

Quick Reference

Please note that you must read the full Call document for guidance before submitting your proposal

End Use Energy Demand Tech Call 2

Call type: Invitation for proposals

Closing date: 01 October 2019

Funding Available: Approximately £6 million of EPSRC funding is available for this call (depending on quality). EPSRC expects to fund 3-6 projects.

How to apply: This is a single stage submission. Applicants should submit full proposals through the Je-S system.

Assessment Process: Expert peer review followed by prioritisation panel.

Key Dates:

Activity	Date
Deadline for Full Proposals	16:00 on 01 October 2019
Prioritisation Panel	February 2020
Funding decision	February 2020
Grant start date	April 2020

Additional information: All applications should involve a member of staff who is directly linked to the CREDS centre. Applications must demonstrate how the proposed research is complementary to the aims and strategy of the centre and clearly address the goals of the UK Research and Innovation Energy programme: <https://epsrc.ukri.org/research/ourportfolio/themes/energy/programme/>

All applications should comprise research that falls within the remit of EPSRC, and specifically in the Energy Efficiency research area, with at least 50% of the classification going to Energy Efficiency: <https://epsrc.ukri.org/research/ourportfolio/researchareas/energyefficiency/>

Contact:

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End Use Energy Demand Technology call

Call type: Invitation for proposals

Closing date: 16:00 on 1 October 2019

Related themes: Energy

Contents of this call document

[Summary](#)
[Background](#)
[Funding Available](#)
[Equality, Diversity and Inclusion](#)
[Equipment](#)
[Eligibility](#)
[How to apply](#)
[Submitting an application](#)
[Guidance on 'Writing an Application'](#)
[User Engagement Strategy](#)
[Assessment process](#)
[Assessment Criteria](#)
[Guidance for Reviewers](#)
[Guidance for \[host organisations/heads of department\]](#)
[Additional grant conditions](#)
[Moving Forward](#)
[Key Dates](#)
[Contacts](#)
[Change Log](#)
[Attachment Checklist](#)

Summary

The UK Research and Innovation Energy Programme, via EPSRC and ESRC, have now funded the Centre for research in Energy Demand solutions ([CREDS](#)) as part of the second phase of strategy to support the broad community of researchers and innovators in energy demand in the UK. EPSRC is looking to fund additional research proposals concerning technologies to enable end use energy demand, investing approximately £6 million (depending on quality) in research projects aligned to, but not duplicating, the aims and objectives of CREDS. This is in addition to the previous call; EUED Tech.

For this call five areas will be highlighted with which there is an increased level of interest. These areas are as follows;

1. EUED Technology
2. Food Technology and systems
3. Digital Technology for energy efficiency

4. and materials for energy efficiency.
5. EUED Other. To allow for a broad range of applications.

The EPSRC would like to see a balance across these priorities. Proposals are invited from applicants which show a clear complementarity to the centre and should include at least one investigator with direct links to the centre. Proposals will be subject to peer review followed by a prioritisation panel to decide funding. Strategic input from the Leader of CREDS, Professor Nick Eyre, will be taken for context at the prioritisation panel, but will not form part of the assessment of quality of the proposals.

In the previous call three proposals were funded: EP/S030654/1, EP/S030700/1, EP/S030786/1. Further information on the successful proposals can be found on Grants on the Web at <https://gow.epsrc.ac.uk/>

Background

End Use Energy Demand definition:

Energy efficiency measures, reduction in demand for energy, and reduction in demand for energy services / mobility - all of which will contribute to reducing carbon emissions from energy use. It includes research in the context of the built environment, transport, heat, industrial processes and products. The research is interdisciplinary in nature covering socio-technical and techno-economic approaches including energy efficient technologies, materials, design, deployment, markets, policy, regulation, organisational aspects and decisions and behaviours of individual institutions and actors. Reducing energy demand has been recognised in the as the most effective intervention to meet 2050 greenhouse gas emission targets while other approaches focus on supply.

EPSRC Balancing Capability

To maintain the UK's global research standing in light of increasing international competition and with limited funding available, EPSRC focus our investments to remain internationally leading in areas that are of long-term strategic importance to the UK. Balancing capability's goal was to align our portfolio to areas of UK strength and national importance.

