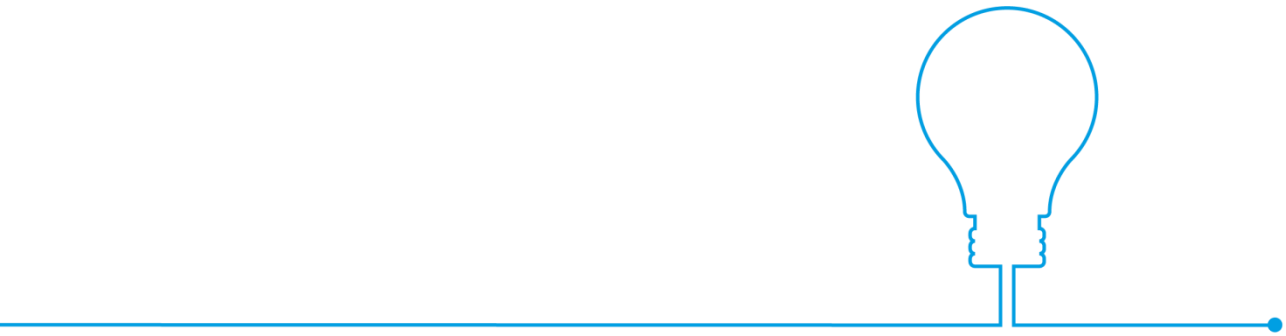
Department for
Business, Energy
& Industrial Strategy

# ENERGY STORAGE COST REDUCTION COMPETITION

## Competition Guidance Notes



January 2017

# ENERGY STORAGE COST REDUCTION COMPETITION

## Competition Guidance Notes

Energy storage Cost Reduction competition



Any enquiries regarding this publication should be sent to us at:
smart.innovation@beis.gov.uk

# Contents

# BEIS Energy Storage Cost Reduction Competition - Competitions Rules and Guidance

## 1. The Energy Storage Cost Reduction Competition – Overview

The objective of the Energy Storage Cost Reduction Competition (the Competition) is to support, through capital grants provided by the Department for Business, Energy and Industrial Strategy (BEIS), a number of industrial research and experimental development projects aimed at securing **cost reduction in larger-scale energy storage technologies.**

The Competition will consider projects for cost reduction of thermal, electricity or power to gas storage technologies which have the potential to reduce overall energy system costs; enable increased deployment of low carbon generation technologies or secure cost-effective efficiency improvements in generation technologies (renewable or non-renewable). The focus will be on reducing the levelised (full-life) costs of energy storage and applicants will be required to justify the cost reduction they expect to secure through the proposed innovation project. The Competition will prioritise support to larger-scale storage technologies capable of operating efficiently and cost-effectively at 1MW export power or 1MWh storage capacity upwards.

The Competition will focus support on component or sub-system level development and testing or improvement of manufacturing processes, rather than full-scale system prototyping and operational demonstration. While the Competition will be open to all types of energy storage technology, funding will not be provided for technologies which are already widely or commercially deployed (in the UK or elsewhere). The supported storage technologies are expected to be at an advanced stage of demonstration or close to commercial deployment.

Industry applicants or project teams, which must be industry-led, can apply for up to £1.0 million grant funding for industrial research projects and up to £2.5 million grant funding for experimental development projects. The maximum funding to be allocated to any single project is £2.5 million. Any project selected for funding in this Competition will be required to provide significant private sector funding alongside the grant funding provided by BEIS (further details of the match funding requirements are in section 5).

During the application process, applicants will be expected to demonstrate a robust evidence-based case for funding, which will include: cost reduction; energy system benefits; market potential; project delivery capability and sector capacity building.

# 2. Competition Context and Objectives

This Competition is funded by the BEIS energy innovation programme (2016-2021). The aim of the BEIS innovation programme is to reduce the UK's carbon emissions and the cost of decarbonisation by accelerating the commercialisation of innovative clean energy technologies and processes into the mid-2020s.

In November 2016, BEIS published a Call for Evidence on "A Smart Flexible Energy System"[1]; this document noted that "enabling a smarter, more efficient energy system is a priority for Government" and "as patterns of energy supply and demand change we need a system that can cope more efficiently". Alongside the Call for Evidence, BEIS published the results of new modelling from Imperial College and the Carbon Trust[2] which analysed illustrative deployment of specific flexible technologies – including energy storage, demand-side response, inter-connection and flexible generation - in different demand scenarios given different technology cost trajectories. This modelling indicates that combining flexible solutions in a whole system approach could save the UK £17-40bn cumulative to 2050 through building less low carbon generation capacity, reducing peaking plant and fuel spending, and deferring investment in network reinforcement while still meeting carbon targets.

In the case of energy storage, the modelling also indicates that the deployment of storage will be heavily dependent on its overall, lifetime (levelised) cost. Over the last 10 years, the cost of batteries – specifically lithium-ion batteries - has already fallen substantially and is expected to fall further over the next 5 – 10 years. This Competition aims to provide support for energy storage technologies which are not yet widely used commercially but which offer the most cost-effective operation potential, particularly in larger-scale applications (from 1MW export power or 1MWh storage capacity upwards) where there is generally less focus on very high-density (small volume) storage technologies.

The specific objectives for the Competition are to:

1. Reduce the cost of energy storage technologies that have the potential to secure one or more of the following benefits within 5 years of project completion: reduce overall energy system costs; enable increased deployment of intermittent or inflexible low carbon generation technologies (including providing synthetic inertia); secure cost-effective efficiency improvements in generation technologies (renewable or non-renewable).

[1] Published by the Department for Business, Energy and Industrial Strategy (BEIS), November 2016: https://www.gov.uk/government/consultations/call-for-evidence-a-smart-flexible-energy-system

[2] 'An analysis of electricity flexibility for Great Britain', published by BEIS, November 2016: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/568982/An_analysis_of_electricity_flexibility_for_Great_Britain.pdf

2. Produce technologies that are market ready with businesses capable of achieving sales of the technology within 3 years of grant award.

