

EPSRC Critical Mass Programmes to Drive a Sustainable Future Funding Opportunity Informational Webinar

23 January 2024, 2:00pm UK Time



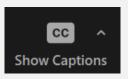
Format of today's webinar

- Introductions to the team leading this funding opportunity (~2 minutes)
- Webinar Housekeeping (~2 minutes)
- Presentation on the Critical Mass Programmes to Drive a Sustainable Future Funding Opportunity (~25 minutes)
- Moderated Question and Answer Session (~30 minutes)



Housekeeping

- This event is being recorded for asynchronous participation.
- This event is fully closed captioned.



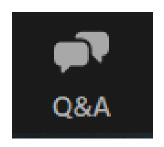
- Attendees are muted and your video is turned off.
- We have addressed all accessibility requests that we received.
- Tech issues and Chat Protocol:
 - Please only use the chat for raising technical issues during the webinar (your name will be shown).
- The raise hand function is not being monitored.





Questions

- Submit your questions as the webinar progresses using the Q&A function.
- Have questions about the UKRI Funding Service?
 Email <u>support@funding-service.ukri.org</u>
- Questions can also be submitted to <u>manufacturingandCE@epsrc.ukri.org</u> and <u>energyanddecarbonisation@epsrc.ukri.org</u> after the webinar.
- Eligibility questions which refer to a specific individual or team should be emailed directly to us.





Introduction to the Team

- Adam Suttle, Portfolio Manager (Energy and Decarbonisation)*
- Rehemat Bhatia, Senior Portfolio Manager (Manufacturing and the Circular Economy)*
- Amanda Howes, Portfolio Manager (Energy and Decarbonisation)
- Anke Davis (Joint Head of Manufacturing and the Circular Economy)
- Jim Fleming (Joint of Energy and Decarbonisation)



Purpose of the Webinar

- Introduce and provide an overview of the Critical Mass
 Programmes to Drive a Sustainable Future Funding Opportunity
- Ensure applicants understand key aims of the scheme
- Application Process
- Assessment Process
- Opportunity for Questions





Please make sure that you read the funding opportunity document

https://www.ukri.org/opportunity/critical-mass-programmes-to-drive-a-sustainable-future/





Background

Our goal* is to invest in research and innovation critical to the discovery, development and deployment of technologies and solutions to:

- Increase the speed of the deliverability of net zero
- Shift us away from environmentally detrimental materials, industries and processes to more sustainable and circular alternatives.

That includes:

- Pioneering new technologies
- The rapid scaling and evolution of current technologies.

*EPSRC Thematic Teams Involved:

- Manufacturing & the Circular Economy
- Energy & Decarbonisation







Core Aims of this funding opportunity

- □ Up to three Critical Mass five year transdisciplinary research programmes
 □ Directly contribute to the shift away from environmentally detrimental materials, technologies, energy solutions and operations to more sustainable, clean and circular alternatives.
 □ Discover, inform and optimise equitable and resilient approaches to the solutions required by the UK's mid-to-long term future.
 □ Support for multiple programmes targeting the highlight area of interseasonal energy storage (IES) beyond hydrogen
 - □ **Develop critical solutions** needed to store energy in large volumes from season to season in ways that are safe, economical and efficient, to enable the UK to take best advantage of the growth in renewable energy generation.



This funding opportunity is intended as a pilot for EPSRC:

We will conduct review and evaluation activities during and after the funding opportunity to inform the targeted priorities of any potential future funding rounds.

Funding Available

Budget (EPSRC will fund 80% Full Economic Cost of a Project)

• Total fund: £22,725,000

• £13,725,000: Critical Mass Programmes (all other projects)

• £9,000,000: IES (beyond hydrogen) highlight area projects

	No. of awards	Maximum Award (100% FEC)	Maximum EPSRC contribution (80% FEC)	Funding duration
Critical Mass Programmes	Up to three	£5,718,750	£4,575,000	5 years
IES (beyond hydrogen) highlight area	Approx. 3 (could be greater or fewer than 3)	£3,000,000	£2,400,000	5 years



What is in Remit for All Projects?

