sustainable Use of Natural Resources, Biodiversity, Natural Hazards and Climate Systems.

NERC is commissioning two scoping studies to evaluate the impacts and benefits of large-scale coastal and offshore marine renewable energy projects on two aspects of the earth system. These studies will be used to inform the workshop and its outcomes. The first study will focus on potential benefits and impacts on ecosystems and biodiversity linked to large-scale offshore and coastal renewable energy projects and the second study will assess the effects of major marine renewable developments (wind, wave and tidal) on sediment dynamics and associated implications in coastal and offshore environments.

The workshop will be held for approximately 40 people and will consist of a mix of plenary talks and break-out/discussion groups. If you wish to attend the workshop please send your 1-page expressions of interest to Sasha Leigh [snbl@nerc.ac.uk](mailto:snbl@nerc.ac.uk) by Friday 23<sup>rd</sup> January 2009. Invited parties will be selected on the basis of criteria including their expertise, links to the stakeholder community, awareness of international dimensions and ensuring a balance between the NERC Theme areas. Invited parties will be notified on 9<sup>th</sup> February 2009.

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22/12/08