3. Leverage private sector funding into pre-commercial energy storage technologies and processes.

4. Strengthen supply chains in the UK for energy storage and to gain a better understanding of UK capabilities and gaps in manufacturing of grid-scale storage.

5. Encourage collaboration between technology developers and key partners, including: suppliers, energy storage customers (or potential customers) and academic expertise and to involve partners in finding innovative solutions.

# 3. Competition Timetable, Application and Assessment Process

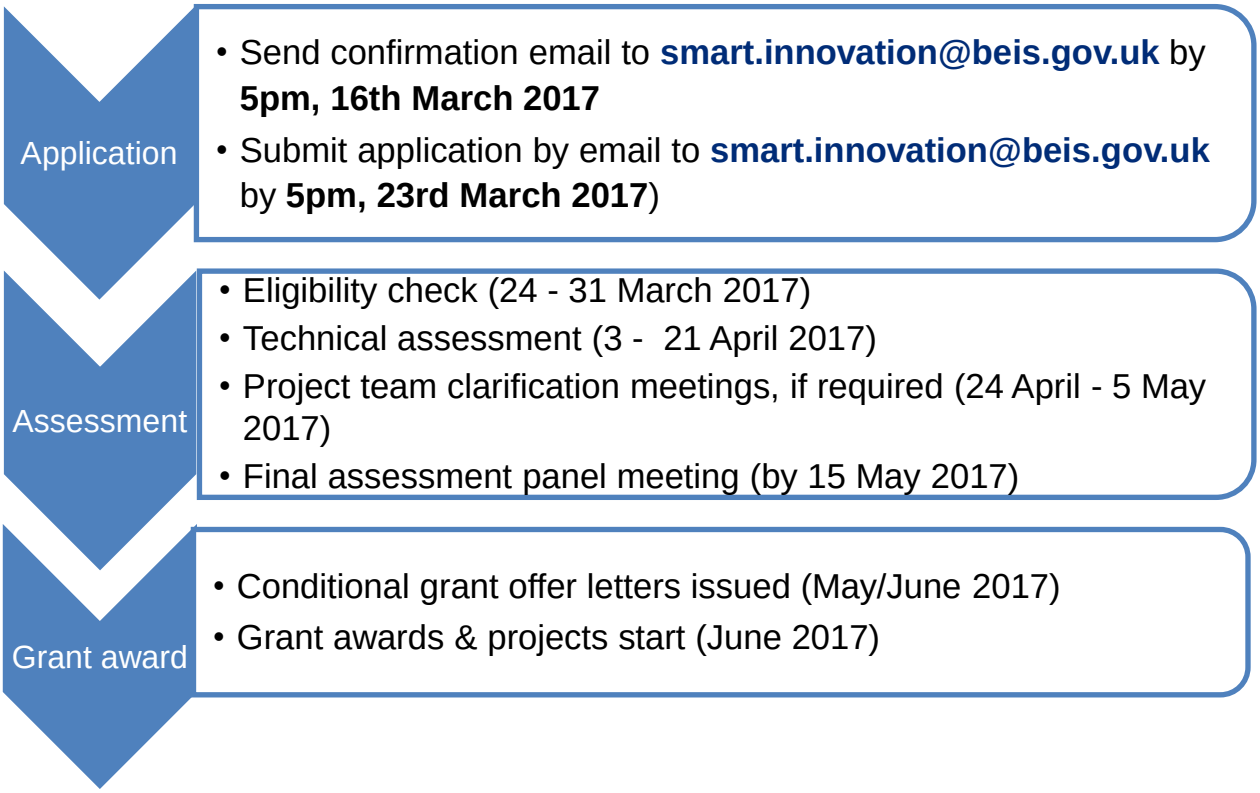
The Competition funding will be awarded in two tranches:

- **Tranche 1** - the first tranche of funding, up to £4.0 million, will be available for proposals received **by 23 March 2017**. Eligible, good quality proposals which are allocated a high assessment score but which do not secure funding in Tranche 1 will be considered for funding alongside proposals submitted for Tranche 2;

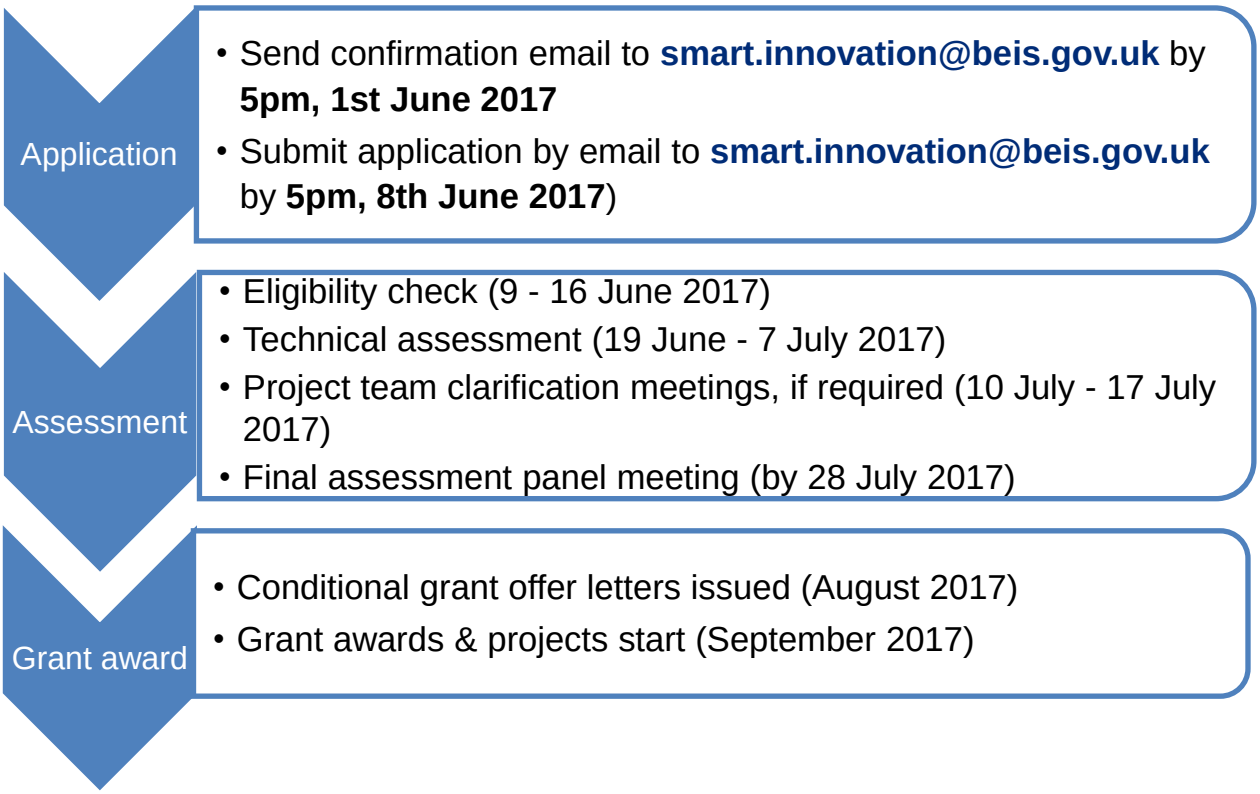
- **Tranche 2** - the second tranche of funding, up to £5.0 million in addition to any funding unallocated from Tranche 1, will be available for proposals received **by 8 June 2017**.

