

## Valuing Natural Capital in Low Carbon Energy Pathways Programme

### 1. Call for participants

The Research Councils work together to fund activities through the Research Councils' Energy Programme (RCEP). Within the programme, the Natural Environment Research Council (NERC) is seeking to fund research that will help understanding of the implications for natural capital and the provision of ecosystem services of a range of future energy scenarios, including scenarios that are compatible with the UK's energy policy challenges of maintaining energy security, keeping energy affordable and cutting greenhouse gas (GHG) emissions by 80% by 2050.

NERC, working closely with the UK Energy Research Centre (UKERC) and its Valuing Nature Programme, will be running a two day interactive strategic ideas brokerage workshop to develop research consortia that will subsequently submit grant proposals to address this challenge.

This Announcement of Opportunity is a call for participants for the ideas brokerage workshop which will take place on the 21/22<sup>nd</sup> July 2014 at Warwick Conferences. NERC have allocated £1.9M (where this is 80% of the Full Economic Costs) to fund the research arising from the workshop and subsequent call.

**Date of workshop:** 21/22<sup>nd</sup> July 2014

**Application closing date:** 9:00 Monday 16<sup>th</sup> June 2014

Assessment of Bids and Notification to applicants: week commencing 23<sup>rd</sup> June 2014

**Venue:** Scarman House, Warwick Conferences

Participants will be selected by means of an expressions of interest followed by an internal sift process and the names of those attending will be published on the programme webpage. In selecting participants the panel will try to achieve a balance in the spread of expertise, institutes and career stages across the workshop.

**It is not a pre-requisite of the subsequent call for proposals that the principal or co-investigators attend this event; the call will be open to all those eligible to receive Research Council funding. With this in mind, participants are encouraged to limit the number of attendees from any one department or group by self selecting workshop attendees.**

### 2. The research challenge

The UK Government is committed to ensuring that the value of our natural assets (ecosystems and their living/non-living, renewable/non-renewable components) and the flow of goods and services

from them is properly understood and reflected in the economy and policy-making. The value of a particular good or benefit derived from natural capital and/or ecosystem services needs to be expressed in a specific context (e.g., of decision-making) usually in terms of something that can be counted, often money, but also through methods and measures from other disciplines (e.g., sociology, ecology etc.).

The overarching aim of this research programme is to understand the implications for natural capital and the provision of ecosystem services of a range of future energy scenarios, including scenarios that are compatible with the UK's energy policy goals of maintaining energy security, keeping energy affordable and cutting greenhouse gas (GHG) emissions by 80% by 2050.

The outcomes of the Programme will include: a better integration of the hitherto separate energy and valuing nature communities; the establishment of energy services as key "provisioning" ecosystem services; a more comprehensive view of the linkage between natural capital and the decarbonisation agenda; the achievement of a genuinely whole systems approach encompassing the ecological system as a whole and energy systems rather than individual energy chains; and help for decision makers by allowing meaningful comparisons between alternative energy and ecological and system pathways and options.

Four inter-related programme challenges have been identified and the successful consortium will encompass all of these challenges:

- to characterise the impact pathways of specific energy chains and energy infrastructure development in the UK's marine, aquatic, coastal margin and terrestrial environments under a range of energy scenarios;
- to understand how different means of sourcing energy from outside the UK would impact ecosystem services from a global perspective and to identify options for managing these impacts;
- to understand the cumulative and indirect effects of energy technologies/ infrastructure over time on the full range of ecosystems services – underpinning, regulating, cultural and provisioning, addressing both economic and non-economic values; and
- to understand better the nexus between energy, land and water and the trade-offs and synergies associated with different patterns of energy development.

These research challenges are developed further in the programme Science Plan which will be provided to workshop participants prior to the event and posted on the programme website on the date of the workshop.

It is expected that the successful bidders for the follow on consortium call will develop their proposals in conjunction with both the UKERC Research Director and the Valuing Nature Programme co-ordination team.

The workshop event will be held in July 2014, with the aim of bringing together the various academic and energy communities to formulate informed research consortia equipped to address the programme challenges.

This AO is a call for participants for that event and will be followed with an open call for consortium proposals. It is anticipated that following an external assessment process a single consortium grant will be funded that delivers all of the programme challenges as detailed in the Science Plan.

### **3. The event**

This workshop is an intensive, interactive and free-thinking event, where a diverse group of scientists from a range of disciplines get together to immerse themselves in an exciting collaborative thinking process in a creative environment to uncover innovative solutions and discuss ideas for research proposals.

As the workshop progresses, participants will build up understanding of and approaches as to how the questions may be addressed and develop their innovative ideas and activities for funding.

#### **Location and Date**

The workshop will run over 2 days, starting at 11:00 on the 21<sup>st</sup> July 2014 and finishing at 15:00 on 22<sup>nd</sup> July 2014.

**An application to attend this event will be taken to mean availability for these dates and a definite commitment to attend for the full period.** Full details of the venue, will be sent out separately to all invited participants. NERC will pay participants accommodation and meals as part of the event. Participants are expected to pay their own Travel and Subsistence associated with getting to and from the workshop.

#### **How the workshop event will work**

The event will run over 2 days and will involve up to 40 participants.

The aim is to bring together a unique mix of expertise to produce consortia to address the research challenges detailed above. Participants will subsequently develop innovative collaborative research proposal ideas through discussions with each other. Please note: it is **NOT** a pre-requisite of the subsequent call that Principal or Co-Investigator attend this event, the call will be open.

