

Energy Storage Technology Demonstration Competition

Call for Proposals – Guidance Notes

October 2012

Table of Contents

Table of Contents.....	2
Introduction.....	3
Pre-Submission Briefing Event and Contact for Enquiries.....	3
Context	4
The Challenge – Competition Aims	5
Key Dates	7
Competition Details	8
Funding Levels and Funding Requirements.....	12
Eligibility Criteria	14
Evaluation Criteria – Phase 1	15
Detailed Competition Process	21
How to Apply.....	23
Annex 1 – Eligible and Ineligible Costs.....	24
Annex 2 – Grounds for Rejecting Bids.....	26

Introduction

The Department of Energy and Climate Change (DECC) has launched a Small Business Research Initiative (SBRI) Competition to develop and demonstrate innovative energy storage technologies. This Call for Proposals Guidance document sets out the scope and criteria for applications to the DECC Energy Storage Technology Demonstrator Competition.

Note: Applications to this scheme must be received by DECC in electronic form by 12pm on 13 December 2012. A signed hard copy of the completed application form must be received within 10 working days of submitting the electronic application (see the final section of this document for details of how to apply).

Pre-Submission Briefing Event and Contact for Enquiries

The contact for enquiries is:

Sally Fenton

Department of Energy and Climate Change

Tel: 0300 068 6503

Email: s.fenton@decc.gsi.gov.uk

A **briefing and networking event** for this call will be held in **London on 6 November 2012**, 10.00am to 3.30pm, to provide applicants with further information on the project scope; eligibility and assessment criteria and to answer other questions in relation to this call. This event, organised by DECC and the Energy Generation and Supply KTN will also provide an opportunity for potential applicants to make contact with potential collaborators or partners.

Please register for this briefing event at the following website:

<https://www.eventsforce.net/decces>

Context

The Department of Energy and Climate Change (DECC) supports innovation in low carbon technologies in order to help meet the Department's goal of delivering secure energy on the way to a low carbon energy future. Increasing the use of low carbon but intermittent generating technologies can help the UK to meet its carbon and other greenhouse emission reduction targets (set out in the Climate Change Act of 2008). However, the use of such intermittent technologies and the use of other low carbon technologies, such as electric vehicles, will lead to increases in electricity demand and to increases in demand volatility. Energy storage could offer one way to help meet the projected increases in volatility and demand in the electricity network.

A DECC report - Electricity System: Assessment of Future Challenges¹, published in July 2012, concludes that the 'need for a more flexible electricity system with more widespread deployment of balancing technologies and a smarter network appears to crystallise in the 2020s, nevertheless it is important that we ensure we are facilitating its development today'. It goes on to note that 'technology development is central to the successful evolution of a flexible electricity system - in terms of delivering key balancing activities (electricity storage and DSR in particular)'.

In August 2012, the Low Carbon Innovation Coordination Group published a summary report² of the Technology Innovation Needs Assessment (TINA) for Electricity Networks and Storage. The Electricity Networks and Storage TINA concludes that "Electricity networks and storage (EN&S) technologies could play an important enabling role in the future energy system, supporting the deployment of renewable electricity generation, renewable heat, electric vehicles (EVs), and other low carbon technologies."

Furthermore the TINA estimates that innovation in EN&S technologies could save the UK £4-19 billion³ cumulatively to 2050, with significant possible additional value offered by enabling other system adjustments. Innovation can also help create UK-based business opportunities that could contribute an estimated cumulative £6-34 billion to GDP to 2050. While the TINA concludes that private sector investment in innovation can deliver the bulk of these benefits, it

¹ Electricity System: Assessment of Future Challenges, DECC, August 2012;
<http://www.decc.gov.uk/assets/decc/11/meeting-energy-demand/future-elec-network/6099-elec-system-assess-future-chall-full.pdf>

² Technology Innovation Needs Assessment: Electricity Networks and Storage; Low Carbon Innovation Coordination Group; 2012;
http://www.lowcarboninnovation.co.uk/working_together/technology_focus_areas/electricity_networks_storage/

³ Cumulative savings (for period 2010-2050); range of savings is present discounted values for lowest to highest scenarios.

recommends targeted public sector support to catalyse the private sector investment and to overcome significant market failures.