The key dates applicable to the Energy Storage Cost Reduction Competition are:

**Tranche 1 Timings:**



**Tranche 2 Timings:**




As outlined in the diagram above, the competition process will be undertaken in three key stages comprising application, assessment and grant award.

### Stage 1: Application

- **Overview:** The Competition funding is offered in two tranches, with separate submission deadlines for each tranche of funding.

- **Registration Email:** Applicants must submit a registration email to smart.innovation@beis.gov.uk using the title 'Energy Storage Cost Reduction Competition' in the email subject and containing the following information: the name of the lead project organisation (project co-ordinator); the project title; and confirmation of intention to submit an application.

  The deadlines for submitting registration emails are:

  - Tranche 1: Registration deadline is 5pm, Thursday, 16 March 2017.
  - Tranche 2: Registration deadline is 5pm, Thursday, 1 June 2017.

- **BEIS confirmation:** Within a week of receipt of the Registration Email, BEIS will issue a confirmation email to the applicant with an individual reference number.

Please use this reference number to submit any subsequent application or when submitting any questions about the Competition.

- **Questions about the Competition:** If you have read the guidance notes and any online FAQs and still have questions, you may address any queries regarding the competition process to the following email address: smart.innovation@beis.gov.uk
- **Submission process and deadline:** The full proposal for the Competition must be emailed to smart.innovation@beis.gov.uk using the title 'Energy Storage Cost Reduction Competition - (name of lead applicant)' in the email subject by the relevant deadline for each funding Tranche:
    - Tranche 1: Proposal submission deadline is 5pm, Thursday, 23 March 2017;
    - Tranche 2: Proposal submission deadline is 5pm, Thursday, 8 June 2017.

- **File format and size:** Completed application forms and the completed finance templates and any supporting information should be submitted electronically. The completed finance form should be submitted as a spreadsheet (.xls) file; the completed application form should be submitted in pdf format.

  The maximum size email you can send is 10 MB. If your application is larger than 10MB, please break the submission down into smaller sizes and ensure the subject line of each additional email takes the following format 'Energy Storage Cost Reduction Competition - (name of lead applicant) – email x of y'.

- **Submission content:** Each proposal must include the following documents:
    - Completed application form (separate word document – this can be downloaded from https://www.gov.uk/guidance/energy-innovation or requested from smart.innovation@beis.gov.uk.);
    - Completed finance form (separate spreadsheet – this can be downloaded from https://www.gov.uk/guidance/energy-innovation or requested from smart.innovation@beis.gov.uk );
    - Completed project Gantt chart or outline project plan (see section 6.1);
    - **Optional:** additional letters of support or other supporting information can also be submitted **where they add substantive information** to the proposal; however, you should not assume that any additional information will be cross-referenced or reviewed as part of the selection process – for example, it may only be used to help finalise the assessment of projects which receive very similar assessment scores.

You should endeavour to answer all of the questions on the application in full. Incomplete applications and any containing incorrect information will very likely be

rejected although BEIS may, at its discretion, request clarification or additional data before making a final decision.

Any applications or supporting documentation received after the application deadline will not be considered.

### Stage 2: Assessment

Applications will be checked initially against the Eligibility Criteria detailed in section 4.

**Applications which fail the Eligibility Criteria will not be assessed further, so it is essential to ensure that your project meets these criteria before you submit your application.**

Applications which meet the Eligibility Criteria will then be assessed against the Competition Assessment Criteria summarised below and described in more detail in section 7:

- Cost reduction & lifetime costs;
- Energy system benefits;
- Market potential;
- Project financing and delivery;
- Sector capacity building.

After this stage, all applicants will receive a short summary of key feedback regarding their applications irrespective of whether they are successful or not. BEIS aims to have provided all feedback to applicants within two months of the final funding decision. However, applicants are asked to remember that BEIS may receive a significant number of applications and the timing of the release of feedback will be at BEIS's discretion.

### Stage 3: Grant Award

Prior to the issue of the formal grant offer, there will be an opportunity to discuss the Grant Offer Letter at a meeting with an official from BEIS who will explain the conditions of the letter and respond to any queries which the applicant may have at this stage. BEIS officials will also discuss and finalise the formal project milestones with the project team before issue of the formal grant offer. BEIS may also involve an external technical adviser in these milestone discussions and in subsequent monitoring of the project.

In the case of projects which are delivered by project consortia, the lead company (project co-ordinator) will be the recipient of the grant offer letter and will be responsible for managing payment of grant funding to the other project partners. For consortium projects, funding will not be provided by BEIS until a consortium agreement for the project has been finalised and signed by all the members of the project consortium.