Having grown the EUED portfolio during the last Delivery Plan period, the research area will now establish a sustainable critical mass activity. EPSRC intends to maintain this level over the next delivery plan period. It was noted that the areas of transport energy demand and non-domestic buildings energy demand should become more integrated into critical mass activities within the portfolio. Research on heat is an important cross-cutting theme within the portfolio and the integrated approach to this theme should continue. In order to build a sustainable community of researchers the EPSRC will build both studentship funding and support for research leaders in energy demand research. For more information about EPSRC's portfolio and strategies, see our website: <https://epsrc.ukri.org/research/ourportfolio/>

EUED Phase 1:

As a direct response to the International Review of Energy 2010 outcomes, in 2011 EPSRC and ESRC launched a call to joint-fund a series of centres focused on multidisciplinary energy demand reduction research. These centres would also

act as a vehicle to build research capacity in the area. The following six Centres were funded and formed the base for the RCUK EUED Programme:

i-STUTE (Warwick) - The interdisciplinary centre for Storage, Transformation and Upgrading of Thermal Energy is dedicated to examining the potential for energy use reduction in heating and cooling.

DEMAND (Lancaster) - The DEMAND Centre tackles the fundamental question of what energy is for. Achieving greater energy efficiency is important, but the trend is often towards more resource intensive standards of comfort, convenience and speed.

CIE-MAP (Leeds) - Centre for Industrial Energy, Materials and Product, Working closely with government and industry, the Centre for Industrial Energy, Materials and Products conducts research to identify all the opportunities along the product supply chain that ultimately deliver a reduction in industrial energy use.

CSEF (Brunel) - The aim of the Centre for Sustainable Energy use in Food Chains is to carry out fundamental research into innovative technologies and approaches for energy demand reduction in food chains.

CIED (Sussex) - The Centre on Innovation and Energy Demand seeks to develop a socio-technical understanding of the emergence, diffusion and impact of low energy innovations.

CUK CEE (UCL) - UCL-Energy has focused the RCUK centre on an energy epidemiological approach that looks to re-interpret the health sciences research structure.

EUED Phase 2:

EPSRC and ESRC recognise the value and importance of continued multidisciplinary research in this area. The six previous centres finished in 2018. The UK Research and Innovation Energy Programme, primarily via EPSRC and ESRC, have now funded the Centre for research in Energy Demand solutions (CREDS) to form the next part of the EUED programme. This has been designed to be an inclusive centre for energy demand research, a National Centre which acts as a focal point for the UK's EUED research designed to take into account the whole picture of activity. This is headed by the Leader, Professor Nick Eyre, who acts as thought leader, flag bearer, and strategy owner for the community.

Through this call EPSRC will fulfil the next stage of phase 2, investing an additional £6 million in research projects aligned to, but not duplicating, the aims and objectives of CREDS.

Funding available

EPSRC have approximately £6 million available for this call. We will aim to fund 3-6 research grants for four years.

All applications should involve a member of staff who is directly linked to the CREDS centre. Applications must demonstrate how the proposed research is complementary to the aims and strategy of the centre and clearly address the goals of the UK Research and Innovation Energy programme:

<https://epsrc.ukri.org/research/ourportfolio/themes/energy/programme/>

All applications should comprise research that falls within the remit of EPSRC, and specifically in the Energy Efficiency research area:
<https://epsrc.ukri.org/research/ourportfolio/researchareas/energyefficiency/>

Equality, Diversity and Inclusion

The long term strength of the UK research base depends on harnessing all the available talent and the Research Councils have together developed the ambitious UK Research and Innovation Equality, Diversity and Inclusion Action Plan <https://www.ukri.org/files/legacy/skills/action-plan-edi-2016/>

In line with the UK Research and Innovation Diversity Principles, EPSRC expects that equality and diversity is embedded at all levels and in all aspects of research practice. We are committed to supporting the research community in the diverse ways a research career can be built with our investments. This includes career breaks, support for people with caring responsibilities, flexible working and alternative working patterns. With this in mind, we welcomes applications from academics who job share, have a part-time contract, need flexible working arrangements or those currently committed to other longer, large existing grants. Please see our Equality and Diversity webpages at <https://epsrc.ukri.org/funding/equalitydiversity/> for further information.

