



UK Energy Research Centre: Flexible Fund

First Call for Proposals

Closing date for expressions of interest: 17.00 on 22nd June 2020



Contents

1. Summary	1
2. Background	1
3. Management of the Research Fund	2
4. Scope of the First Call	2
4.1 Governing the transition: governance and energy vector change	3
4.2 Finance: the impact of policy on investments at different scales	4
4.3 Cooling the transition: clean cooling and energy integration	5
5. Eligibility	6
6. Expression of Interest Procedure	6
7. Evaluation Procedure	6
8. Participation in UKERC	7
9. Timeline	7
10. Contact Details	8



1. Summary

The UK Energy Research Centre is issuing the first Call for Proposals under its Flexible Fund. We are seeking proposals from universities or other institutions eligible to hold Research Council awards, in three topic areas:

- Governing the transition: governance and energy vector change
- Finance: the impact of policy on investments at different scales
- Cooling the transition: clean cooling and energy integration

Consortium or single institution bids will be considered. Projects are expected to start by January 2021, and are usually expected to last between one and two years. The supported research will form an integral part of UKERC's research programme. There will be a two-stage selection process for the call. Expressions of interest are invited by 22nd June 2020. Following evaluation, successful applicants will be invited to submit full proposals. These must be costed using standard Research Council Full Economic Costing (FEC) principles, and will be subject to full peer review. The closing date for full applications will be 5pm on 30th September 2020. Decisions can be expected by November 2020.

If you have any queries please contact Ioanna Ketsopoulou (i.ketsopoulou@ucl.ac.uk). EOIs should be sent via email to Ioanna Ketsopoulou.

2. Background

The UK Energy Research Centre (UKERC) was established by the Research Councils in 2004. UKERC's main aims are to:

- Carry out world-class, interdisciplinary research into sustainable future energy systems from a whole systems perspective;
- Act as a focal point of UK energy research and a gateway between the UK and the international energy research communities; and
- Inform UK policy development and strategies of public, private and third sector organisations.

UKERC is a distributed Centre operated by a consortium of ten core partners with its headquarters hosted by UCL. For more detailed information visit www.ukerc.ac.uk.

During UKERC's current phase (2019-2024), part of our research funding will be allocated through a Flexible Fund. Under this arrangement, specific projects will be commissioned, on a competitive basis, from the wider research community. The aims of the Fund are:

- To allow the research programme to develop flexibility in the light of new scientific insights or external developments;

- To bring a wider range of researchers and disciplines into UKERC’s research programme, including researchers from outside the ‘traditional’ energy community;
- To promote integration in the UKERC research programme, and to fill gaps where needed;
- To build collaborations between the UKERC research community and other research communities – including other energy researchers, groups and centres; and
- To scope and develop new research agendas in partnership with funders, the research community and other stakeholders.

Details of the UKERC research programme can be found on the UKERC [website](#). The Flexible Fund will support research that is an important part of the overall research programme, and will complement research projects that are already underway or planned by members of UKERC’s core consortium.

The total value of the Flexible Fund allocated to new research is approximately £3m (valued at 80% FEC). We will issue Calls for Proposals in 2020 and 2021. We would expect individual research projects to run from between one and two years, or exceptionally up to 3 years. All Research Fund projects must be completed by the end of UKERC Phase 4 on 30th April 2024.

3. Management of the Research Fund

Each call for proposals is developed by the UKERC HQ, guided by the advice of the UKERC Research Committee. Priorities have been identified through [consultations](#) on potential research topics with the wider energy research community in the UK. The membership of the Research Committee represent a range of disciplines and specialisms relevant to UKERC’s whole systems energy research remit and a variety of career stages. Members were selected through an open application process.

The Research Committee is responsible for advising on Research Fund priorities, the scope of each call, shortlisting of outline proposals and making final funding recommendations following independent peer review of full proposals. The Committee also advises UKERC on our overall strategy and the “fit” of successful research proposals to the overall UKERC Research Programme. Details about membership can be found on our [website](#).

4. Scope of the First Call

The first Call for Proposals focuses on three topics:

- Governance of energy vector change
- Finance: the impact of policy at different scales
- Cooling the transition

We anticipate that approximately £1 million will be distributed under the first call for proposals. Our intention is to distribute the available funding for this call between the three broad topics. However, subject to peer review, we do not guarantee to fund a project under each topic.