# 4. Eligibility for funding

## 4.1 Competition Eligibility Criteria

To be eligible for funding, proposed projects must meet all of the following eligibility criteria:

1) **Innovation and technology readiness**

   There are two aspects of technology readiness to consider here: the existing technology readiness level of the energy storage system and the progress of technology readiness in the specific component, sub-system or manufacturing process during the proposed innovation project. The focus of the competition is on cost reduction of energy storage technologies which are already at advanced prototype or even pre-commercial stage through supporting improvements to components, system design or manufacturing processes. A description of Technology Readiness Levels is provided in **Annex 1**.

   - **Existing technology readiness level of the overall energy storage system:** the supported technologies should already be at **TRL 6 or above**;
   - The proposed innovation activity must **advance** the energy storage component, sub-system or manufacturing process **through at least two technology readiness levels from a minimum level of TRL3 at the project start**.
   - Funding will not be provided for early-stage research (technology readiness levels 1 – 2).

2) **Technology scope**

   The Competition can support cost reduction of energy storage technologies which are not already commercially or widely deployed in the UK or elsewhere, including electricity storage technologies, power-to-gas technologies and thermal storage technologies. The Competition will prioritise funding to larger scale storage technologies which are cost-effective when operating at a minimum of 1MW export capacity or 1MWh storage capacity.

3) **Project activity**

   a) To be eligible for funding, the proposed projects must be made up of **industrial research or experimental development**, as defined within the EU General Block Exemption Regulation (see section 5 below). Projects which involve both industrial research and experimental development are eligible but the different types of project work involved must be clearly identified and costed from the outset because different types of project activity are eligible for different levels of grant funding. Subsequent changes to project activity type once a project is underway may not be possible and may lead to a reduction in grant funding allocation (no increase in grant funding will be possible).

**4) Project status**

BEIS is unable to fund retrospective work on projects.

**5) Additionality**

Projects can only be funded where evidence can be provided that innovation would not be taken forwards (or would be taken forwards at a much slower rate) without public sector funding.

**6) Grant size**

The maximum grant for this Competition depends on the type of project activity:

a) For industrial research projects, grant funding for each project: £100k - £1.0m;
b) For experimental development projects, grant funding for each project: £100k - £2.5m.

The total maximum grant which will be awarded in this Competition is £2.5m.

**7) Aid intensity (match funding) and eligible project costs**

The funding levels applied for must be consistent with the relevant GBER aid intensity levels (including consideration of the cumulative effect of other forms of state aid). Section 5 sets out the maximum aid intensity limits for the Competition but applicants should be aware that grant awards may be lower than the maximum limit. The GBER rules on aid intensity require applicants to have private funding in place to cover the balance of the eligible project costs. Such funding may come from a company's own resources or external private sector investors, but must not include funding attributable to any public authority or EU institution.

The full list of eligible project costs is set out in Annex 2.

**8) Project location**

The activities for any project supported in this Competition must be conducted largely in the UK (and the majority of the eligible project costs must be incurred in the UK).

**9) Project duration**

Projects should be completed – including all reporting requirements – by end March 2020 at the latest: a project-specific end date will be agreed at the outset for each funded project and confirmed in the grant offer.

**10) Applicants**

Companies of any size are eligible to seek funding, including applications from SMEs, as defined by the EU[3]. Proposals from project consortia are also eligible and are encouraged but every project consortium must be led by a private sector company (not by an academic partner or research organisation). In the case of projects carried out by consortia, the project leader/co-ordinator will be the grant recipient and will be responsible for managing distribution of funding to other partners and for ensuring overall delivery of the project.

Universities or research organisations can only participate in this Competition as members of a project consortium.

Previous recipients of public sector innovation funding can apply but the proposed project must be a new proposal which has not previously received funding. Applicants will be required to provide details of other public sector funding which they have received or for which they have applied which relates to the same technology.

## 4.2 General conditions

Applicants(s) must be financially viable and undertakings must not be subject to an outstanding order from the Commission to recover incompatible aid already granted or in financial difficulty (e.g. seeking rescue and restructuring aid).

In addition, Annex 3 lists a number of questions relating to issues including bribery, corruption or fraud and BEIS would not expect to provide grant funding to companies which cannot answer 'No' to all of these questions.

[3] http://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition_en

# 5. Funding levels and State Aid requirements

To avoid provision of state aid, this competition will be operated in accordance with the EU General Block Exemption Regulation (GBER) – specifically: Section 4, Article 25 (Aid for research and development projects)[4].

## 5.1 Grant intensity guidelines

The GBER specifies the maximum level of public funding (the grant intensity) which can be provided by BEIS for projects supported by this Competition. The grant intensity will vary depending on the type of project activity and the type of organisation receiving the funding. This Competition will provide funding for Industrial Research and Experimental Development, defined in the GBER as follows:

**Industrial Research** means "the planned research or critical investigation aimed at the acquisition of new knowledge and skills for developing new products, processes or services or for bringing about a significant improvement in existing products, processes or services. It comprises the creation of components parts of complex systems, and may include the construction of prototypes in a laboratory environment or in an environment with simulated interfaces to existing systems as well as of pilot lines, when necessary for the industrial research and notably for generic technology validation";

**Experimental Development** means "acquiring, combining, shaping and using existing scientific, technological, business and other relevant knowledge and skills with the aim of developing new or improved products, processes or services. This may also include, for example, activities aiming at the conceptual definition, planning and documentation of new products, processes or services. Experimental development may comprise prototyping, demonstrating, piloting, testing and validation of new or improved products, processes or services in environments representative of real life operating conditions where the primary objective is to make further technical improvements on products, processes or services that are not substantially set. This may include the development of a commercially usable prototype or pilot which is necessarily the final commercial product and which is too expensive to produce for it to be used only for demonstration and validation purposes. Experimental development does not include routine or periodic changes made to existing products, production lines, manufacturing processes, services and other operations in progress, even if those changes may represent improvements".

Table 1 summarises the maximum grant intensity applicable to companies and other organisations supported by funding through this Competition. BEIS may choose to award a lower level of funding – below the maximum permitted by the State Aid regulations – in order to secure greater value for money. Further guidance on collaborative projects is given in section 5.3.