Equipment

For information on support for equipment on research grants please see the EPSRC website (<https://epsrc.ukri.org/research/facilities/equipment/process/researchgrants/>).

We would not expect applications to this call to request individual items of equipment over £138,000. For equipment between the values of £10,000 and £138,000 EPSRC will only fund 50% FEC.

Smaller items of equipment (individually under £10,000) should be in the Directly Incurred - Other Costs heading.

Applicants should look to make the best use of existing equipment and facilities, including those funded under other UK Research and Innovation schemes. These should be highlighted as appropriate.

For more information on equipment funding, please see:
<https://epsrc.ukri.org/research/facilities/equipment/>

Eligibility

Please ensure sufficient time to create Je-S accounts for Investigators who do not currently have one.

For information on the eligibility of organisations and individuals to receive EPSRC funding, see the EPSRC Funding Guide:
<https://epsrc.ukri.org/funding/applicationprocess/fundingguide/>

A list of eligible organisations to apply to EPSRC is provided at:
<https://www.ukri.org/funding/how-to-apply/eligibility/>

How to apply

Submitting an application

You should prepare and submit your proposal using the Research Councils' Joint electronic Submission (Je-S) System (<https://je-s.rcuk.ac.uk/>).

When adding a new proposal, you should select:

- Council 'EPSRC'
- Document type 'Standard Proposal'
- Scheme 'Standard'
- On the Project Details page you should select the 'EUED Tech 2' call.

Note that clicking 'submit document' on your proposal form in Je-S initially submits the proposal to your host organisation's administration, not to EPSRC. Please allow sufficient time for your organisation's submission process between submitting your proposal to them and the call closing date. EPSRC must receive your application by **16:00 on 01 October 2019**.

Guidance on the types of support that may be sought and advice on the completion of the research proposal forms are given on the EPSRC website (<https://epsrc.ukri.org/funding/applicationprocess/>) which should be consulted when preparing all proposals.

Guidance on writing an application

Applications must be made through Je-S. As well as the Je-S form, the following documents should be submitted:

- Case for Support: should be up to eight pages in total, to include:
 - Up to two-page track record, which should detail the relevant expertise that each investigator will bring to the research
 - Description of the proposed research focus and how this fits the aim and scope of the call. Please see the 'Assessment criteria'. This should include a clear statement of the proposal's vision, and how each strand of activity complements this vision. It should detail how the proposed research will align to the strategy of the CREDS centre, solving the energy trilemma (security, cost and environmental impact) and realising the EPSRC balancing capability strategy for Energy efficiency:
<https://epsrc.ukri.org/research/ourportfolio/researchareas/energyefficiency/>
- Pathways to Impact: should be up to two pages and is primarily for detailing the activities which will help develop potential economic and societal impacts. Please detail how the proposed research project will be managed to engage beneficiaries and increase the likelihood of impacts. More information on preparing the impact plan and on impact can be found on the EPSRC website at:

<https://epsrc.ukri.org/funding/applicationprocess/preparing/impactguidance/>

- Justification of resources: should be up to two pages. This should be a narrative description of the need for the resources requested.
- Work plan: should be up to one page. It is not expected that this will be a Gantt chart for the whole time of the project, but should include a comprehensive plan for the start of the project and then refer to the management strategy to give appropriate milestones for when important decisions on the direction of the research will be taken. For advice on writing proposals see:
<https://epsrc.ukri.org/funding/howtoapply/preparing/>
- Project partner letters of support - where appropriate, should detail how the partner is contributing to the project and a quantification of the value of this support. It is not expected that the CREDs centre will provide a letter of support as details of the alignment to the centre should be included in the case for support.
- Letters of support - will only be expected in exceptional circumstances where a partner cannot be listed as a project partner, but could provide information directly pertinent to the execution of the workplan (e.g. subcontractors).
- Cover letter - an optional attachment which is not seen by peer reviewers. Please highlight any information which may be pertinent to the processing and peer review of the proposal.