Themes of focus may include, but are not limited to:

- Advanced renewable energy technologies with potential to play a part in the energy transition or revisions of existing technologies that provide more sustainable solutions
- Decarbonised, sustainable transport, including land, air, sea and cross modal
- Sustainable next generation manufacturing technologies, processes and systems
- Technologies to enable a circular economy, in particular reuse, refurbish, remanufacture and longer-in-life solutions



What is in Remit for the Interseasonal Energy Storage Highlight Area?

Applications may include, but are not limited to:

- Electrochemical storage
- Thermal storage
- Gravitational (potential energy) storage
- Whole system including the production of the storage technology, storage integration, and use of the energy storage system



Other council remits?

Applicants are expected to co-create solutions between different disciplines, within and beyond EPSRC's remit, as appropriate.

However:

- Overall majority of the research proposal must be within EPSRC remit*
- Driving a sustainable and net zero future from 2030 <u>must not</u> be a beneficiary or potential impact pathway, but rather the core focus and vision of the programme*



*EPSRC reserves the right to make remit decisions without reference to peer review.

Other Council Remits?

Sustainability research is often transdisciplinary by necessity

Definition of Transdisciplinarity for this Funding Opportunity:

"Research that transgresses boundaries between disciplinary knowledge or integrates different bodies of knowledge and actively co-creates knowledge between academic and societal partners such as policymakers or business."



"Critical Mass Programmes"

- A consortia of researchers with a view to achieving a particular aim collectively and for that to be the basis of the proposed research project.
- We recognise that delivering a sustainable, prosperous and resilient future is complex and highrisk, requiring the integration of multiple stakeholders and broad interdisciplinary teams across and beyond the remit of EPSRC.





"Critical Mass Programmes"

- Expected to exhibit a set of features ("Programmes must" and "Programmes should") which we believe to be vital to delivering impact towards ENZ aims
- These investments will provide the scale, flexibility and length of award necessary to support this.





Refer to "Programmes must" & "Programmes should" sub-sections of the sections

Programmes must:

- address one or more timely research challenge or challenges focused on a single strategically important theme which is driven directly by the vision of the transition to sustainable, clean and circular materials, technologies, energy and operations in the UK's mid-to-long term future from 2030 onwards
- demonstrate a coherent long-term strategic vison and bring together a collaborative and world-leading academic team with relevant stakeholders to address it
- take a systems approach, considering the wider context in which the proposed research and research outcomes will sit and the trade-offs and unintended consequences of the research outcomes
- demonstrate co-creation and collaboration with stakeholders including industry, policy and the third sector to identify timely and strategically important research challenges
- drive added value as a core focus of the programme by demonstrating synergistic connectivity between partners, disciplines, and workstreams
- identify and embed clear, realistic and proportionate impact and translation pathways which will maximise demonstrable impact from the programme in the medium and longer term
- use the scale, flexibility and length of the funding to deliver UK-wide national leadership and advocacy and embed creativity and agility into the plans for the programme
- develop the skills of the researchers and partners involved, embedding equality, diversity and inclusion throughout the programme, as well as supporting development and training for early career researchers
- embed environmental sustainability throughout the programme, both in research outcomes and in programme operations



Refer to "Programmes must" & "Programmes should" subsections of the sections

Research programmes should:

- look to integrate leading-edge analysis of whole life cycle, social engagement or behavioural science, alongside engineering, physical, and environmental science approaches to enhance the translatability of findings into viable solutions
- build upon existing UKRI research investments, from fundamental to applied, avoiding duplication, competition, and ensuring collaboration where applicable, building upon or partnering with existing UK and international academic and stakeholder initiatives relevant to the challenge area of focus, including exchanging knowledge, drawing on experience and outcomes and collaborating on data use and collection
- anticipate the need for freedom to respond quickly to new arising challenges, bring in new collaborators, attract more funding, and cross-fertilise ideas



Address EPSRC's strategic aims:

- Deliver high quality, novel engineering and physical sciences research addressing timely and strategically important challenges demonstrably driven directly by the vision of a net zero and sustainable UK.
- Demonstrate broader benefits to society, the economy and the environment





Programme Impact:

- Timescale: clear pathways to impact (translatable to the domain of the 2030s and 2040s).
- Engage, collaborate and co-create with industrial, policy and third sector stakeholders
- Consider the wider system in which your proposed programme's research and planned outputs exist.