[4] http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014R0651&from=EN.

**Table 1: Maximum public funding for projects in the Energy Storage Cost Reduction Competition**

| Research Category | Type & size of applicant | Maximum amount of public sector funding towards eligible Project Costs |
|---|---|---|
| **Industrial Research** - Single Company Application | Small enterprise | 70% |
| | Medium enterprise | 60% |
| | Large enterprise | 50% |
| **Industrial Research** - Companies in Collaborations (i.e. consortium made up of either several businesses, including at least one SME; or business(es) and at least one research organisation)<br>Note: Certain conditions must be fulfilled for collaboration (See Article 25(6) of the Block Exemption[5]) | Small enterprise | 80% |
| | Medium enterprise | 75% |
| | Large enterprise | 65% |
| **Experimental Development** - Single Company Application | Small enterprise | 45% |
| | Medium enterprise | 35% |
| | Large enterprise | 25% |
| **Experimental Development** - Companies in Collaborations (i.e. consortium made up of either several businesses, including at least one SME; or business(es) and at least one research organisation)<br>Note: Certain conditions must be fulfilled for collaboration (See Article 25(6) of the Block Exemption) | Small enterprise | 60% |
| | Medium enterprise | 50% |
| | Large enterprise | 40% |
| **Industrial Research or Experimental Development** – Universities or Research Organisations in Collaborations<br>(N.B. Universities or research organisations can only participate in this Competition as members of a project consortium) | Universities or research organisations (as defined in the GBER) may be entitled to receive full funding for their eligible project costs as long as they are not undertaking any economic activities in the project. University and research organisations should confirm the funding position with BEIS prior to application. | |

**Note:** State Aid compliance is a legal requirement and the risk of non-compliance rests with the grant recipient[6]. It is therefore crucial that you address State Aid fully within the application, as any errors at this stage may result in BEIS being able only to offer a reduced level of funding or repayment of grant by applicants.

[5] http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014R0651&from=EN

[6] The UK's rights and obligations of EU membership, including compliance with State aid rules, continue to apply until the UK's exit from the EU has been completed, and therefore for this competition.

### 5.2 Public funding

When considering levels of aid intensity (described above), public funding includes the grant and all other funding from, or which is attributable to, other government departments, UK public bodies, other Member States or the EU institutions. Such funding includes grants or other subsidies made available by those bodies or their agents or intermediaries (such as grant funded bodies).

In applying to this Competition you must state if you are applying for, or expect to receive, any funding for your project from public authorities (in the UK or in other Member States) or the EU or its agencies. Any other public funding will be cumulated with BEIS funding to ensure that the public funding limit and the aid intensity levels are not exceeded for the project.

Whilst BEIS will check the information provided to try and ensure that applicants meet the requirements of State Aid, applicants should establish that they fall within the state aid rules before submitting applications. BEIS requires applicants to notify them of any change to situation or circumstance during the project.

If there is a breach of State aid regulations, for whatever reason, the European Commission requires repayment of any grant received, including interest, above that which was due. In this situation applicants will be required to repay any funding received. It is also important to ensure that the total grant funding for the project from public sources (including from the European Commission) does not exceed the permitted percentages stated for the relevant Article.

As part of the assessment process, the added value and additionality of public funding will be tested. Applicants will need to demonstrate why public funding is required to deliver this project.

### 5.3 Collaborative projects

Under the GBER regulation, additional public funding (up to 15%) can be awarded to participants in collaborative projects as long as they meet one of the following conditions:

“(i) the project involves effective collaboration:

— between undertakings among which at least one is an SME, or is carried out in at least two Member States, or in a Member State and in a Contracting Party of the EEA Agreement, and no single undertaking bears more than 70 % of the eligible costs, or

— between an undertaking and one or more research and knowledge-dissemination organisations, where the latter bear at least 10 % of the eligible costs and have the right to publish their own research results;

(ii) the results of the project are widely disseminated through conferences, publication, open access repositories, or free or open source software.”

# 6. Project plans, finances and financial viability

## 6.1 Project Plans

Projects are expected to be up to 30 months in duration. All projects must be completed, including reporting requirements, by end March 2020. All projects must submit a project plan (Gantt chart, or equivalent) as part of their application; the plan must detail the project timeline, the various work packages and the project milestones and deliverables.

## 6.2 Project Costs

In addition to completing the Application Form, all applicants must complete the Competition Finance Form detailing their expected expenditure and spending profile for the project. This Finance Form can be downloaded from https://www.gov.uk/guidance/energy-innovation or requested from smart.innovation@beis.gov.uk.

During the assessment of applications, the project costs and plans that are submitted as part of the application process will be fully assessed along with the answers to the questions on the application form to ensure they are what might be reasonably expected.

The eligibility of all costs under state aid rules and the financial viability of your organisation will be checked following the decision to select an applicant but before a formal offer is made. Being contacted for this information does not indicate either success or failure in the assessment process.

While BEIS understands that project costs are subject to change prior to agreeing a Grant Offer Letter and throughout the course of the project, we do expect the final version of the Finance Form to be our guide to project expenditure through delivery and costs should not vary significantly from this without prior agreement of the Department.

## 6.3 Financial viability checks

BEIS will undertake financial viability checks on all successful applicants. These will include looking at the latest independently audited accounts filed on the Companies House database.

Where a business is not required to file accounts with Companies House, other financial information may be requested to enable an appropriate financial viability review to be undertaken. We will be looking for evidence of your ability to resource the project appropriately, so the information we request will be focused on understanding how your business operates in this respect.

Before your project starts, BEIS will ask for evidence that you have the funding mechanisms in place to manage your cash flow across the life of your project. This could include letters of credit or other such mechanisms. We do not expect you to have cash deposits to cover the entirety of your project at the start. However, if you do not complete your project due to cash flow problems that you could have anticipated and managed, we may request repayment of any grant already issued to you.

BEIS will not make payments in advance of need and typically makes grant payments in arrears on satisfactory completion of agreed milestones and deliverables. BEIS understands, however, the difficulties which small businesses may face when financing this type of project. BEIS will explore cash flow issues with the applicant as part of developing the financial and milestone profile during the Grant Award process. BEIS will offer flexibility in terms of profiles and payments, within the confines of the requirements for use of public money within which it operates.

