

## Quick Reference

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

# ISCF Faraday Challenge – Call for Establishment of a Batteries Research Institute

**Call type: Invitation for proposals**

**Closing date: 16.00 30 August 2017**

**How to apply:** Submission of full proposals

**Assessment Process:** Full proposals will be reviewed by an expert panel followed by a further interview stage convened with an expert panel.

### Key Dates:

Activity	Date
Deadline for Full Proposals	30 August 2017
Interview Panel	06 September 2017
Funding decision	Mid-September 2017
Grant start date	Beginning of October 2017

**Additional information:** This funding call is part of the Government's Industrial Strategy Challenge Fund (ISCF). This is not a standard EPSRC funding call and the remit is unique to this call. Applications will only be accepted from Organisations who attended the ISCF Faraday Challenge briefing meeting on 12 July 2017. Consortia intending to apply should complete expression of interest by no later than 17.00 on 04 August 2017. All consortia applications must contain only the documentation outlined in this document and must contain a letter of institutional support.

### Contacts:

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## **ISCF Faraday Challenge – Call for Establishment of a Batteries Research Institute**

**Call type: Invitation for proposals**

**Closing date: 16.00 30 August 2017**

**Related themes: All Themes**

### **Summary**

EPSRC invites submission of proposals from UK university consortia to establish an internationally recognised virtual institute to lead in research, education and knowledge transfer in line with the Industrial Strategy Faraday Challenge ‘Batteries for Britain’. This funding call is part of the Government’s Industrial Strategy Challenge Fund (ISCF). This is not a standard EPSRC funding call and the remit is unique to this call.

The successful consortia will lead, shape and define a strategic programme of fundamental application driven research which must aim to achieve significant outputs in the area of battery technologies which can be translated through innovation and scale up activities. Within the remit of the Research Institute will be the scoping and running of subsequent research funding calls in this area, through national and international engagement with academic and industrial communities. Further to this the Institute will be responsible for developing a world leading training programme which will define the future research landscape and fulfil the developing needs of the UK to have a significant number of skilled individuals in this area.

The core consortia members must have attended the briefing meeting which took place in London on 12 July 2017. This does not restrict subsequent University partners from joining the consortia prior to final proposal submission.

The objectives of the institute will be to ensure that the UK remains at the forefront of novel battery technologies which will underpin our ability to be world leading in the area of energy storage. The institute will provide a national hub to promote research and its translation to address challenges in the automotive sector and the wider energy storage area.

As part of the Industrial Strategy Challenge fund the UK government has committed a total of £246 million to March 2021 to establish the UK capability in this area. This funding is unique as it covers the complete innovation pipeline from fundamental research (EPSRC) to translation technologies (IUK) and scale up activities (APC). As part of this wave of funding £78 million will be administered through EPSRC to include the formation of the institute and to kick start the first tranche of research activities.

It is envisaged that following the formation of this institute and the appointment of a Research Institute Director that the institute will retain a significant portion

of the aforementioned EPSRC funding to allocate to subsequent waves of funding with reference to the relevant governance structures of the wider programme.

Proposals will be assessed at an interview stage by an expert panel.

## **Background**

It should be noted that, as this call is for investment from the Industrial Strategy Challenge Fund, this is not a standard EPSRC funding call. As such the remit and requirements of this call are unique to the ISCF Faraday Challenge and potential applicants must be aware and accepting of this not being considered business as usual for EPSRC when applying to this call.

This new Institute will be a virtual entity founded by a consortium of universities with demonstrable world leading excellence in the field of batteries research. The institute will be the focal point for delivering cutting edge fundamental research which will subsequently shape the future innovation pipeline to establish the UK as the world leader in this area. As written in the business case for this challenge, EPSRC will transfer a significant portion of the investment it receives from BEIS to the Institute.

The consortia proposing to form the Institute will be required to have established their scientific pedigree, whilst, expertise in all of the relevant scientific aspects of this call will not be expected as a pre-requisite for applications sufficient breadth of expertise across the field should be demonstrated. The funded institute will deliver research through funding a series of research projects within the university sector involving relevant expertise from any eligible organisation including those outside of the institute.

The Institute is expected to build translational relationships with both small to medium enterprises and large commercial industrial organisations. The Institute will be expected to (with support from EPSRC and in reference to the overarching governance structure) use this portion of the overall Batteries Challenge investment to support further research challenge programmes based on objectives identified in collaboration with the challenge advisory board and the UK batteries community from both industry and academia.

The Institute and its associated members will be responsible for supporting an aligned programme of training and skills development. This must include support for training, with significant consideration given to shaping the proposed training structures to meet emerging industrial need.