The market failures and barriers currently limiting commercial development of energy storage include: market arrangements – there are significant risks and uncertainties associated with future revenues from storage and no clear route at present for technology developers to capture the value of storage; high upfront capital costs; uncertain future demand – due to uncertainty over future levels of intermittent renewable technology and the level of deployment of alternative non-generation approaches to balancing.

A report published in July 2012 by Imperial College London⁴ for the Carbon Trust also concludes that “energy storage can bring benefits to several sectors in electricity industry, including generation, transmission and distribution, while providing services to support real-time balancing of demand and supply, network congestion management and reduce the need for investment in system reinforcement”.

On the potential for further innovation and development in storage technologies, the Imperial College report notes that there are a “number of important unknowns in grid scale energy storage, in particular relating to the cost and lifetime of energy storage technologies when applied to real duty cycles within the power network, across a range of power and energy scales, and as a function of location within the network. As such it is essential to demonstrate and evaluate a range of storage technology types to understand how the duty cycle and control strategy impact the performance and lifetime of the storage systems.”

Given the potential future role for storage to contribute to the government’s climate change and energy security aims, the scope for further innovation and cost reduction in storage technologies, and the need for public sector innovation, DECC has identified storage as one of the specific technology areas which should be supported with energy innovation funding.

The Challenge – Competition Aims

This competition aims to demonstrate the scope for cost reduction of innovative energy storage technologies and to explore the opportunities for deployment of energy storage technologies to address a wide range of future UK electricity network balancing and other storage needs. The competition will do this by:

⁴ Strategic Assessment of the Role and Value of Energy Storage Systems in the UK Low Carbon Energy Future; Imperial College London report for Carbon Trust; June 2012; <http://www.carbontrust.com/media/129310/energy-storage-systems-role-value-strategic-assessment.pdf>

- demonstrating viable electricity storage technologies that could be deployed cost-effectively in the UK electricity network in the run up to 2020 and beyond to meet future grid-scale balancing and other storage needs and support the deployment of intermittent renewable and other low carbon technologies; and
- enabling the demonstration of electricity storage systems at a near-commercial scale and in real-life conditions which will extend the publicly available information on electricity storage systems beyond current understanding and experience.

In addition this scheme is expected to generate learning and practical experience which will:

- improve confidence in electricity storage systems;
- reduce future costs of storage systems; and
- help stimulate further private sector investment in electricity storage systems.

Key Dates

Phase 1 (technology viability and demonstration design)	
Competition opens	19 th October 2012
Briefing and industry engagement event	6 th November 2012
Deadline for applications	13 th December 2012
Phase 1 begins (Phase 1 duration = 10 weeks maximum)	February 2013
Deadline for design report	April 2013

NB: Guidance on the detailed requirements for the Phase 1 report will be provided by DECC and should be followed carefully to enable assessment and down selection to Phase 2.

Phase 1 reports and other deliverables need to be made on time and to the appropriate quality otherwise payment for Phase 1 will be withheld and continuation to Phase 2 will not be considered.

Phase 2 (demonstration and trials)	
Successful Phase 1 participants invited to tender	Early May 2013
Deadline for Phase 2 applications	May 2013
Phase 2 delivery commences	June 2013
Phase 2 monitoring stage	June 2013 to March 2015
Deadline for Phase 2 final report	End March 2015

NB. Phase 2 reports and other deliverables need to be submitted on time and to sufficient quality. All payments need to be made before March 2015.

Competition Details

Overview

The Department of Energy and Climate Change (DECC) has launched a Small Business Research Initiative (SBRI) Competition to develop and demonstrate innovative energy storage technologies.

SBRI is a programme that brings innovative solutions to specific public sector needs, by engaging a broad range of companies in competitions for ideas that result in a fully funded development contract between the organisation and the government department – it is not a government grant. Further information about the SBRI process can be found at:

<http://www.innovateuk.org/deliveringinnovation/smallbusinessresearchinitiative/whatissbri.ashx>

DECC are seeking applications to develop and demonstrate innovative energy storage technologies which can address grid-scale storage needs for the UK electricity network in the run up to 2020 and beyond. Applications will be assessed against key criteria, including a wide range of technical and economic performance parameters, project management ability and likelihood of commercialisation. Pre-commercial procurement contracts will be awarded on a competitive basis to successful bidders to develop and demonstrate energy storage technologies which offer value for money; where there is genuine innovation taking place and where there is a realistic chance of future deployment.