Details about each topic are set out below. Those wishing to bid should read the topic specifications carefully. UKERC's own approach to research is interdisciplinary and whole systems. Successful bids may be rooted within one or more specific disciplines, provided they contribute appropriately to UKERC's overall research programme. Interdisciplinary proposals are therefore strongly encouraged. However, methods and approaches are left to the discretion of the proposers.

Collaborations between different eligible research institutions are encouraged, where appropriate. As well as complementing UKERC's own research programme, care must be taken to ensure that proposed research complements, and does not duplicate, activities within existing research programmes.

4.1 Governing the transition: governance and energy vector change

We invite proposals that explore how different levels of governance interact with multiple and evolving energy vectors for the delivery of decarbonised energy services. Here governance refers to decision making processes, and the associated practices and activities. It also includes the role of different actors, or networks of actors, in decision making and their respective levels of agency.

Topics may include:

- How local, regional, national or multilateral/intergovernmental governance affect the development of new or expanded vectors such as heat distribution networks.
- The changing roles of different agencies and actors in the context of new loads on existing vectors, such as upgrading electricity grids to provide heat, or new uses of existing vectors, such as using the gas grid for hydrogen.
- Interactions across vectors to promote a more integrated energy system, such as using district heat stores to help accommodate variable renewables.
- Interactions of individual levels of governance in the development and emergence of different vectors, for example the role of local authorities in promoting the development of low carbon heat.
- Interactions of multiple agencies; such as the interactions between Ofgem, local authorities, network operators and planning agencies in delivering energy system change. The interaction of legal duties, roles and responsibilities among these bodies, how this impacts on decision-making and collective investment choices and scope for reform & improved alignment.

We strongly encourage proposals which are interdisciplinary, and which consider governance and agency (i.e. who can affect and direct change) in addition to technological options and developments.

The proposed research should aim to complement and build links with the core UKERC research programme. Relevant themes and projects include:

- Theme 1 'UK Energy in a global context', which includes projects on the geopolitical economy of energy system transformation and the implications of Brexit on the UK's energy and climate strategies.
- Theme 2 'Local and regional energy systems', which includes projects on devolution processes and the development of local and regional energy systems, the regulation of local energy systems, and the synergies between local, regional and national energy transitions.
- Theme 3 'Energy, environment and landscapes', which explores local decision-making tools for the integration of social, economic and environmental objectives.
- Theme 4 'Energy infrastructure transitions', which explores governance models for different types of change.
- Theme 5 'Energy for mobility', which examines the governance of grid connectedness for microgeneration and EV charging.

4.2 Finance: the impact of policy on investments at different scales

UK energy policy has deliberately de-risked certain categories of energy investment. In particular the Contracts for Difference provide revenue stability to prospective investors in low carbon generation such as wind, solar and nuclear. However it is less clear how investment in other aspects of decarbonisation are supported or hindered by policy, and how this affects the ability of different actors to invest and engage.

We invite proposals that will explore the impact of policy on financing low carbon energy at different scales. Topics may include:

- The distributional aspects of investment in lower carbon energy – across heat, electricity generation, storage and distribution as well as energy efficiency and demand response.
- Barriers to low carbon energy investment and where/how policy could influence these.
- Mechanisms for widening access to green finance.
- Who pays for, and who benefits from low carbon energy investment, and where/how might policy affect this balance.
- The scope for innovation in financing and financial products to enable a more equitable transition to new low carbon technologies and propositions.

Proposals could consider whether investing in smaller scale supply, energy demand management or flexibility options is successfully de-risked so that investors are willing to support these sectors. Another option would be to explore whether particular types of technology or project are far more investable than others, what type of actors have access to green finance and what are the potential implications for some sectors or types of household that may miss out or need support in the transition.

The proposed research should aim to complement and build links to the core UKERC research programme. Relevant projects are undertaken in Theme 4 'Energy infrastructure transitions', which includes a project that explores infrastructure investment and the effect of different commercial and regulatory models, and a modelling project that simulates the behaviour of different actors.

Earlier UKERC research includes a project on the distributional impacts of retail energy markets in SMEs and social housing, a project on the effect of energy efficiency policies on disabled and low income households, both under the now completed 'Energy, economy and societal preferences' theme, and a project on financing community energy, under the now completed 'Energy systems at multiple scales' theme.