### 6.4 Grant Use

Grants provided will only cover eligible costs within the meaning of Article 25(3) of the General Block Exemption Regulation and as defined in Annex 2 (which includes additional lists of non-eligible costs).

# 7. Assessment Process and Criteria

## 7.1 Assessment Process

All applications will be considered initially against the competition eligibility criteria (described in section 4) and then against the assessment areas outlined below which are based on the Competition's objectives.

Eligible projects will be ranked against projects within the same storage type – i.e. electricity storage; power-to-gas storage; or thermal storage. Projects will be required to secure an assessment score of at least 60% to be awarded funding and funding will be awarded to the highest scoring projects from these three categories. BEIS may allocate less than the total budget depending on the quality of the applications. BEIS may also choose to allocate the budget to lower scoring projects in a different category to ensure support for a wider range of technologies.

The application form and these Guidance Notes are designed to inform you about the types of information you should provide to BEIS in order for your proposal to be assessed. The application form can be downloaded from https://www.gov.uk/guidance/energy-innovation or requested from smart.innovation@beis.gov.uk .

For the avoidance of doubt, the individual questions listed under the headings below do not constitute assessment sub-criteria, but are an indication of the factors that will be taken into account in assessing each aspect of a proposal.

## 7.2 Assessment Criteria

| **Criterion 1** | **Cost reduction and expected lifetime costs of the storage system** |
|---|---|
| Weighting | 25% |
| Guidance | This criterion will be used to assess the expected lifetime costs of the energy storage system, assuming the proposed innovation is successfully deployed.<br>It will also look at the cost reduction which is expected to be secured specifically through deployment of the innovation which is proposed for funding in the Competition.<br>BEIS will use the performance, lifecycle and cost information provided by applicants to estimate the lifetime costs of the storage technology – to enable all applications of the same storage type to be assessed on the same basis. |
| Scoring | Highest marks will be awarded to the technologies expected to lead to the lowest levelised cost of storage and to those projects expected to secure the greatest cost reduction by deploying the innovation(s) which will developed in the Competition. |

| **Criterion 2** | **Energy system benefits to be secured by the technology** |
|---|---|
| Weighting | 15% |
| Guidance | This criterion will be used to assess the benefits to the energy system which could be secured by the proposed energy storage system, assuming the proposed innovation is successfully deployed.<br>Applicants will be asked to explain – with supporting evidence about the energy storage system's performance parameters – how their energy storage system will secure one or more of the following benefits for the energy system:<br>- reducing overall energy system costs;<br>- enabling increased deployment of intermittent or inflexible low carbon generation technologies (including providing synthetic inertia);<br>- securing cost-effective efficiency improvements in generation technologies (renewable or non-renewable). |
| Scoring | Highest marks will be awarded to projects that can demonstrate the best expected performance against the required system benefits. |

| **Criterion 3** | **Market potential** |
|---|---|
| Weighting | 15% |
| Guidance | This criterion will be used to assess the likely scale and scope of the market for the proposed energy storage system, assuming the proposed innovation is successfully deployed.<br>Applicants will be asked to explain – with supporting evidence about the proposed market and route to market – the likely commercial success of the innovation.<br>In assessing this criterion we will consider how likely the proposed energy storage system is to be commercialised and deployed, for example by reviewing the applicant's post-project plans for the further development, commercialisation and exploitation of the innovation. Evidence of a credible commercialisation plan may include collaboration or close engagement with the DNOs or TSO and/or with key industrial partners where energy storage could address a clear need. Details of any relevant intellectual property already secured or applied for should be included here. |
| Scoring | Highest marks will be awarded to applicants who best demonstrate a clear understanding of the potential market for their technology and have a credible, robust plan for the commercialisation of the energy storage |

| | |
|---|---|
| | system. |

| **Criterion 4** | **Project financing** |
|---|---|
| Weighting | 15% |
| Guidance | This criterion will be used to assess the:<br>- leverage of private sector funding into the project – i.e. the overall proportion of project costs to be funded by private sector funding; and<br>- the robustness of the project costs – i.e. whether the proposed eligible project costs are realistic and justified in terms of the proposed project plans and sufficient to deliver the deliverables sought. |
| Scoring | Highest marks will be awarded to projects that can demonstrate that the proposed public sector contribution to the eligible project costs:<br>• will leverage more than the legal minimum level of private sector funding (as determined by the State Aid funding intensity limits);<br>• will represent good use of public funding by supporting projects whose costs are realistic and justified and are likely to secure the expected project aims and deliverables. |

| **Criterion 5** | **Project delivery** |
|---|---|
| Weighting | 20% |
| Guidance | This criterion will be used to assess the expected effectiveness and efficiency of delivery of the project. This will be assessed by looking at a range of factors, including:<br>• the capacity, experience and capability of the project team;<br>• the completeness and quality of the proposed project delivery plans;<br>• the appropriateness and realism of the project milestones and deliverables;<br>• the project's access to the necessary skills and facilities;<br>• the quality of risk assessment and contingency planning, including consideration of health and safety and other regulatory requirements. |
| Scoring | Highest marks will be awarded to applicants that have taken all reasonable steps to maximise the likelihood of successfully delivering the projects aims (whilst recognising the innate technical risk in any innovation project). High scoring applications will, for example:<br>• present well thought-out, robust, credible, project plans; |

| | |
|---|---|
| | • show a realistic and robust approach to risk management;<br>• have a strong delivery team with proven experience of successfully delivering comparable projects;<br>• guarantee access to any necessary specialist facilities, operational knowledge and skills, or other resources required to execute the project;<br>• show the strong commitment of all participating organisations;<br>• not be heavily dependent for success on external factors beyond the project's direct control. |

| **Criterion 6** | **Contribution to sector capacity building** |
|---|---|
| Weighting | 10% |
| Guidance | This criterion will be used to assess the impact that the project will have on the wider storage industry and storage industry supply chains in the UK. To assess this criterion, we will consider a number of factors, including, but not limited to:<br>• the extent to which the project, if successful, will broaden or strengthen understanding of the benefits, potential applications, challenges and limitations of energy storage systems;<br>• the extent to which learning from the project will be shared. |
| Scoring | Highest marks will be awarded to those projects that are likely to result in a strengthening of the energy storage industry and its supply chains in the UK and are likely to secure wider economic benefits. |

### 7.3 Scoring Guidance

We will select projects that offer the best value for money based on their assessment against the assessment criteria outlined in section 7.2. The projects will be scored against these six assessment criteria using the following scoring guidance set out in Table 2. Projects must score a minimum of 60% (based on total score) in order to be eligible for funding.