Under this competition, funding is available for pre-commercial R&D activities, including solution design, prototyping, field testing, trials and demonstrations. Funding is not available for commercial development activities such as quantity production and the SBRI process does not preclude competition in any future commercialisation phase.

SBRI involves a high degree of risk–benefit sharing. In return for provision of funding, DECC expect to be able to use and share the results of the R&D with other public sector organisations and industry, for example through publication and standardisation.

The competition will run in two phases, with Phase 1 for system and project design studies opening on 18 October 2012 with Phase 1 contracts expected to be awarded in February 2013. Applicants will be asked to provide a robust, evidence based case against a set of assessment criteria for the viability of their technologies and for the viability of their proposed demonstration projects. Bidders who are judged to have submitted Phase 1 design studies which offer the best value for money and best fit with the competition's aims will be invited to participate in the development and demonstration phase (Phase 2) in Spring 2013. Delivery and monitoring of the Phase 2 demonstration projects is expected to take place over the period from June 2013 to end March 2015.

N.B. Bidders can not apply for Phase 2 only – all bids must be received by the competition deadline of 13 December 2012 to be considered.

Scope

DECC are seeking applications to design, develop and demonstrate innovative energy storage technologies which could address grid-scale electricity network storage needs in the UK (such as balancing supply and demand and managing network congestion) in the run up to 2020 and beyond. We are particularly interested in systems which will provide storage and balancing solutions in the UK electricity networks to support the deployment of intermittent renewable electricity generation, renewable heat, electric vehicles (EVs), and other low carbon technologies.

Technology readiness: This competition is open to storage technologies which are not yet commercially viable or proven but are in the later stages of their development with their potential already shown – perhaps by the construction of early prototypes or through non-operational trials. Technologies supported should be ready during the project's lifetime for demonstration at full or near-full commercial scale (i.e. technology readiness levels 6 – 8 approximately).

Understanding operational storage needs and constraints: Bidders should identify all the balancing and storage needs that can be met by their technologies. Bidders should ensure that their proposed storage products can address system balancing and storage needs which would be associated with the increased levels of electricity demand and intermittent generation which are expected to arise in the UK electricity network in the future (e.g. from 2020 onwards). All applicants will be expected to demonstrate a strong understanding of the operational constraints and potential applications of their proposed technology and an understanding of the likely future storage needs in the UK electricity network. Collaboration or engagement with organisations such as the UK DNOs, TSO or large industrial customers is strongly encouraged.

Deployment and scalability: There is no limit on the discharge power and energy capacity of an individual storage unit but bidders must be able to demonstrate that their proposed storage technology can be readily and cost-effectively scaled and deployed, to meet grid-scale system balancing and storage needs in the UK electricity networks (at distribution or transmission level).

Innovation: Technologies presented must incorporate and demonstrate innovation in their design compared to existing storage solutions. DECC expects to prioritise innovative, value for money technologies which are unlikely to be developed to commercialisation without a contract from this competition. DECC also expects to focus on technologies and projects for which other funders (UK or international) have not, or are unlikely to, provide sufficient support

Timescale limit: Funding under this competition is only available until 31st March 2015. Demonstration projects may continue past this date (for up to one year), all contract-supported expenditure must be incurred by 31st March 2015.

Deliverables

Phase 1: For Phase 1 of this competition, contractors are expected to deliver, within 10 weeks, a detailed, robust, evidence-based report addressing the viability and expected performance of their proposed technologies with supporting data from early prototypes or laboratory-scale demonstrations.

Bidders selected for Phase 1 will be required to set out details of their proposed technology and proposed storage applications for their systems and must address at least the technical and commercial criteria identified in Assessment Criteria 1 and 2 of this competition when providing the detailed study for their proposed technology.

The Phase 1 study should build on information provided in the competition application form by providing detailed supporting data and test results. Contractors should also explain how any significant differences between the expected performance of the proposed demonstration storage system and the expected performance of a full commercial-scale version of the applicant's storage technology will be met.

The Phase 1 report must also provide detailed project planning information about the proposed demonstration project which the contractor would take forwards if invited to tender for Phase 2 of the competition including information about where and how the project will be demonstrated.

During Phase 1, DECC may be able to help facilitate links with network operators and others who may be interested in hosting a demonstration project.