Programme Impact:

• **Embed** careful consideration of environmental sustainability **throughout the lifetime** of the programme. All proposed project outputs and outcomes, research approaches and operations





- Maximise quality and impact
 - Collaborative and transdisciplinary approaches
 - Co-creation with new and existing stakeholders, both academic and non-academic, across and beyond EPSRC's remit
- Compliment: how you will interact with existing EPSRC/UKRI investments and demonstrate how your work will compliment and add value to the existing research and innovation landscape.







Who Can Apply for this Funding Opportunity?

Who can apply

- Individual UK investigators and Research Organisations: Standard EPSRC eligibility requirements apply
- Project Lead*: One application only
- Project Co-Lead*: <u>Multiple</u> applications

There is no demand management and there are no limits on the number of applications per organisation.

*Please note: Principal Investigator and Co-Principal Investigator have been renamed Project Lead and Project Co-Lead respectively



Expression of Interest will request:

- Project lead name, affiliation and email address
- Proposed host organisation
- Project co-lead names



Funding available: What can be funded in a project?

Eligible Costs

	No. of awards	Maximum Award (100% FEC)	Maximum EPSRC contribution (80% FEC)	Funding duration
Critical Mass Programmes	Up to 3	£5,718,750	£4,575,000	5 years
IES (beyond hydrogen) highlight area	~3 (could be greater or fewer than 3)	£3,000,000	£2,400,000	5 years

For this Funding Opportunity, EPSRC's standard business rules on eligible costs apply.

Please visit 'Costs you can apply for'

You do NOT have to provide any indicative costs at this (EoI) stage.





Q Search

Engineering and

Physical Sciences Research Council

Costs you can apply for



Eligible Costs

You do NOT have to provide any indicative costs at this (EoI) stage.

Directly Allocated Costs	Eligible?
Project Leads and Project Co-Leads	
Estates	
Other directly allocated costs	Yes
Directly incurred costs	
Staff (Enabling staff are scheme specific – details to follow in the Full Stage Opportunity)	
Travel, subsistence and consumables for staff	
Equipment (up to £400,000 including VAT)	
Exceptions	Eligible?
Norway and International Institute of Advanced System Analysis (IIASA) co-leads	
Studentships (Masters, PhD)	



Who can be funded in a project?

Expression of Interest will request:

- Project lead name, affiliation and email address
- Proposed host organisation
- Project co-lead names

You do NOT have to provide any indication of other Enabling Staff at the Expression of Interest Stage.



Home > Roles in funding applications > Roles in funding applications: eligibility, responsibilities and costings guidance

Guidance

Roles in funding applications: eligibility, responsibilities and costings guidance

Published:

23 May 2023 20 August 2024

Contents

- How to use this guidance
- Before you apply: discuss and agree with lead organisation
- <u>Using roles in funding application</u> <u>services</u>
- Role descriptions and responsibilities
- After applying to a funding opportunity
- Role costings

This guidance sets out the different roles on a project team when applying to a funding opportunity from UKRI or one of its research councils.

How to use this guidance

UKRI has three main services that you can use to apply for funding:

- UKRI Funding Service a new service used by the seven research councils
- Joint Electronic Submission (Je-S) system in the process of being replaced by UKRI Funding Service

Fallow this avidance if you are applying through the HIVDI Funding Comise to a

Innovation Funding Service – for funding opportunities from Innovate UK

Who can be funded in a project?

*Any unnamed role resource, can be included and justified in the 'Resources and Costs' section of the Full Stage Application.