Table 2: Scoring Guidance

| **Score** | **Description** |
|---|---|
| 1 | Not Satisfactory: Proposal contains significant shortcomings and does not meet the required standard |
| 2 | Partially Satisfactory: Proposal partially meets the required standard, with one or more moderate weaknesses or gaps |
| 3 | Satisfactory: Proposal mostly meets the required standard, with one or more minor weaknesses or gaps. |
| 4 | Good: Proposal meets the required standard, with moderate levels of assurance |

| | |
|---|---|
| 5 | Excellent: Proposal fully meets the required standard with high levels of assurance |

# 8. Notification

Applicants will be informed by email whether their application has been successful, subject to compliance with the terms and conditions of the Conditional Grant Offer.

BEIS may wish to publicise the results of the scheme which may involve engagement with the media. At the end of the application and assessment process, BEIS may issue a press release or publish a notice on its website. These public documents may, for example, outline the overall results of competitions and describe some of the projects to be funded.

Some organisations may want their activities to remain confidential and you will be given a chance to opt out of any involvement in media relations activity and further case study coverage of projects, should you see this as being absolutely necessary. However, the public description of the project you provide in your application will be made available in the public domain if your application is successful, and you are not able to opt out of the project description being published. In addition, all funded projects must include reporting and dissemination milestones – agreed with BEIS - as part of their project deliverables.

Any organisation that wishes to publicise its project, at any stage, must contact the Competition Project Manager or their Project Monitoring Officer at BEIS before doing so.

# 9. Project monitoring, knowledge sharing and evaluation

There will be a number of reporting requirements on project teams during the course of the project, including after the final payment milestone:

- Reporting: to track project progress and ensure payments are made according to a schedule of milestones to be agreed with selected projects. This reporting will be in confidence to BEIS and its technical advisers and will not be published. Any changes to schedules or project plans will need to be discussed with BEIS and applicants should expect significant interaction with the team during the project;

- Evaluation of the scheme: Successful applicants will be expected to participate in an evaluation of the scheme during and after final contract payments, to assess the impact of the scheme including value for money;

- Knowledge sharing: effective dissemination and knowledge sharing are important requirements in this Competition – and applicants will be assessed on the scope and scale of their proposed knowledge sharing activities.

# 10. Feedback, re-application and right of appeal

A short summary of key feedback regarding the applications will be provided to all applicants, this feedback will be based on the comments of the project assessors (both BEIS officials and external technical assessors, if used). No additional feedback will be provided and there will be no further discussion on the application.

The feedback from the assessors is intended to be constructive. Comments are not a check list of points which must be answered or argued in a resubmitted application as the assessors may be different and it is your decision as to whether you act on the suggestions made.

# 11. Confidentiality and Freedom of Information

Where any request is made to BEIS under the Freedom of Information Act 2000 (“FOIA”) for the release of information relating to any project or applicant, which would otherwise be reasonably regarded as confidential information, then BEIS will notify you of the request as soon as we become aware of it. An applicant must acknowledge that any lists or schedules provided by it outlining information it deems confidential or commercially sensitive are of indicative value only and that BEIS may nevertheless be obliged to disclose information which the applicant considers confidential.

As part of the application process all applicants are asked to submit a public description of the project. This should be a public facing form of words that adequately describes the project but that does not disclose any information that may impact on Intellectual Property (IP), is confidential or commercially sensitive. The titles of successful projects, names of organisations, amounts awarded and the description of the project may be published once the award is confirmed as final.

All assessors used during the assessment of applications will be subject to a confidentiality agreement.

# Annex 1 – Technology Readiness Levels (TRLs)

Technology readiness levels are an indication of the maturity stage of development of particular technology on its way to being developed for a particular application or product. The table below provides a definition of Technology Readiness Levels 1 to 9.

| | |
|---|---|
| TRL 1 – Basic Research | Scientific research begins to be translated into applied research and development. |
| TRL 2 – Applied Research | Basic physical principles are observed, practical applications of those characteristics can be 'invented' or identified. At this level, the application is still speculative: there is not experimental proof or detailed analysis to support the conjecture |
| **Applied research and development** | |
| TRL 3 – Critical Function or Proof of Concept Established | Active research and development is initiated. This includes analytical studies and laboratory studies to physically validate analytical predictions of separate elements of the technology. Examples include components that are not yet integrated or representative. |
| TRL 4 – Laboratory Testing/Validation of Component(s)/Process(es) | Basic technological components are integrated - Basic technological components are integrated to establish that the pieces will work together. |
| TRL 5 – Laboratory Testing of Integrated/Semi-Integrated System | The basic technological components are integrated with reasonably realistic supporting elements so it can be tested in a simulated environment. |
| **Demonstration** | |
| TRL 6 – Prototype System Verified | Representative model or prototype system, is tested in a relevant environment. |
| TRL 7 – Integrated Pilot System Demonstrated | Prototype near or at planned operational system, requiring demonstration of an actual system prototype in an operational environment. |
| **Pre-commercial deployment** | |
| TRL 8 – System Incorporated in Commercial Design | Technology is proven to work - Actual technology completed and qualified through test and demonstration. |
| TRL 9 – System Proven and Ready for Full Commercial Deployment | Actual application of technology is in its final form - Technology proven through successful operations. |

# Annex 2 – Eligible Costs

## General Requirements

**Timing:** In addition to the requirements of the EU General Block Exemption Regulation, BEIS will only provide the grant to cover eligible costs incurred and defrayed in the period between acceptance of the BEIS grant and the deadline specified in the grant offer letter for completion of the project.