Phase 2: Successful bidders will be asked to build a demonstrator of their energy storage technology and test it in operational or realistic conditions. Bidders are expected to demonstrate their storage technology at sufficient scale and under sufficiently real conditions to be able to demonstrate that the proposed technology could address grid-scale storage needs for the UK electricity network. Possible settings in which a storage system could be demonstrated are:

- In a large industrial network or discrete network operated by an independent DNO – this could enable the technology to be tested in realistic conditions but may allow a more limited range of storage needs to be demonstrated and provide limited information about the UK commercial and regulatory interactions for a storage system.
- Linked to a source of intermittent low carbon generation – this could enable the technology's ability to balance intermittent output to be effectively demonstrated but again may provide limited information about wider UK network constraints and interactions.
- In the main UK network (operated by one of the DNOs or the TSO) – this could be the most effective way to address the full range of technical and operational issues but will require very close working with a DNO or TSO.

At the conclusion of the project, phase 2 contractors must prepare a detailed final report which includes:

- detailed results obtained from testing the demonstration storage system;

- detailed technical specification for their proposed storage solution;
- a detailed cost-benefit evaluation, including robust cost information for commercial-scale deployment of the proposed storage technology;
- updated plans for commercialisation and exploitation of the technology, including details of any further development and testing required to make the technology ready for commercial deployment;
- description of key commercial and regulatory conditions that will affect deployment of their proposed technology and proposals to address technical, operational, regulatory and commercial barriers to deployment.

Other Competition Conditions

Intellectual Property

Suppliers will retain the intellectual property generated from the project and will be expected to identify and protect patentable knowledge within 3 years of its creation. Costs associated with securing intellectual property arising from or associated will be covered by suppliers.

As part of any contract awarded under this competition, DECC will require a UK wide, irrevocable, royalty-free, non-exclusive licence, together with the right to grant sub-licences, to use or publish information, data, results, outcomes or conclusions arising from the Project and any foreground technology.

The detailed arrangements for intellectual property rights and exploitation of IPR are set out in the template contract for this competition; a copy of the template contract can be obtained by emailing: innovation@decc.gsi.gov.uk .

Ownership of Demonstration Devices

Chosen suppliers would retain responsibility and ownership for the energy storage technologies and related equipment developed and used during the delivery of the contracts.

Decommissioning Costs

Chosen suppliers would have responsibility for decommissioning prototype storage devices when the project has been completed. When bidding, suppliers need to include any decommissioning costs, at fair market value, in the total cost of their bid.

Funding Levels and Funding Requirements

Support Available

This Energy Storage Technology Demonstration Competition has a capital budget (total for both phases) of up to £17million – though DECC may choose to allocate less than or more than £17m depending on the quality of applications.

Funding under this Competition is only **available until 31st March 2015**. Whilst demonstration projects may continue past this date (for up to one year), all contract-supported expenditure must be incurred by 31st March 2015. DECC may choose to prioritise projects with early opportunity for expenditure, i.e. most expenditure in the 2013-2014 financial year (1 April 2013 to 31 March 2014). Applicants will be expected to provide a robust costed delivery plan as evidence of delivery in the proposed timescales.

Phase 1 (10 weeks): A maximum of £40,000 will be available for each phase 1 design proposal selected from the initial application forms. The number of phase 1 projects funded depends on the range of solutions proposed and the quality of the proposals.

Phase 2: Following successful completion of phase 1, applicants will be requested to propose an appropriately scaled demonstration project. Phase 2 is expected to result in contracts worth between £500,000 and £12m, although projects of smaller or higher value will be considered if they demonstrate a clear cost benefit. DECC expects to support up to 3 large-scale demonstration projects, depending on the quality and cost of the proposals.

Note: Nothing in this funding call requires DECC to award any applicant a contract of any particular amount or on any particular terms. DECC reserves the right not to award any contracts, in particular if DECC is not satisfied by the proposals received or if the funding assigned to the scheme is required for other, unforeseen, purposes. DECC will not, under any circumstances, make any contribution to the costs of preparing proposals and applicants accept the risk that they may not be awarded a contract.

Eligible Costs

Applicants are instructed that the project costs quoted must reflect actual costs at a 'fair market value' and profit should not be included.

Assessors are required to judge each application in terms of value for money, i.e. does the proposed cost for effort and deliverables reflect a fair market price, including whether the applicants have provided reasonable price reductions to reflect the risk-benefit sharing IPR conditions of the pre-commercial procurement contract for this competition. The sharing of risks

and benefits is key to the pre-commercial procurement/SBRI approach and applicants are expected to offer a price reduction compared to the price applicable in the case of exclusive development⁵. Applicants should provide detailed cost information to enable assessment of value for money of their bid.