The process of the event will be in several stages:

- defining the scope of the issue;
- agreeing a common language and terminology;

- sharing understanding of the problem, and the expertise brought by the participants;
- focusing on the problem, using creative and innovative thinking techniques in break-out sessions;
- capturing the outputs to start forming a research project(s) (a multi-disciplinary team will be expected to develop the detailed proposal that is submitted).

Activities during the workshop:

- scene-setting and presentations from key specialists, experts and funders;
- representation from the UK Energy Research Centre (UKERC) and Valuing Nature Programme;
- development of multi-disciplinary collaborative research teams with the aim of subsequently submitting a consortium proposal(s) tackling the high-level science challenges and bringing together a diverse range of partners.

The output of the workshop will be research groups/consortia ready to identify priority challenges, with the core teams and broad outline of timeline, organisations to be involved and plans to tackle the programme challenges.

#### 4. Application Procedure for NERC Workshop Participants

##### Who should apply?

We invite applications to participate (i.e. be eligible to participate in funded projects) from **individual** UK researchers who are:

- researchers from eligible UK institutions able to act on successful projects as Principal Investigator or Co-Investigator (see NERC Research Grants Handbooks for further eligibility information);
- experienced PDRAs who could make an important contribution and would gain additional benefits by attending, e.g. developing new links, gaining experience, and who can potentially act as researcher co-investigators on a resulting award;
- individuals from the Government Departments;
- individuals from UK organisations not eligible to receive NERC funding who feel they could make an important contribution to the research. Individuals in this latter category may potentially act as project partners on successful projects.

Applicants **must** be available to attend for the full duration of the workshop event to which they are applying and an application will be taken as a definite commitment to attend on both dates. Substitutes or representatives for selected applicants may be permitted to attend, provided NERC is made aware of any changes prior to the event and that the replacement delegate is considered to be appropriate.

We encourage applications from all relevant research areas. It would be beneficial for applicants to have some prior knowledge of one or more of the following:

- integrating energy systems, considering all components including construction, generation, end-use demand, decommissioning, storage and supply, into the ecosystem services framework;

- whole-system assessment of consequences for natural capital of adopting different patterns of energy development, exploring potential trade-offs and synergies with other ecosystem services and mitigation strategies;
- implications for natural capital value through the enhancement and integration of existing models alongside the development of UKERC's energy pathways and/or using existing energy/NEA scenarios,
- scoping of energy system impacts on natural capital (spatial and temporal) are considered, bearing in mind that, depending on the energy mix selected, the impacts on ecosystem services could extend beyond UK borders, with potential impacts around the globe;
- concepts of ecosystem services embedded in the trade of goods and services, in a vein similar to embedded carbon or water, associated with energy system; and/or
- scoping and benefits of spatial and temporal targeting of the energy system to make use of heterogeneity in natural capital stocks and other ecosystem services.

Applicants **must** demonstrate an enthusiasm for cross-disciplinary research and indicate how their expertise can address the defined problem. Applicants should not feel limited by conventional perceptions: this event is about bringing together people who may not normally interact.

This is an opportunity to share ideas and develop collaborations that address the stated research questions. The research proposals initiated by this event must fall within the NERC remit to be eligible for funding.

### **How to apply**

Applicants should complete the two-page Expression of Interest form which can be found on the programme webpage.

Please ensure you fully complete the Expression of Interest form, as this is the only information used for the selection of participants. Your answers to these questions will be used to differentiate your application and convince us that you have the suitable skills and attitude to participate in this event. We are looking for both your relevant skills and expertise and for evidence of how you might approach the multidisciplinary problem that the research questions raise.

Completed Expression of Interest forms should be submitted by email to Sally Reid ([serei@nerc.ac.uk](mailto:serei@nerc.ac.uk)) by **9:00 on Monday 16<sup>th</sup> June**. Applications before this date would be welcomed. No further documentation will be accepted, and we will not consider late submissions.

Applicants will be informed by email of the outcome of the selection process. If selected as a participant, your details may be requested and made available at the event to other participants to facilitate networking.

### **Assessment Criteria**

The panel will identify approximately 40 participants to take part in the workshop.

The participant selection panel will seek to ensure that a balance of expertise, research institutes and career stage are present at the workshop; their assessment will be based on the criteria outlined below.

- specific expertise relevant to the topic;
- the ability to develop new and highly original research ideas;
- the potential to contribute to the research between disciplines;
- the ability to work in a team;
- the ability to explain own research to non experts.

Please also note that it will not be possible to provide feedback to unsuccessful applicants.

**It is not a pre-requisite of the subsequent call that principal or co-investigators attend this event, the call will be open.**

## **5. Post-Workshop Activities**

Following the event, investigators involved in the event will be expected to contribute to writing a full consortium proposal(s). The deadline for submission of a proposal generated at the workshop is likely to be mid-late September 2014. These proposals must be submitted via the Research Councils Joint Electronic Submission System (Je-S). Further guidance on this part of the process will be provided to at a later date.

## **6. Contact Details**

For further information, advice or queries regarding format of the event and application procedure please contact:

Sally Reid (NERC) Email: [serei@nerc.ac.uk](mailto:serei@nerc.ac.uk) Tel 01793 442565