



Wave and tidal stream  
energy technologies:  
underpinning deployment

**COMPETITION FOR COLLABORATIVE R&D FUNDING  
SEPTEMBER 2010**

# Wave and tidal stream energy technologies: underpinning deployment

## COMPETITION FOR COLLABORATIVE R&D FUNDING

### Summary

The Technology Strategy Board is to invest up to £3m in innovative collaborative research, development and demonstration in the area of wave and tidal stream energy technologies.

This competition is targeting **pre-commercial full-scale devices** installed and operating in the sea, including those supported by Carbon Trust's Marine Renewables Proving Fund (MRPF). The scope includes verifying performance; improving reliability in a real environment; and developing installation, operation and maintenance methodologies.

The competition is open to wave and tidal stream device manufacturers, and also to collaborations that will develop the UK supply chain and the skills needed to deploy these technologies.

It complements the March 2010 competition 'Wave and tidal stream energy technologies: reducing costs and improving performance' (see our website at [www.innovateuk.org](http://www.innovateuk.org) under Competitions).

Both competitions complement the MRPF, and together they aim to advance wave and tidal technologies along the innovation chain to grow business opportunities and achieve the Government's renewable energy targets.

### Background and challenges

This competition is the latest in a series of integrated activities led by the Technology Strategy Board on the research and development of wave and tidal stream energy devices.

We aim to help identify those technologies that will enable the cost-effective exploitation of wave and tidal resources in the UK and globally. Together with the Carbon Trust's MRPF we will help device developers to meet the criteria necessary to access the Government's Marine Renewables Deployment Fund (MRDF), fiscal incentives such as the Renewables Obligation, and private investment.

Wave and tidal energy offers promising prospects for the UK, as highlighted in *The UK Low Carbon Industrial Strategy*, published by the Government in July 2009. Because of the UK's natural resources and world leadership in the development of this technology, marine energy could contribute significantly to the UK's targets for renewable energy and it represents a significant economic opportunity for the UK.

Wave and tidal stream technologies are at an early stage of development. They are expected to be a significant part of the UK's renewable energy mix in 2050, with the potential to provide up to 20% of the UK's electricity needs. They are estimated to contribute around 1.3GW to the UK's 2020 renewable energy target.

To fully realise the potential for marine energy in the UK, several technological challenges must be tackled. These range from proving which technological solutions will most successfully harness marine energy, to reducing the cost of the energy produced to make the technology competitive with other renewable energy solutions.

The March 2010 competition focused on innovation to drive down the cost of energy from waves and tidal streams, and to improve the reliability and performance of devices.

The Government, through the Carbon Trust's MRPF, has invested £22m of funding to support the most promising wave and tidal devices through the final design stage, construction, deployment and commissioning of full-scale prototypes. It aims to get the most mature projects to the point where they can qualify for support from the MRDF.

### Scope

This competition is targeting **pre-commercial, full-scale** wave and tidal stream devices, installed and operating in the sea, that are looking to progress rapidly towards the MRDF and full-scale deployment. Devices that have benefited from the Carbon Trust's MRPF are also, but not exclusively, included.

Through this competition we will support applied research and experimental development projects that address the following challenges:

- achieving continuous operation and the performances required to access MRDF
- installation, operation, maintenance and retrieval methods for full-scale devices
- collation and analysis of data, and verification of performance in real sea conditions
- supply chain development
- environmental issues.



We encourage project applications that build on existing UK world-class knowledge, such as that emanating from previous publicly or privately funded projects.

Proposals must explain how the work will help gain a share of the UK and global marine energy markets against other innovative leaders in this field. They should also state how they will enable the UK to achieve its 2020 and 2050 renewable energy targets, and specify what share of the projected 1.3GW of electricity produced from marine energy in 2020 will be attributable to the specific proposal.

The competition is open to wave and tidal stream device manufacturers, and also to collaborations that will develop the UK supply chain and the skills necessary to deploy these technologies.

### Coordination with other funding bodies

We are working closely with other funding bodies such as the research councils, the Carbon Trust, the Energy Technologies Institute, the regional development agencies and the Department of Energy and Climate Change. Together we will develop a portfolio of projects spanning the innovation chain. This will tackle both short and long-term challenges relating to climate change and security of energy supply, while developing significant opportunities for wealth creation in the UK.

### Funding allocation and project details

We have allocated up to £3m to fund innovative collaborative research, development and demonstration projects that address one or more of the areas outlined in the scope. Collaborations must be business-led and involve science-to-business and business-to-business interactions involving a minimum of two partners (one industrial).

We will invest in collaborative projects which last up to 18 months and require public sector funding of typically £250k to £1m. Projects can span both applied R&D (attracting 50% public funding) and experimental development (25% public funding), or a combination of both, provided they underpin full-scale devices installed and operating in the sea.

Given the international nature of many of the key businesses involved in the low carbon supply chain, non-UK based businesses will be eligible to be consortium members, providing there are a minimum of two UK partners (one of which must be a business) and clear quantified benefits to the UK are identified. Although non-UK businesses can participate, they cannot lead the project or receive grant funding.

### Application process

This single-stage competition opens on **13 September 2010** and applicants must register their intent to submit an application by **14 October 2010**. The application form, including annexes and finance forms, has to be formally received by noon on **21 October 2010**. Following an independent assessment process, applicants will be informed of the decision on **19 November 2010**.

The Guidance for Applicants provides full details of how to complete and submit the application form. A briefing event will be held on **22 September 2010** to explain the application process and competition requirements in more detail. We strongly advise that all applicants attend.

### Key dates

Competition opens	<b>13 September 2010</b>
Briefing day	<b>22 September 2010</b>
Registration of intent to submit (compulsory)	<b>14 October 2010</b>
Deadline for receipt of applications	<b>21 October 2010 (noon)</b>
Inform applicants of decision	<b>19 November 2010</b>





## Further information

For more information about this and other competitions, and details of how to register and apply, please see [www.innovateuk.org](http://www.innovateuk.org) under Competitions. The Guidance for Applicants will be available online by **8 March 2010**.

Competition helpline:  
0300 321 4357

Email:  
[competitions@tsb.gov.uk](mailto:competitions@tsb.gov.uk)

## Publicity

The Technology Strategy Board frequently publicises the results of competitions and this includes engagement with the media. All applicants will be given a chance during the competition process to opt out of any publicity. Willing applicants will be asked to provide an agreed form of words for use in publicity material. E-mail [pressoffice@tsb.gov.uk](mailto:pressoffice@tsb.gov.uk) with any queries.

*The Technology Strategy Board is a business-led executive non-departmental public body, established by the Government. Its role is to promote and support research into, and development and exploitation of, technology and innovation for the benefit of UK business, in order to increase economic growth and improve quality of life.*

*Collaborative research and development is part of the Government's Solutions for Business portfolio.*

*For more information about the MRPF see [www.carbontrust.co.uk](http://www.carbontrust.co.uk)*

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