All costs should include VAT, where applicable. Further details of eligible and ineligible costs are provided in Annex 1.

Itemisation of costs and methods of calculation may be requested to support the application at a later date.

An indication of potential costs involved in participating in Phase 2 is also required when bidding for Phase 1.

In Phase 2, only costs directly associated with the development, implementation and monitoring of demonstration products will be considered.

⁵ Exclusive development means that the purchaser reserves all the results and benefits of the development (including Intellectual Property Rights) exclusively for its own use.

Eligibility Criteria

SBRI is aimed at organisations working on the development of an innovative process, material, device, product or service. Successful applications will be those where the technology best addresses the specific needs identified, with the potential to make measurable improvements to the problem presented.

We are encouraging proposals with strong collaboration across the supply chain, but the contract will be with the lead party and other collaborators will be sub-contractors of the lead party.

SBRI competitions are open to all organisations that can demonstrate a route to market for their solution. Projects are 100% funded and focussed on specific identified needs, increasing the chance of future exploitation. Suppliers for each product will be selected by open competition.

To proceed to full evaluation, a proposal must demonstrate the following:

1. The proposal is in scope, as outlined in this Guidance document, and will result in an storage demonstration project that meets the conditions described in the scope section of this document with respect to: technology readiness level; understanding operational needs and constraints; scalability; innovation and timescales.

This competition does not support proposals that are purely paper based feasibility or analytical projects.

2. The proposal is costed at a fair and reasonable market value and demonstrates clear value for money, including a price reduction that reflects the risk-benefit sharing approach of pre-commercial procurement activities.
3. Applicants are financially viable.
4. Applicants must not meet any of the DECC grounds for mandatory rejection (see Annex 2) and as a general rule they should not meet any of the DECC grounds for discretionary rejection.

N.B. Bidders should endeavour to answer all of the questions on the application in full. Incomplete applications and any containing incorrect or false information will very likely be rejected.

Evaluation Criteria – Phase 1

Applications that meet the 'Eligibility Criteria' (see above) will then be assessed, during January 2013, against the following Evaluation Criteria. Phase 1 contracts are expected to be awarded in February 2013 (feedback to applicants will be provided on request after contracts have been awarded). DECC's decision on project funding and award of contracts is final.

The relative weighting of each criterion is listed as a guide to their relative importance but a successful application will need to demonstrate impact against all six criteria. The information provided in the application will also be used to assess the overall cost-benefit ratio of each project which will be a factor in the final decision.

For each criterion, bids will be scored from 0 to 5. The following table outlines the meaning of each score:

Score	Description
0	Unacceptable: Proposal does not meet the requirement. Does not comply and/or little or no evidence to support the response.
1	Serious reservations: Proposal significantly fails to meet the requirement with major reservations.
2	Minor reservations: Proposal satisfies the requirement with minor reservations.
3	Satisfactory: Proposal satisfies the requirement.
4	Above Satisfactory: Proposal satisfies all requirements and exceeds some requirements.
5	Excellent: Proposal meets the requirement and exceeds most of the major requirements. Evidence identifies factors that will offer significant added value and/or innovative solutions.