4.3 Cooling the transition: clean cooling and energy integration

We invite proposals that consider how demand for cooling might change in future, how cooling can be decarbonised ('clean cooling'), and implications for energy systems. Topics may include:

- How centralised or distributed cooling systems, or sectors with high cooling loads (such as datacentres/servers) could contribute to demand management and/or to benefit from - or integrate with - growth in variable renewable energy.
- An investigation into the changing cooling needs within a key sector such as food and drink, or across different sectors; the effect of climate change and climate mitigation policies (e.g. in the transport sector).
- Space conditioning in a changing climate: evolving heating and cooling needs be both met in different building types and how this can be addressed in building and system design. This can include the effect of ICT in commercial buildings.
- The impact of changing climate and unmet cooling needs across different social economics groups, especially vulnerable groups.

We strongly encourage proposals that are interdisciplinary, and that adopt a whole systems perspective rather than purely technical focus.

Exploring the relationship between cooling and energy systems is a new area of research for UKERC. It is not currently covered in the programme, however there is scope for proposals to link with Theme 4 'Energy infrastructure transitions', Theme 6 'Energy systems for heat'

or Theme 7 'Industrial decarbonisation'. We encourage you to consider how your work will complement ongoing research outside UKERC, such as the recent Decarbonising Heating and Cooling UKRI funding stream.

5. Eligibility

Expressions of Interest (EOIs) are invited from eligible UK researchers, i.e. applicants based in UK Higher Education Institutions (HEIs), Research Council Institutes and Centres, and Independent Research Organisations (IROs) approved by any of the Research Councils. Please refer to the [UKRI website](#) for details on Research Councils funding eligibility. Potential applicants should contact UKERC well in advance of the submission deadline if they have any queries concerning their eligibility. Organisations not eligible to receive Research Council funding directly (e.g. industry, government agencies, third sector organisations) may participate as project partners.

Individuals may submit no more than one EOI as Principal Investigator plus one as Co-investigator, or two as Co-Investigator, to this call.

6. Expression of Interest Procedure

An EOI should consist of no more than 2 pages, minimum font size 11, minimum margins 2cm. It should be presented under four headings:

- Aims and objectives
- Fit with the research specification and UKERC's overall Research Programme
- Research methods and approaches (with justification)
- Competences of the bidder and consortium members

A separate single page sheet should list the individuals/groups participating in the EOI.

EOIs should be sent via email to Ioanna Ketsopoulou (i.ketsopoulou@ucl.ac.uk).

7. Evaluation Procedure

EOIs will be evaluated by the UKERC Research Committee, who will make recommendations regarding which EOIs should proceed to a full proposal. We would expect no more than 3-4 full proposals to be invited for each topic.

The main evaluation criteria will be: overall quality and fit with the research specification and UKERC's Research Programme; appropriateness of the research methods and

approaches proposed; and the track record and competence of the bidders to carry out the proposed research.

Those invited to submit full proposals will be briefed on detailed procedures when their EOIs are accepted. Proposals will be subject to full peer review. The final decision on which projects will be funded will be made by the UKERC Research Committee.

8. Participation in UKERC

Successful bidders will be considered full members of the UKERC consortium. It is not the intention that those funded should conduct their research in isolation from UKERC and simply deliver a final report. They will need to liaise throughout their award with UKERC HQ, and with other members of the consortium as appropriate. They will be assigned to one of UKERC's research themes and will be expected to participate in theme meetings and other activities.

While their project is operational, successful proposers will also be expected to attend the Annual Assembly which engages all UKERC participants and usually takes place over a 48 hour period (Wednesday lunchtime – Friday lunchtime) each year. They would also be expected to attend two other one-day UKERC General Meetings each year. Proposers should include funding provision for travel to theme and Centre meetings in their bids.

Members of the UKERC consortium provide quarterly reports to HQ on activities and outputs. This reporting mechanism allows UKERC to report to its Funders and Advisory Boards and to make an annual submission to the Research Councils research outputs database (Researchfish). Successful bidders will be expected to report on this basis.

In turn, successful bidders will be able identify themselves as members of UKERC. They will have access to internal newsletters, meetings and stakeholder networks. They can also expect support and advice from UKERC HQ. The UKERC engagement team can help with the development of UKERC-branded Research Reports and dissemination to wider audiences. Media training can also be provided.

9. Timeline

- Call for Expressions of Interest closes: 5pm on 22nd June 2020
- Full proposals invited: 27th July 2020
- Closing Date for Full Proposals: 5pm on 30th September 2020
- Successful Proposals Notified: November 2020
- Funded Research Commences: January 2021

10. Contact Details

For queries on the Call for Proposal please contact Ioanna Ketsopoulou
(i.ketsopoulou@ucl.ac.uk).