**Who can incur eligible costs:** The definition of eligible costs includes the applicant's own costs, eligible costs incurred by consortium members and eligible costs incurred by companies sub-contracted to the applicant or consortium members.

**Use of contractors:** BEIS would not normally expect to see contractors in key posts, e.g. CEO, FD, etc within the applicant company or consortium members. Exceptionally, where BEIS is willing to fund a project which includes contractors in key posts, the day rate attributable to the project must be agreed with BEIS at the outset and cannot be varied without written agreement.

**Non-sterling costs:** Costs must be denominated in GB pounds. If relevant, applicants should indicate where conversion has been made to GB pounds from other currencies and indicate the conversion rate and assumptions used.

## List of Eligible Costs

Under Article 25(3) of the EU Block Exemption Regulation[7], eligible costs are defined as the following:

a) Personnel costs: researchers, technicians and other supporting staff to the extent employed on the project;

b) Costs of instruments and equipment to the extent and for the period used for the project. Where such instruments and equipment are not used for their full life for the project, only the depreciation costs corresponding to the life of the project, as calculated on the basis of generally accepted accounting principles are considered as eligible;

[7] http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014R0651&from=EN

c) Costs for of buildings and land, to the extent and for the duration period used for the project. With regard to buildings, only the depreciation costs corresponding to the life of the project, as calculated on the basis of generally accepted accounting principles are considered as eligible. For land, costs of commercial transfer or actually incurred capital costs are eligible;

d) Costs of contractual research, knowledge and patents bought or licensed from outside sources at arm's length conditions, as well as costs of consultancy and equivalent services used exclusively for the project;

e) Additional overheads and other operating expenses, including costs of materials, supplies and similar products, incurred directly as a result of the project.

**List of Non-eligible Costs**

Under no circumstances can the grant be claimed or used:

a) For activities of a political or exclusively religious nature;

b) In respect of costs reimbursed or to be reimbursed by funding from other public authorities or from the private sector;

c) In connection with the receipt of contributions in kind (a contribution in goods or services as opposed to money);

d) To cover interest payments (including service charge payments for finance leases);

e) For the giving of gifts to individuals, other than promotional items with a value no more than £10 a year to any one individual;

f) For entertaining (entertaining for this purpose means anything that would be a taxable benefit to the person being entertained, according to current UK tax regulations);

g) To pay statutory fines, criminal fines or penalties; or

h) In respect of VAT that you able to claim from HM Revenue and Customs.

i) Contractors in key roles - BEIS would not normally expect to see contractors in key posts, e.g. CEO, FD, etc. Exceptionally, where BEIS is willing to fund a project which includes contractors in key posts, the day rate attributable to the project must be agreed with BEIS at the outset and cannot be varied without written agreement.

# Annex 3 – Reasons for Exclusion

If you cannot answer 'no' to every question in the table below it is very unlikely that your application will be accepted, and you should contact us for advice before completing the Competition Application form.

| **Has your organisation or any directors or partner or any other person who has powers of representation, decision or control been convicted of any of the following offences?** | **Answer** |
|---|---|
| (a) conspiracy within the meaning of section 1 or 1A of the Criminal Law Act 1977 or article 9 or 9A of the Criminal Attempts and Conspiracy (Northern Ireland) Order 1983 where that conspiracy relates to participation in a criminal organisation as defined in Article 2 of Council Framework Decision 2008/841/JHA; | |
| (b) corruption within the meaning of section 1(2) of the Public Bodies Corrupt Practices Act 1889 or section 1 of the Prevention of Corruption Act 1906; where the offence relates to active corruption; | |
| (c) the offence of bribery, where the offence relates to active corruption; | |
| (d) bribery within the meaning of section 1 or 6 of the Bribery Act 2010; | |
| (e) fraud, where the offence relates to fraud affecting the European Communities' financial interests as defined by Article 1 of the Convention on the protection of the financial interests of the European Communities, within the meaning of: | |
| (i) the offence of cheating the Revenue; | |
| (ii) the offence of conspiracy to defraud; | |
| (iii) fraud or theft within the meaning of the Theft Act 1968, the Theft Act (Northern Ireland) 1969, the Theft Act 1978 or the Theft (Northern Ireland) Order 1978; | |
| (iv) fraudulent trading within the meaning of section 458 of the Companies Act 1985, article 451 of the Companies (Northern Ireland) Order 1986 or section 993 of the Companies Act 2006; | |
| (v) fraudulent evasion within the meaning of section 170 of the Customs and Excise Management Act 1979 or section 72 of the Value Added Tax Act 1994; | |
| (vi) an offence in connection with taxation in the European Union within the meaning of section 71 of the Criminal Justice Act 1993; | |

| | |
|---|---|
| (vii) destroying, defacing or concealing of documents or procuring the execution of a valuable security within the meaning of section 20 of the Theft Act 1968 or section 19 of the Theft Act (Northern Ireland) 1969; | |
| (viii) fraud within the meaning of section 2, 3 or 4 of the Fraud Act 2006; or | |
| (ix) making, adapting, supplying or offering to supply articles for use in frauds within the meaning of section 7 of the Fraud Act 2006; | |
| (f) money laundering within the meaning of section 340(11) of the Proceeds of Crime Act 2002; | |
| (g) an offence in connection with the proceeds of criminal conduct within the meaning of section 93A, 93B or 93C of the Criminal Justice Act 1988 or article 45, 46 or 47 of the Proceeds of Crime (Northern Ireland) Order 1996; or | |
| (h) an offence in connection with the proceeds of drug trafficking within the meaning of section 49, 50 or 51 of the Drug Trafficking Act 1994; or | |
| (i) any other offence within the meaning of Article 45(1) of Directive 2004/18/EC as defined by the national law of any relevant State. | |

Information on the latest innovation calls can be found here:
https://www.gov.uk/guidance/energy-innovation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