



# Invitation to Tender

## Restricted Commercially Confidential

### CLOSES 1200hrs on Friday 6 March 2009

#### Technology Acceleration Support for Development of a Novel Tidal Stream Turbine Device Concept

## 1 SUMMARY

**Renewables East** (“RE”) is engaged in programmes with both the East of England and East Midlands Development Agencies (EEDA & EMDA) to accelerate the route to market of very early stage renewable energy technologies, increasing both the quantity and quality of investable concepts capable of growing across the two regions.

Invite capable businesses, consultants and service providers to support the acceleration of the route to market for a Novel Tidal Stream Turbine Device Concept, through provision of patent / IPR support and initial market and tidal resource analysis.

## 2 Background

The East of England is the leading English region for renewable electricity, currently producing 9% of the electricity it uses from renewable sources. It benefits from wide scale deployment of **bio energy** (for example the world’s first chicken litter electricity plant at Thetford, the UK’s first **bio ethanol** plant at British Sugar Wigginton, and the world’s fastest biofuelled car at Lotus in Norfolk) and 2007 saw a record year for deploying on shore renewable energy. The region’s coast is also surrounded by the majority of the UK’s Rd1, Rd2 and [proposed] Rd3 offshore wind installations, with around £50 billion capital investment anticipated by 2020 as well as being the host region for **OrbisEnergy**, a Centre of Excellence focussed wholly on R&D, innovation, business development & growth for offshore wind, wave and tidal technologies. As a result, the region is well on target to meet its 2010 target of 14% electricity from renewable sources and has also been engaged by the East Midlands Development Agency to increase exploitation of the sector growth in offshore renewables.

In order to further strengthen the regional renewable energy proposition, RE is carrying out feasibility studies to underpin the business case for additional infrastructure projects which, if realised, will enhance the region’s ability to (1) capture economic benefit for businesses, (2) develop high calibre skills, and (3) increase knowledge holding in each of the areas of Primary Renewable Energy (Heat, Electricity & Transport Fuels). Each feasibility study will lead to a full Green Book business case assessment on which capital investment decisions can be based.

The Renewable East Technology Acceleration Scheme helps entrepreneurs, businesses and other technology developers create successful and innovative renewable energy solutions. It

does this by providing early-stages funding and other support to help ideas reach a level of development and credibility at which other significant funding options become viable.

The general objectives of the scheme are to:

Increase the strength of the renewable energy engineering and service sector in the East of England and East Midlands.

Help adoption of renewable energy technologies by producers and consumers in the region.

A Regional Innovator has developed a Tidal Stream Device and is currently producing a business plan to acquire further funding. The results of the activities outlined within this tender will assist with the compilation of supporting evidence within this plan.

### **3 About Renewables East**

**Renewables East** is a private company delivering the services associated with being the renewable energy agency for the East of England. The Company is funded by the East of England Development Agency (EEDA) and officially designated as an EEDA sister organisation. For the year 2008/09, **RE** has been allocated £2.4M from various sources including EEDA, EMDA, EU, Local Authorities and central government to continue its mission.

The objectives of the Company are:

- a. To enable the East of England to meet its adopted target for the production of energy from renewable resources, within the context of national energy policy and the need to move towards a lower carbon economy; and
- b. To maximise the rate of growth of the renewable energy sector and the economic benefits to the East of England and East Midlands' regions, especially through stimulating investment and job opportunities, supply chain development and innovation.

**RE's** primary work areas are Bioenergy (Biomass and Biofuels,) Offshore/Onshore Wind and the emerging marine renewables (i.e. Wave & Tidal technologies), Planning, Supply Chain Development and the On-site Renewables agenda. If you have not already done so, you may find a visit to our web-site useful [www.renewableseast.org.uk](http://www.renewableseast.org.uk).

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## 4 Scope of work

The innovator is developing a concept that has the potential for producing electricity from a novel tidal stream device. The innovation centres upon the use of a novel turbine arrangement to provide rotational torque. It is proposed that this configuration can provide, via increased rotational speed, much improved power generation. It is aimed at numerous markets in the UK and overseas and is intended to be manufactured via a local supply chain.

The following scope of work will assist the company achieve greater clarity and focus surrounding potential IPR issues and market opportunities.

The successful bidder(s) will have the capability to provide one or both of the following support packages:

### **PACKAGE 1 – Support with Highlighting and Protecting Intellectual Property Rights (IPR)**

This package of work is specifically focussed on investigation of prior art and any intellectual property rights arising and advising the innovator on a range of IPR issues surrounding the potential for further UK and overseas protection (where appropriate).

Therefore it is likely to include one or both elements of the following overall scope of work subject to signing of the declaration of confidentiality offered in Appendix 1:

#### **a) Outline Patent Search:**

Low-cost search to highlight the existence of prior-art (if any) which could effectively limit the concept owner's ability to develop all or specific parts of the technology. Based on the outcome of the outline patent search potential exists to progress to a detailed patent search (b) if evidence is presented to justify the need.