The Institute will appoint a Research Institute Director alongside a core management team to support the activities required to be undertaken to ensure the successful establishment of the institute (Headquarters and research initiatives). The institute must support a strong programme of research and must ensure that the outputs of research developed have the potential to be translated to industrially relevant technologies.

It is expected that the proposed Research Institute Director or interim Director will be identified prior to the submission of this application and will be ready to take up this post immediately upon commencement of the grant.

An independent academic advisory board proposed by the Institute will be put in place to provide EPSRC assurance that any re-deployment or award of Institute

funds represents a value for money investment and aligns to the research objectives of the Institute. The terms of reference and appointments of this independent body must be signed off by EPSRC, who will in addition appoint an independent chairperson.

Further to this, as with all investments through the ISCF, an overarching governance structure has been put in place. This will be headed by an ISCF challenge Director for the Faraday Challenge, which will be a key role in delivery of the research, innovation and scale up activities with our interpretation of that being much closer jurisdiction over strategic direction.

## **Expectations**

Working with the consortium the Director of the Faraday Challenge Research Institute, not the ISCF Challenge Director, will ensure that the Institute will:

- Establish a management board and administrative team commensurate with delivering a 4- to 10-year multimillion pound programme involving up to 150 researchers, a cohort of PhD students and a comprehensive training programme
- Show strong visible leadership and facilitate national and international engagement with appropriate expertise within this field of research
- Deliver world class science and bring in the best science and engineering experts currently outside of energy research to work on the research projects.
- Bring together the underpinning and application driven UK battery science communities (both academic and industrial) to agree its priority challenges, including in longer term more strategic higher risk science and as well as in areas where fundamental science is required to unlock short term industrial needs.
- Identify long term application inspired fundamental research challenges and specific research challenge objectives with reference to industry and the broader challenge advisory structure
- Working with EPSRC, commission subsequent sets of projects which directly link to the identified research challenges of the institute to deliver a single national scale science programme. Such projects are expected to be of significant scale and multi-disciplinary and multi-institutional in nature.
- Facilitate Intellectual Property arrangements which maximise return to the UK.
- Actively engage with the innovation and scale up aspects of the challenge being led by Innovate UK and the Advanced Propulsion Centre.
- Adhere to specified monitoring and evaluation requirements as outlined in the grant terms and conditions. Be capable of running further quality assurance and monitoring and evaluation processes.
- Alongside the research programme, the institute must be in a position to manage an aligned programme of training and skills development.

- Establish and maintain an Equality and Diversity plan by which will be monitored and adequately adapted throughout the lifetime of the institute.
- Demonstrate a clear willingness to work within the governance structure designed to support the research outputs of this institute across the rest of the Innovation pipeline through Innovate UK's CRD programme and the APC Scale Up programme.

## University Commitments

**Consortia intending to submit a full proposal should express an interest in doing so by emailing [derek.craig@epsrc.ac.uk](mailto:derek.craig@epsrc.ac.uk) by no later than 17.00 on 04 August 2017.** Full proposals (consisting of only the document types outlined below) from university consortia should be submitted to EPSRC by **16.00 on Wednesday 30 August 2017.** To be considered Universities must:

- Be prepared to consider this project as a ten-year investment with four years of funding currently committed by government. Universities must be aware that they are expected to sign up to this project on the basis of a ten-year lifetime and should be prepared to provide a strategic contribution that ensures its sustainability.
- Agree to contribute to the growth of this field of research by recruiting staff to maximise the funding available.
- Facilitate the work of the Institute and its Director by allowing participating staff the freedom to work solely on the work of the institute i.e. allow participating staff on occasion to work at the headquarters of the institute and free up staff time to focus on specific Institute projects.
- Accept that the Institute has the rights to re-deploy staff and funding to other projects upon advice from the relevant governance structures.
- Provide access to facilities to all Institute partners across the headquarters and research initiatives.
- Be able to demonstrate excellence in novel batteries research. Demonstrable research excellence in the corresponding underpinning disciplines facilitating this research must also be provided (e.g. chemistry, control systems, engineering, manufacturing, mathematics, physics etc.)
- Have a significant track record of engaging with Industry on challenge based research including both SMEs and large scale Industrial partners in relevant areas of expertise.
- Work with others in the innovation chain, specifically across innovation and scale up activities.
- Demonstrate a clear willingness to collaborate with other universities.
- Demonstrate international connections that will facilitate the development of UK battery research.
- Demonstrate a willingness and capability to support a multidisciplinary training programme of excellence suitable to meet the specific needs of

the overall ISCF Batteries project. Including support for masters, postgraduate and postdoctoral training.

- Be prepared to adhere to further requirements which the Institute will be required to contribute in the period between the start-up of the Institute and 31 March 2021.