Directly incurred costs - Staff*	Eligible?	Notes
Project Lead (PL)	Yes	
Project Co-Lead UK (PcL)	Yes	
Project Co-lead (International) (PcL (I))	No	Unless based in Norway or at the International Institute of Advanced System Analysis (IIASA) Co-leads *listed in Exceptions
Researcher Co-Lead	Yes	
Fellow	No	
Grant Manager	Yes	
Research and Innovation Associate	Yes	Formerly 'PDRA' in Je-S
Visiting Researcher	Yes	Overseas collaborators to the UK for up to 12 months per individual
Specialist	Yes	
Technician	Yes	
Doctoral student	No	
Professional Enabling Staff	Yes	

Are Project Partners Eligible for this Funding Opportunity?

Yes – however: You do <u>not</u> have to provide any indication of your intended Project Partners or their contributions at the Expression of Interest Stage.

EPSRCs standard business rules will apply to this Funding Opportunity

How do I list my overseas / international collaborators in my proposal? Project Partners or Visiting Researchers

Project partners: Can receive small amounts of funding from the grant, such as for travel and subsistence to attend project meetings. Extended visits should be listed as visiting researchers.

Visiting researchers: Support may be requested for visits by overseas collaborators to the UK for up to 12 months per individual. The application may include estates and indirect costs for any visiting researcher, regardless of whether the support being requested includes a salary contribution or is only travel and subsistence.



Eligible Overseas Costs

Cost	
Travel for UK researchers to partner labs	
Extended overseas visits of UK based research staff	
Hosting costs for overseas visitors in UK	
Consumables of UK researchers while working overseas	
Cost of transporting equipment used in joint experiments	
Use of DTP funds to support EPSRC funded students in visits	Yes
Costs of overseas researchers while at UK institutions	
Costs of overseas researchers at overseas institutions (other than Norway), including consumables and international PDRAs	
Costs incurred by research undertaken by collaborators	
Research projects led by non-UK institutions	





Additional considerations

Equality, Diversity and Inclusion (EDI)

EPSRC aims to support a diverse and inclusive research environment where there is equality of opportunities.

We support people to work in a way that suits their personal circumstances.

This includes:

- career breaks
- support for people with caring responsibilities
- flexible working
- alternative working patterns



We strongly encourage you to integrate EDI in your application

Am I expected to know about EDI as an applicant?

Project teams are not expected to have specific expertise in EDI.

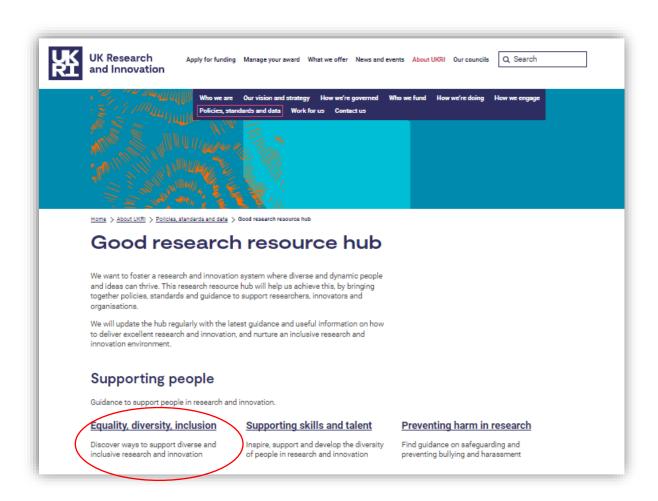
What should I think about in my application?

- How you will support Capacity Building and Skills Development across and beyond the research programme:
 - Team Formation
 - Activity and Outcomes planning

Integrate EDI principles in **all** parts of the application.

 How will you foster a nurturing research culture?





Other considerations

- Responsible Innovation
- Trusted research and Innovation
- **Export control**
- Visas





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Good research resource hub

We want to foster a research and innovation system where diverse and dynamic people and ideas can thrive. This research resource hub will help us achieve this, by bringing together policies, standards and guidance to support researchers, innovators and

We will update the hub regularly with the latest guidance and useful information on how to deliver excellent research and innovation, and nurture an inclusive research and innovation environment.