Applicants should use the Ethical Information section on the Je-S form to demonstrate to peer reviewers that they have fully considered any ethical issues concerning the material they intend to use, the nature and choice, current public perceptions and attitudes towards the subject matter or research area. EPSRC will not fund a project if it believes that there are ethical concerns that have been overlooked or not appropriately accounted for. All relevant parts of the Ethical Information section must be completed. If the research will involve human participation or the use of animals covered by the Animals (Scientific Procedures) Act 1986 it is recommended that applicants pay particular attention to the guidance highlighted below. EPSRC reserves the right to reject applications prior to peer review if the Ethical Information sections are not completed correctly.

Further guidance on completing the Je-S form can be found at <https://je-s.rcuk.ac.uk/Handbook/Index.htm#pages/SystemRequirementsFormatsandSafetysandConditionsofUse.htm>. Other relevant guidance includes: EPSRC's policy on animal use in research (<https://epsrc.ukri.org/about/standards/animalresearchpolicy/>) and the Responsible Innovation Framework (<https://epsrc.ukri.org/research/framework/>).

Please note that on submission to EPSRC **all** non-PDF documents uploaded onto Je-S are converted to PDF, the use of non-standard fonts may result in errors or font conversion, which could affect the overall length of the document.

For advice on writing proposals see:

<https://epsrc.ukri.org/funding/applicationprocess/preparing/>

User Engagement Strategy

Successful applicants will be required to develop and execute a strategy for engaging with potential users of the research funded in the project (resources for this activity can be requested as part of the Pathways to Impact and must be justified in the application). This strategy should be reviewed and updated regularly as part of the formal management of the grant.

The strategy should cover:

- how and when potential users have been / will be identified;
- what form the engagement will take;
- what steps will be taken to ensure that outputs of the research are made available to potential users;
- suitable metrics for determining the success of the strategy in delivering value to users.

Assessment

Assessment process

Applications received under this Call will be assessed by peer review followed by ranking at a prioritisation panel. (see:

<https://epsrc.ukri.org/funding/assessmentprocess/overview/>)

Strategic input from the Leader of CREDS, Professor Nick Eyre, will be taken at the prioritisation panel, where he will provide a contextual briefing and be available for the panel to ask questions regarding CREDS centre strategy. He will not form part of the assessment of individual proposals, nor will he be asked to comment on specific proposals.

Assessment criteria

Applications will be assessed against our standard criteria, the definitions of which can be found here:

<https://epsrc.ukri.org/funding/assessmentprocess/review/formsandguidancenotes/standardcalls/>

Quality/excellence (primary criterion)

Reviewers are asked to comment on the degree of research excellence of the proposal making reference to:

- 1) The novelty, relationship to the context, and timeliness;
- 2) The ambition, adventure, and transformative aspects identified;
- 3) The appropriateness of the proposed methodology

Importance (secondary major criterion)

How the research:

- 1) Contributes to, or helps maintain the health of other disciplines contributes to addressing key UK societal challenges and/or contributes to future UK economic success and development of emerging industry(s);
- 2) Meets national needs by establishing/maintaining a unique world leading activity;
- 3) Complements other UK research funded in the area, including any relationship to the EPSRC portfolio will be addressed.

Proposal Assessment (secondary major criterion)

Reviewers will be asked to comment on how the research complements other UK research funded in the area, including any relationship to the EPSRC portfolio. Specifically applicants should address how the proposed research advances the state of the art in End use energy demand, advances the EPSRC Balancing capability strategy for Energy Efficiency and aligns with the strategy and mission of the CREDS centre.

Pathways to Impact (secondary criterion)

Reviewers will comment on the pathway to impact identified for this work particularly:

- 1) How complete and realistic are the impacts identified for this work;
- 2) The effectiveness of the activities identified to help realise these impacts, including the resources requested for this purpose;
- 3) The relevance and appropriateness of any beneficiaries or collaborators.