#### **b) Detailed Patent Search:**

Subject to the results of (a) above, a more detailed search may be necessary to establish in more detail the specific nature of potential prior art which could effectively limit the concept owner's ability to develop all or specific parts of the technology.

### **PACKAGE 2 – Market Analysis**

Conduct an initial market appraisal for tidal stream products. The main geographic areas of interest are UK (specifically Channel Islands and Isle of Man) and the USA. Key expected outcomes arising from this study will encompass:

**2.1** Outline review of potential locations (within the Channel Islands and the Isle of Man) noting the conditions for both deployment and physical integration.

- High resolution resource mapping identifying potential tidal stream sites and range of water velocities
- Overview of seabed conditions at the identified sites
- Overview of shoreline conditions at those sites (geographic and infrastructure)

**2.2** Outline review of potential locations (USA) noting the conditions for both deployment and physical integration.

- Low resolution resource mapping identifying potential tidal stream sites and range of water velocities
- Overview of seabed conditions at the identified sites
- Overview of shoreline conditions at those sites (geographic and infrastructure)

**2.3** Investigate the current market conditions, for the geographic areas noted above, for marine renewables with respect to:

- utility companies
- consenting processes
- financial inducements/barriers (i.e. feed-in tariffs, connection costs etc)
- known stakeholders

**2.4** Review existing USA based organisations that are involved with or seeking involvement in this sector.

The above information will be used within a business plan and as such is not intended to be an exhaustive study, but should present indicative evidence of the potential market and any respective entry barriers/opportunities.

It is expected that the required data is freely available within the public domain and/or from internal data bases residing within the tenderer's organisation.

Results to be presented in clear easily understood graphical format (where appropriate) and with all data sources being clearly referenced.

**NOTE: It is anticipated that further study of the USA market will be undertaken, in the near future, if the results of this phase are positive.**

## **5 Tender Details**

Responses to this tender must be received by **Renewables East** no later than **1200 hours on Friday 6<sup>th</sup> March 2009** and should be sent via email to:

**John Heath  
Delivery Manager  
Renewables East  
ZICER Building  
School of Environmental Sciences  
University of East Anglia  
Norwich  
NR4 7TJ**

Responses should be submitted electronically, and should include your total fees (including the number of people involved, their daily rates, plus any expenses and VAT), outline proposals on

the form and type of training session and supporting materials you would develop, evidence of previous experience, and any additional value you can add.

The successful applicant will be notified by Friday 6<sup>th</sup> March 2009 at the latest and must be in a position to start work on the 9<sup>th</sup> March 2009 upon notification.

The materials produced will be the property of **Renewables East** and will need to be supplied in formats (hard copy and/or electronic) that can be reproduced by us without further project cost.

## 6 Tender Process & Assessment

Tenders should be no longer than ten pages, including a two page executive summary. Further information can be included in the form of an appendices.

Above all else, the successful tenderer will clearly articulate specifically how the work packages will be delivered, stating how resource will be deployed to stay within the budget and timescale.

The tenders will be assessed against the following criteria:

- 30% - Value for money: Clear, concise evidence of how the tenderer will not only deliver the scope, but will deliver a greater/wider value to the overall project/programme.
- 50% - Track Record: Demonstratable (evidenced) examples of knowledge and experience in delivering work packages of a similar nature on time and to budget.
- 20% - Understanding economic drivers in SME businesses: Demonstratable (evidenced) examples of funding and resource constraints often prevailing within small to medium size enterprises (SME's)

Any information provided will be treated with total confidentiality.

## 7 Fees

The total budget available for this work will not exceed:

- **£8,000.00 ("Eight Thousand Pounds):**

Derived from the following Packages:

Package 1a (Support for IPR) Initial Search:

- GBP£500.00 ("Five Hundred Pounds")

Package 1b (Support for IPR) Initial Search:

- GBP£2,500.00 ("Two Thousand Five Hundred Pounds")

Package 2 (Market Analysis) :

- GBP£5,000.00 (“Five Thousand Pounds”)

All prices are inclusive of VAT and any materials/expenses incurred in the course of this work and will be released in line with tangible evidence of progress against milestones.

## **8 Further Information**

Should you require any further information on this brief to complete your tender submission, please contact John Heath by e-mail or post: [JohnHeath@RenewablesEast.org.uk](mailto:JohnHeath@RenewablesEast.org.uk)

John Heath, Delivery Manager  
Renewables East  
ZICER Building, School of Environmental Sciences  
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## **9 Restricted and Commercially Confidential**

PLEASE NOTE THAT THE INFORMATION AND ASSOCIATED DOCUMENTS SUBMITTED IN RESPONSE TO THIS INVITATION TO TENDER AND ALL SUBSEQUENT INFORMATION RELEASED TO TENDERERS SHALL NOT BE AVAILABLE IN THE PUBLIC DOMAIN AND SHALL REMAIN COMMERCIALY CONFIDENTIAL. THE INFORMATION IS NOT TO BE USED FOR ANY PURPOSES OTHER THAN TO RESPOND TO THE TENDER.