Supporting people

e in research and innovation.

Equality, diversity, inclusion

Discover ways to support diverse and inclusive research and innovation

Supporting skills and talent

Inspire, support and develop the diversity of people in research and innovation

Preventing harm in research

Find guidance on safeguarding and preventing bullying and harassment

Supporting research and innovation

Guidance, policies and standards on research ethics and integrity, open research and responsible innovation.

Use of animals in research

Understand your responsibilities for carrying out research in this area

Research integrity

Learn more about the standards of research integrity that we expect

Open research

Get information about our policies on open access and open research data

Human research participants

Find guidance, legislation and support if your research involves human participants

Human biological samples

Find out about the standards we expect you to meet when using human samples

rusted research and innovation

Find out how we are protecting staff and ork from theft and exploitation

Responsible innovation

Read how we're encouraging approaches to responsible innovation in the research we fund and businesses we support

Research in a global setting

Get support and resources for undertaking research in an international context

Engaging with the public

Learn how to involve the public in your

What is Trusted Research and Innovation (TR&I)?

Trusted Research is a sector term for protecting the UK's intellectual property, sensitive research, people and infrastructure from potential theft, manipulation and exploitation, including due to interference by hostile actors.

The National Protective Security Authority (NPSA) website has guidance for academia and industry:

"The UK has a thriving research and innovation sector that attracts investment from across the world."

"More than half of UK research is a product of international partnerships."

"Trusted Research aims to secure the integrity of the system of international research collaboration, which is vital to the continued success of the UK's research and innovation sector."

https://www.npsa.gov.uk/trusted-research



The UK has a thriving research and innovation sector that attracts investment from across the world. Trusted Research aims to secure the integrity of the system of international research collaboration, which is vital to the continued success of the UK's research and innovation sector.

Trusted Research Guidance for Academia



Trusted Research Guidance for Industry







Application and Assessment process

Key Application Dates





Timeline

7 January 2025 9:00am

Expression of Interest opening date

23 January 2025 2:00pm

Webinar

4 March 2025 4:00pm

Expression of Interest closing date

by 30 April 2025 5:00pm UK time

Full stage invitations

1 May 2025 9:00am

Full stage (invite only) opening date

17 July 2025 4:00pm

Full stage (invite only) closing date

September 2025 \Rightarrow Assessment by panel October 2025 PI response November 2025 Prioritisation panel meeting December 2025 Funding decisions mid-February 2026



Anticipated. Specific dates to follow

Earliest start date for programmes

Have you filled in an Expression of Interest?

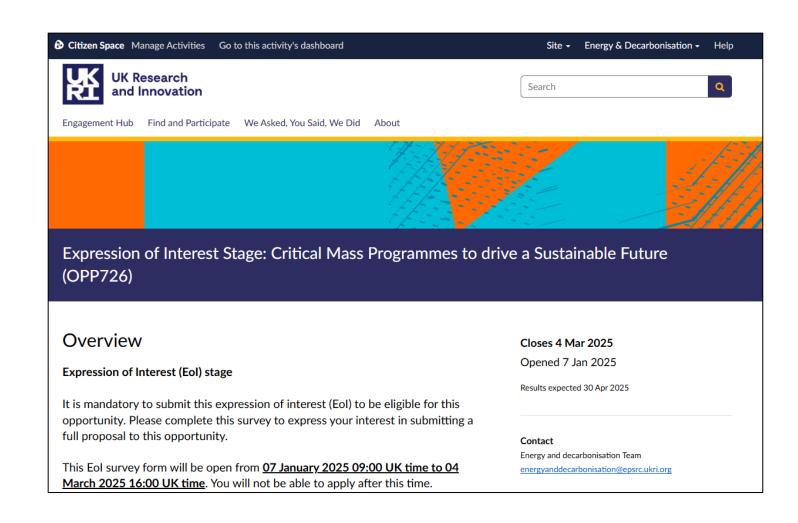
This is a mandatory part of the application process:

More to come on this process later...

