Invitation to Quote:

Wave and tidal energy: state of the industry report.

Introduction

ClimateXChange[1] wishes to commission a review of the current state and potential of the wave and tidal industries. The aim of the research is to inform the redesign of the Scottish Government's Saltire Prize.

Background

The Scottish Government is committed to supporting and accelerating the commercialisation of wave and tidal energy technologies. Scotland has tremendous wave and tidal energy resources and the potential exists to generate more electricity than we currently need from the waters around the Scottish coast. As well as delivering important social and economic benefits, the Scottish Government believes that marine energy will make an important contribution towards meeting our future demand for electricity.

The Scottish Government and its enterprise agencies have a suite of policies and initiatives to support technology development and the deployment of the first arrays. One early initiative was the Saltire Prize which, when launched, was the world's largest innovation prize for marine energy. The Saltire Prize competition guidelines were developed in 2008 following consultation with leading representatives of the marine energy sector and the scientific community. The whole energy sector is now operating in very different circumstances. The marine renewables industry has taken momentous steps forward since that date, but the path to commercialisation is taking longer and proving more difficult than initially expected. There is increasing recognition that the development paths of wave and tidal stream technologies are quite different, and the Scottish Government has already introduced a more tailored approach to the way it supports the two sectors.

The Saltire Prize Challenge Committee has been keeping the prize criteria, competitor progress and more recent policy developments under review and is now considering options for reshaping the prize to better reflect the circumstances of the wave and tidal sectors. The Challenge Committee has asked for up-to-date analysis of the state of the industry to inform its deliberations.

Research Objectives

The objectives of this research will be:

- To better understand the current state of the UK marine energy industry
- To chart recent activity in the sector (e.g. development of new components and subsystems; demonstration of single devices; deployment of first arrays; involvement of utilities and large engineering firms)
- To investigate the deployment pipeline and the market

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[1] ClimateXChange is Scotland's Centre of Expertise on Climate Change, please see www.climatexchange.org.uk

- To explore policy initiatives, political signals from the UK Government and devolved administrations and the availability of market pull instruments.
- To set UK development in the context of global activity (taking into consideration the availability of market pull instruments and incentives in other countries)

Methodology

Tenderers are invited to put forward proposals on how to best meet the research objectives within the budget available. A full explanation of your chosen approach, including any limitations, should be provided.

You will be expected to at least include:

1. A review of existing literature on the state of the industry, e.g. RenewableUK's 'Wave and Tidal Energy in the UK' of February 2013; the IRENA technology reports from June 2014 (see http://www.irena.org/menu/index.aspx?mnu=Subcat&PriMenuID=36&CatID=141&SubcatID=431); the annual report of the Ocean Energy Systems Technology Collaboration Programme (OES), part of the IEA (see https://report2015.ocean-energy-systems.org/) **NB You should not rely on the information in these reports as it will be out-of-date** but the reports give an indication of the sort of material to be consulted in the review and the type of output we are expecting from this project.
2. Qualitative interviews with people involved in the industry, e.g. technology and project developers, leading academics, supply chain, policy makers and relevant UK trade bodies
3. Qualitative research into the global position (e.g. interviews with the chief executive of Ocean Energy Europe and with the chair of the Ocean Energy Systems Technology Collaboration Programme)

In terms of geographical coverage, the research should focus on the UK, but you should undertake to include interviews with two or three key 'nodal' figures with a good understanding of global marine activity. You should set out any other methodological elements you feel are achievable within budget constraints.

Outputs

This project is commissioned on behalf of the Scottish Government and presentation of the results should be in a form that can be easily understood by an intelligent lay person.

The outputs for this project will include:

- Concise notes on interim findings.
- A final report of no more than 25 pages.
- A summary report no longer than 4 pages.
- A verbal presentation of findings.

The outputs will be written in plain English and follow the CXC style guide, presenting findings against the criteria agreed with the project steering group. The outputs will be analytical and policy and practice focused, rather than simply reporting or reproducing information given by others.

The ownership of the research material including the final report and any data produced as a result of the research lies with ClimateXChange on behalf of the Scottish Ministers. The research will be published on the ClimateXChange website, the date and format of which will be determined by the Scottish Government and ClimateXChange.

Project Management

A small steering group will be established to support delivery of the project and will include representatives from Scottish Government, ClimateXChange and the project team. The lead contact for ClimateXChange will be Ciara O'Connor, who will liaise regularly with the contractor's project lead.

Note – regular update calls to be scheduled fortnightly between the contractor's project lead and the CXC project manager (Ciara O'Connor) to discuss progress, address any issues, escalating to steering group for consideration where necessary.

Project Timetable

Milestone	Completed by (2017)
Project kick-off meeting, to agree • Overall approach • Resolution of any outstanding questions/ exceptions • Roles of steering group members in supporting the contractor	Mid-April 2017
Submission of draft report	Mid-July 2017
Steering group meeting (incl. presentation of findings), and comments on draft	End July 2017
Submission of final report	August 2017

Submission of proposals

Please send CVs for the proposed team, applicable day rates, a brief outline of the approach you propose, relevant research experience and the number of person-days' work proposed.

Award Criteria

Price		20%
Quality		**80%**
	1. State the team members' names and their role in the team for this project.	Not scored
	2. Understanding of the research specification and the policy environment. • The proposal should include an introduction which demonstrates a clear understanding of the research requirements, including an understanding of the policy environment and the supporting role of this research; the need for this research; the research aim; and how the proposal will address this aim.	25
	3. Proposed Methodology • Outline the approach the proposed team will take to undertaking this research, including any limitations.	30

	4. Reporting • Demonstrate the proposed team's capability in communicating research effectively in a fast-moving policy environment • Demonstrate experience of writing reports for a non-specialist audience.	15
	5. Risk • Present a risk assessment matrix detailing any risks identified in relation to the delivery of this project, and proposed mitigation measures to minimise their probability and impact, focused particularly on risk to completion on time and quality control.	10

Submitting a proposal

Please send a **brief** proposal (no more than six pages of substantive text) and work plan responding to the award criteria above and with deadlines, CVs for the proposed delivery team, applicable day rates, relevant research experience and the number of person days' work proposed.

Proposals need to be submitted to lee.callaghan@ed.ac.uk and cc'd to Ciara.o'connor@ed.ac.uk for evaluation **by noon on 28 March 2017.** We aim to notify the successful bidder by 4 April in order for work to commence by mid-April 2017. Please contact Ciara O'Connor on Ciara.o'connor@ed.ac.uk /0131 6514645 if you would like clarification of any of the above.

Proposals are expected to be in the range of £30,000 (including VAT). However, ClimateXChange would welcome proposals for less than this amount.

Depending on the quality of proposals received, CXC may chose not to appoint any contractor.

You should highlight any potential conflicts of interest in your proposal. For queries about what may constitute a potential conflict of interest, please contact Ciara.o'connor@ed.ac.uk.

CXC Secretariat

13 March 2017