## Equipment

No equipment will be available through this call.

For more information on equipment funding, please see:  
<https://www.epsrc.ac.uk/research/facilities/equipment/>

## Eligibility

Only Universities who attended the information meeting on 12 July 2017 are eligible to bid for this call as the lead consortium university. Additional Universities may join the consortium prior to the submission of the final proposal.

Proposals received from lead universities who were not in attendance at the 12 July information meeting will be rejected without consideration.

For information on the eligibility of organisations and individuals to receive EPSRC funding, see the EPSRC Funding Guide:  
<https://www.epsrc.ac.uk/funding/howtoapply/fundingguide/>

As this call is a targeted funding opportunity provided by EPSRC, higher education institutions, and some research council institutes and independent research organisations are eligible to apply. A list of eligible organisations to apply to EPSRC is provided at: <http://www.rcuk.ac.uk/funding/eligibilityforrcs/>

## How to apply

EPSRC wishes for interested university consortia to make their intentions to apply known through email to [derek.craig@epsrc.ac.uk](mailto:derek.craig@epsrc.ac.uk) by no later than **17.00 on 04 August 2017**.

EPSRC requires that proposals for this call are submitted through the Research Councils Joint electronic Submission (Je-S) System (<https://je-s.rcuk.ac.uk/>) and a copy of all documentation must also be uploaded via online SmartSurvey form. For access to the SmartSurvey form, please email [derek.craig@epsrc.ac.uk](mailto:derek.craig@epsrc.ac.uk) to request the link.

**Successful applicants must be able to attend and direct a subsequent workshop on 15 September 2017 with interested applicants to the subsequent ISCF Faraday Challenge: Fast Start projects research call. At this workshop the Research Institute will be required to work with potential applicants to scope and develop collaborative research projects to tackle research challenges in the four 'Fast Start' project areas.**

## 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 'ISCF Faraday Challenge: Research Institute' 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 30 August 2017**.

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://www.epsrc.ac.uk/funding/howtoapply/>) which should be consulted when preparing all proposals.

EPSRC must receive your application through Je-S **and** through SmartSurvey (<http://www.smartsurvey.co.uk/s/XK2GH/>) by no later than **16:00 on 30 August 2017**. Proposals received after this deadline will be rejected without consideration as will proposals which have not been received through both Je-S and SmartSurvey.

## Guidance on writing an application

Proposals should comprise **only** the following five, separate, documents:

- 1) A case for support, **maximum 10 pages**, of:
  - the consortiums strengths in research focused on the delivery of novel battery technologies research, particularly those disciplines which play an underpinning role in this area of research, drawing on evidence such as performance in past research assessment exercises, a description of the expertise of key staff in the relevant fields, the publications generated by key staff and their citation impact, and any other evidence that might be considered relevant. (Maximum **two** pages of A4)
  - any existing business links that might be built upon in the context of the new Institute, through for example, the sponsorship of new academic positions or post-graduate studentships, the funding of research projects or any other potential activities. (Maximum of **one** page of A4)
  - the approach the consortium will take to managing and operating the research institute i.e. the business model by which the Institute will operate. (Maximum of **four** pages of A4) This must include a description of the following:
    - the working agreement which must exist between consortia partners
    - how the consortium would run the Institute headquarters

- the location of the institute headquarters
  - how the institute would manage the subsequent portfolio of research and the process by which it would identify and run subsequent calls for funding
  - how the research institute would manage intellectual property and where the rights to this intellectual property would reside
  - how the headquarters should be set up (whether the HQ will be run through one university, as a joint venture between universities or independent institution etc.)
  - how the headquarters should be organised including a description of the skills and roles which must be in place to ensure the success of the institute
  - a proposed budget for management of the institute and an explanation of how this money will be used to maximise value for money. Taking into consideration expenditure required to cover the facilitation of both national and international engagement, the need to potentially employ research staff to liaise with the research project principal investigators, the skills and roles which will need to be covered to ensure the institute management structure is correctly in place.
  - an evidenced approach to how the Institute will manage and deliver a world leading training programme
- An explanation of how the institute will ultimately contribute to the competitiveness of UK industry. This must include an understanding of the economic considerations of the technology breakthrough envisaged (especially, what will it do to reduce the cost for UK industry and to improve the performance of UK industry) and outlined plans for linking with the Innovation and Scale Up programme strands. (Maximum of **one** page of A4)
  - A personal statement, of no more than **two** sides of A4, from the candidate identified to be the Director of the institute illustrating their research vision for the institute and the steps they will take to ensure the Institute engages with the broad academic and Industrial community to ensure the correct research challenges are being addressed throughout the lifetime of the institute and that maximum impact is obtained from the outputs of the Institute.
- 2) If desired, a publication list or other supportive materials in support of the case for support above. Submitted as a list of publications attachment.
  - 3) A proposal cover letter showing confirmation in writing from the University's Vice-Chancellor (or equivalent senior officer) of the willingness of the University to make contributions to the Institute, including any contribution that the University may be willing to make beyond the minimum requirement specified above.