Link can be found in Funding Opportunity Page

https://engagementhub.ukri.org/epsr c-energy-decarbonisation/4ef64852/





Submission Process – Expression of Interest (EoI) Application

- Please ensure sufficient time to:
 - Prepare for your research organisation's submission process
 - Leave enough time between submitting your proposal to your research office and the funding Eol Closing Date.
- Proposals can be multi-institutional, however only one application form should be submitted for each bid.
- Eol submissions should be made using our dedicated form on the The Funding Finder.
 - See How To Apply on the Funding Opportunity: https://engagementhub.ukri.org/epsrc-energy-decarbonisation/4ef64852/



What do I need to submit?

The Expression of Interest will request the following details:

- Project Lead name, affiliation and email address
- Proposed host organisation
- Project Co-Lead names
- If your submission is for the interseasonal storage highlight area (Yes or No)
- Short summary of the proposed research vision and its objectives (500 words / 3000 characters)
- Short summary of how your programme will provide additionality to the current and foreseeable UK Research and Innovation (UKRI) portfolio (250 words / 1500 characters)
- How you would like us to contact you

You do not have to provide any indicative costs at this stage. You cannot insert figures into the form.



UKRI can offer disability and accessibility support for UKRI applicants and grant holders during the application and assessment process.

How will my application be assessed?

Details of each assessment stage are listed in the funding opportunity guidance.

Eol Stage

Internal Panel (EPSRC Staff)

Invited Full Stage Application

- Expert Panel
- Prioritisation Panel (resulting in two* rank-ordered lists)



*Applications targeting the IES highlight area are ranked on a separate list to all other applications



Assessment Criteria: Eol Stage

Eol submissions will be evaluated by EPSRC staff members internally after the closing date. This review will assess that:

- you meet our funding eligibility requirements
- the majority of the research is within EPSRC remit
- your application aligns to the scope and objectives of this funding opportunity
- a sustainable future is a core focus of the programme and not a mere beneficiary or potential impact pathway
- your programme will provide additionality to the current and foreseeable UKRI portfolio
- any applications with the same area of research focus, submitted into the same round of this funding opportunity, could be offered the opportunity to strengthen their consortia by forming a single full stage application with other applicants





Questions?



- Submit your questions using the Q&A function.
- Eligibility questions pertaining to an individual or specific applicant group should be emailed directly to us.
- Have questions about the UKRI Funding Service? Email <u>support@funding-service.ukri.org</u>



https://www.ukri.org/opportunity/critical-massprogrammes-to-drive-a-sustainable-future/

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- Look out for the Webinar Outputs! They will be published on the Funding Finder soon.
- Another question?
 - Please get in touch:
 - Manufacturingandcirculareconomy@epsrc.ukri.org or energyanddecarbonisation@epsrc.ukri.org











- What's the difference to the Programme Grant scheme

Refer to the specific "Programmes must" and "Programmes should" of this Funding Opportunity because there are notable differences. A key requirement for programmes in this scheme is for them to develop clear pathways for impact and translation to the UK's mid-to-long term future (translatable to the domain of the 2030s and 2040s). It is really seeking demonstrable impact from the programme in the medium and longer term which the Programme Grant Responsive mode is not necessarily directed to.

Duration	5 years	Up to 6 years
Max Award	£5.7m FEC, £3.0m FEC (IES)	N/A
Impact	Demonstratable med-long term (2030s/2040s)	N/A
Sustainable Future	Core focus	Not a necessity
Systems Approach	Essential	Not-essential

Programme Grant

CMP / IES Scheme



– What is the purpose of the IES highlight?

To goal of this highlight area is to address a breadth of challenges in this area and build capacity in interseasonal energy storage beyond hydrogen due to saturation of IES funding in the hydrogen space.