Applicant (secondary criterion)

Reviewers will comment on the applicants' ability to deliver the proposed project making reference to:

- 1) Appropriateness of the track record of the applicant(s);
- 2) Balance of skills of the project team, including academic partners.

Resources and Management (secondary criterion)

Reviewers will comment on the effectiveness of the proposed planning and management and on whether the requested resources are appropriate and have been fully justified.

Guidance for reviewers

Information about the EPSRC peer review process and guidance for reviewers can be found at: <https://epsrc.ukri.org/funding/assessmentprocess/review/>

Guidance for reviewing standard grants can be found here:

<https://epsrc.ukri.org/funding/assessmentprocess/review/formsandguidancenotes/standardgrants/>

Additional grant conditions (AGCs)

Grants will be subject to the standard UK Research and Innovation grant conditions; however the following additional grant conditions will be added to this call:

GAC 01 Working with CREDS

This grant is awarded on the condition that the project will work in strategic partnership with the Centre for Research into Energy Demand Solutions (CREDS), and in addition to the core research programme will undertake a wider networking role with the research and user community outside the project membership.

The project investigators will become members of CREDS, attending meetings as required, providing regular project updates and reports, and engaging fully with the CREDS management and research steering groups. Failure to do so will result in the suspension of the grant.

The project must use logos and branding as required by EPSRC.

The principal investigator will be required to submit annual progress reports as part of the CREDS annual report. The required format will be specified by EPSRC at least two months prior to the due date.

The project could be reviewed as part of CREDS, in which the project team could be invited to CREDS to discuss their work.

The project must collect details of project partner and their contributions to the research and provide this information both to CREDS and to the EPSRC on request.

GAC 02 Collaborative Agreement

A collaborative agreement is required for this project. This must include clauses committing all project partners to participation in CREDS as detailed above.

Confirmation that the agreement is in place must be sent to edward.jones@epsrc.ukri.org within six months of starting the project.

Moving forward

Submissions to this call will count towards the Repeatedly Unsuccessful Applicants Policy. Further information about the policy can be found at: <https://epsrc.ukri.org/funding/howtoapply/basics/resubpol/rua/>

Key dates

Activity	Date*
Deadline for full proposal	16:00 on 01 October 2019
Prioritisation Panel	February 2020
Funding decision	February 2020
Grant start date	April 2020

*EPSRC aims to adhere to the key dates as published, however there may be exceptions where the panel meeting may have to change due to panel member availability.

Contacts

- Edward Jones (edward.jones@epsrc.ukri.org – 01793 444470)

Change log

Name	Date	Version	Change
Edward Jones	29/03/19	1	N/A

Appendices (includes Attachment Checklist and Fund Headings)

Je-S attachments Check List

Standard:

Attachment Type	Maximum Page length	Mandatory/Optional	Extra Guidance
Case for Support	Eight pages	M	Comprising up to two A4 sides for a track record, and six A4 sides describing proposed research and its context.
Pathways to Impact	Two pages	M	
Workplan	One page	M	
Justification for Resources	Two pages	M	
CVs	Two pages each	As Required by EPSRC	For named and visiting researchers, and researcher co-investigators only.
Project Partner Letters of Support	No page limits	As Required by EPSRC	Must be included from all named project partners. Must be on headed paper, and be signed and dated within six months of the proposal submission date.

Letters of Support	No page limits	As Required by EPSRC	In exceptional circumstances a maximum of three letters can be submitted.
Equipment Quotes	No page limits	As required by EPSRC	
Equipment Business Case	Two pages each	As required by EPSRC	Required for any items or combined assets with a value above the OJEU limit.
Technical assessment	No page limit	As required by EPSRC	
Proposal Cover Letter	No page limit	Optional	The cover letter can be used to highlight any important information to EPSRC. This attachment type is not seen by reviewers or panel members.
Other attachment	No page limit	As required, at EPSRC request only	This can be used for a document that does not fit under any of the headings above. This attachment type is not seen by reviewers or panel members.

Please ensure you adhere to the above attachment requirements when submitting your proposal. Any missing, over length or unnecessary attachments may result in your proposal being rejected.