- 4) A CV for the identified Director of the institute (this may be an interim director who will facilitate the appointment of a full time Director in due course).
- 5) Letters of support from existing or new business partners which should be directly relevant to, and informed by, the contents of the call. (All letters submitted must be signed and dated, if multiple letters are available then they should be collated into one PDF document prior to submission)

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.

In addition, where non-standard fonts are present, and even though the converted PDF document may look unaffected in the Je-S System, when it is imported into the Research Councils Grants System some information may be removed. We therefore recommend that where a document contains any non-standard fonts (scientific notation, diagrams etc.), the document is converted to PDF prior to attaching it to the proposal.

## **Assessment**

### **Assessment process**

An expert peer review panel will be convened to assess the track record of the consortia with respect to the area of batteries research and to the quality of the consortiums ideas on how to run the programme prior to a subsequent interview stage by an expert panel.

### **Assessment criteria**

- **Research Quality (Primary):** International standing and established track record of the consortia with respect to their expertise in the area of novel batteries research. Strength of current/previous research collaborations with Industrial partners in this field.
- **Institutional Commitment:** Assessment of the outlined contributions to the Institute from the consortium as well as their willingness to meet the outlined contributions stated in this call document. Assessment of the Universities commitment to this challenge on the timescale of a ten-year programme which is beyond the four-year funding commitment currently.
- **Leadership Quality:** International standing and established track record of the proposed Director in the field of novel batteries research, as well as history of successful engagement with Industry and leadership of large scale funding programmes.
- **Vision and Ambition:** Articulation of how through the Research Institute Director the Institute will deliver the vision and ambition of this challenge in the context of the ISCF. The Institute should seek to be ambitious and raise the international profile of the UK in this field. The Institute must also ensure that it actively engages across all three strands of the ISCF Batteries challenge (i.e. with innovation and scale up activities).

- **Impact:** Articulation of how the Institute will achieve maximum impact both nationally and internationally from research outputs, knowledge transfer and training activities.
- **Resources and management:** Articulation of how the consortium will translate the Vision and Ambition into a practical way of working, covering resource management, intellectual property, capability development and the set up and running of the Institute Headquarters.
- **Industrial Support:** Appropriateness and level of support from Industrial partners to support this project in the context of the ISCF.

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

## Guidance

### Guidance for reviewers

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

Guidance for reviewing standard grants can be found here:

<https://www.epsrc.ac.uk/funding/assessmentprocess/review/formsandguidancenotes/standardgrants/>

### Additional grant conditions

In addition to the standard terms and conditions for grants, successful applicants will be required to adhere to further non-standard terms and conditions which will be provided to the successful applicant upon completion of this process.

### Key dates

Activity	Date*
Information meeting	12 July 2017
Call Opens	24 July 2017
Call Closes	16.00 30 August 2017
Interviews	06 September 2017
Grant Start Date	01 October 2017

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

## Contacts

- Dr. Derek Craig ([derek.craig@epsrc.ac.uk](mailto:derek.craig@epsrc.ac.uk) - 01793 444112)
- Dr Kathryn Magnay ([kathryn.magnay@epsrc.ac.uk](mailto:kathryn.magnay@epsrc.ac.uk) - 01793 444337)

## Change log

Name	Date	Version	Change
Derek Craig	05/07/2017	1	N/A
Derek Craig	07/07/2017	2	Takes into account Peer Review comments and Adjustments from ISCF team.
Derek Craig	17/7/2017	3	Changes to Timeline and Requirements

## Je-S attachments Check List

### Standard:

Attachment Type	Maximum Page length	Mandatory/Optional	Extra Guidance
Case for Support (This document should be named as your Consortia Case for Support)	10 pages limit	Mandatory	10 pages maximum.
Publication List (Publication list in support of Consortia Case for Support)	No page limit	Optional	A publication list in support of consortia case for support. Maximum of 1 page per University partner. Publications must be within the last 4 years.
Cover Letter (University letter of support)	2 pages	Mandatory	University letter of support establishing commitment to

			Institute. Should be signed and dated.
CVs	2 pages	Mandatory	CV for Research Institute Director only.
Letters of Support	No page limits	Mandatory	Must be submitted as one combined document. All Project partner letters of support must be signed and dated.

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.