"Inter seasonal" = 3+ months

- electrochemical storage
- thermal storage
- gravitational (potential energy) storage
- whole system including the production of the storage technology, storage integration, and use of the energy storage system



FAQ Assessment – Full Stage

Evaluation areas for full stage applications

It is anticipated that the following criteria will form the basis of assessment by the expert panel:

- Vision and Approach which will include that a sustainable future has been embedded as a core focus of the programme
- Applicant and team capacity to deliver
- Plans for taking a systems approach
- Co-creation and stakeholder engagement
- Resources requested, and the proposed management
- Ethical and responsible research and innovation considerations

More details, including assessment questions, will follow once the full stage of the funding opportunity opens in May 2025. This will be displayed under the 'Application questions' heading in the 'How to apply' section.



by 30 April 2025 5:00pm UK time

Full stage invitations

1 May 2025 9:00am

Full stage (invite only) opening date

17 July 2025 4:00pm

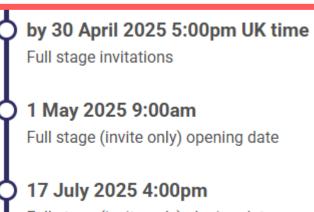
Full stage (invite only) closing date

FAQ Assessment – Full Stage

All applications, including those targeting the IES highlight area, will follow the same assessment process and criteria.

IES highlight will have a separate funding list

IES Highlight assessment contexts £3m < 5.7m





- What remits are out of scope?

Due to previous recent UKRI investment activity, the primary focus should not be on:

- hydrogen production or systems integration
- hydrogen based interseasonal energy storage
- nuclear fission
- nuclear fusion
- industrial decarbonisation
- healthcare manufacturing



- What Hydrogen remits are included?

So long as a proposal sits distinct from the work being carried out by the EPSRC-funded hydrogen hubs, Hi-Act and HyRes, and does not concern production of hydrogen, or integration of hydrogen into the energy system, then it will be within remit of this call. An example of Hydrogen remits that could be included in this call might be investigations into material degradation by hydrogen in systems being powered by the fuel, or investigations in hydrogen for sustainable transport, including land, air, sea and cross modal.

However,

-Industrial Decarbonisation is out of scope due to previous recent UKRI investment activity - please see EPSRC's Definition of Industrial Decarbonisation and note the investment activity of the

Industrial Decarbonisation Challenge

- Hydrogen Interseasonal Energy Storage is out of scope.





Funding Available – Who Can Be Funded through a Project?

Overseas partner organisations and International Collaborators

Organisations are defined as universities, public sector research organisations or publicly funded research institutes.

International collaborators should be listed as project partners or visiting researchers.

Project partners: Can receive small amounts of funding from the grant, such as for travel and subsistence to attend project meetings. Extended visits should be listed as visiting researchers.

Visiting researchers: Support may be requested for visits by overseas collaborators to the UK for up to 12 months per individual. The application may include estates and indirect costs for any visiting researcher, regardless of whether the support being requested includes a salary contribution or is only travel and subsistence.



Exceptions

Norwegian Project Co-Leads

Following the Money Follows Cooperation agreement between UK Research and Innovation (UKRI) and Research Council of Norway (RCN), Norway co-leads (co-investigators) can be included in UK-led applications and to receive funding from the participating UKRI research councils.

This is not a separate research funding scheme; applications come through existing opportunities.

This agreement reduces barriers to cross-border collaboration.



More info on UKRI website

https://www.ukri.org/opportunity/collaborate-with researchers-in-norway/

Funding opportunity

Collaborate with researchers in Norway

Opportunity status:	Open	
Funders:	Arts and Humanities Research Council (AHRC), Engineering and Physical Sciences Research Council (EPSRC), Economic and Social Research Council (ESRC), Medical Research Council (MRC), Natural Environment Research Council (NERC), UK Research and Innovation	
Co-funders:	Research Council of Norway (RCN)	
Funding type:	Grant	
Publication date:	3 November 2022	
Opening date:	N/A	
Closing date:	Open - no closing date	