Criterion 1	The expected technical performance and key storage needs to be addressed by the technology																		
Weighting	20%																		
Guidance	<p>Applicants should provide details of the expected performance of their storage technology and should identify the key storage needs expected to be addressed by their proposed technology and the key performance parameters expected to be achieved by the proposed demonstration system to be developed in the project.</p> <ol style="list-style-type: none"> 1. Applicants should explain how their proposed storage technology would be deployed and identify the key electricity network or industrial storage needs which could be addressed by their storage technology. 2. For each of the performance parameters listed in the table below, applicants should set out: <ol style="list-style-type: none"> a) the expected performance of their proposed <u>demonstration</u> storage system (to be demonstrated, if selected, in Phase 2 of this competition); b) the expected performance of a <u>full commercial-scale</u> version of their proposed storage system; c) the <u>performance requirements</u> for the main storage needs and up to four additional storage needs which they have identified for their proposed storage system; <p>Applicants must explain any key assumptions used and explain the robustness of their performance data (e.g. is it based on calculations; or data from repeated laboratory-scale tests or testing of more advanced prototypes).</p> <table border="1" data-bbox="316 1568 1471 2101"> <thead> <tr> <th data-bbox="316 1568 890 1626">Performance parameter</th> <th data-bbox="890 1568 1471 1626">Unit</th> </tr> </thead> <tbody> <tr> <td data-bbox="316 1626 890 1684">Deliverable power</td> <td data-bbox="890 1626 1471 1684">MW</td> </tr> <tr> <td data-bbox="316 1684 890 1742">Energy</td> <td data-bbox="890 1684 1471 1742">kWh</td> </tr> <tr> <td data-bbox="316 1742 890 1832">Discharge duration (at rated power) (give range if applicable)</td> <td data-bbox="890 1742 1471 1832">Hours</td> </tr> <tr> <td data-bbox="316 1832 890 1890">Time to charge to full storage capacity</td> <td data-bbox="890 1832 1471 1890">Hours</td> </tr> <tr> <td data-bbox="316 1890 890 1948">System start-up time</td> <td data-bbox="890 1890 1471 1948">Minutes</td> </tr> <tr> <td data-bbox="316 1948 890 2007">Roundtrip efficiency</td> <td data-bbox="890 1948 1471 2007"></td> </tr> <tr> <td data-bbox="316 2007 890 2065">Self-discharge time</td> <td data-bbox="890 2007 1471 2065">Days</td> </tr> <tr> <td data-bbox="316 2065 890 2101">Degradation of system efficiency and</td> <td data-bbox="890 2065 1471 2101"></td> </tr> </tbody> </table>	Performance parameter	Unit	Deliverable power	MW	Energy	kWh	Discharge duration (at rated power) (give range if applicable)	Hours	Time to charge to full storage capacity	Hours	System start-up time	Minutes	Roundtrip efficiency		Self-discharge time	Days	Degradation of system efficiency and	
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Self-discharge time	Days																		
Degradation of system efficiency and																			

	other performance parameters with number of cycles completed	
	Geographical or proximity constraints (e.g. any constraints due to electromagnetic interference)	
	Infrastructure requirements	
	Size & weight	
	Environmental impact (including an estimate of the energy required to produce, maintain and decommission the system)	
	Current state of the technology (e.g. laboratory-scale testing; early prototype)	
Scoring	Highest marks will be awarded to projects that can demonstrate the best set of performance parameters and the best fit of performance against the performance requirements for the proposed main function(s).	

Criterion 2	The expected costs and lifetime of the storage system
Weighting	20%
Guidance	<p>Applicants should provide details of the expected lifetime and costs of the system, assuming the technology is successful and deployed in operational conditions. Applicants should include details of:</p> <ul style="list-style-type: none"> • Capital costs and installation costs (in £/kW and £/kWh, based on power and energy which can be delivered) – applicants should include evidence to support cost estimates; • Annual operating and maintenance costs (in £/kWh) and details of the duty cycle used to estimate these annual costs - applicants should include evidence to support cost estimates. • Expected system lifetime (in years) and details of the duty cycle used to estimate these annual costs - applicants should include evidence to support the system lifetime estimates.
Scoring	Highest marks will be awarded to the technologies expected to lead to the lowest costs of storage.

Criterion 3	The likelihood of successful project delivery (for Phase 1 and Phase 2)
Weighting	20%
Guidance	In assessing this criteria we will consider a range of factors that might impact on successful delivery of the project's goals – these will include but are not limited to factors such as:

	<ul style="list-style-type: none"> the completeness and quality of the proposed plans for Phase 1 (technical and project feasibility study) and the outline plans for Phase 2 (demonstrating the storage technology); the appropriateness and realism of the project milestones and deliverables; the track record of the team(s) involved in the project; the project's access to the necessary skills and facilities; the quality of risk assessment and contingency planning, including consideration of health and safety and other regulatory requirements.
Scoring	<p>Highest marks will be awarded to applicants that the panel considers 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:</p> <ul style="list-style-type: none"> present a well thought-out, robust, credible, project plans; show a realistic and robust approach to risk management; have a strong delivery team with proven experience of successfully delivering comparable projects; guarantee access to any necessary specialist facilities, operational knowledge and skills, or other resources required to execute the project; show the strong commitment of all participating organisations; not be heavily dependent for success on external factors beyond the project's direct control.

Criterion 4	The suitability of the project's financing, including assessment of fair materiality and additionality
Weighting	15%
Guidance	<p>In assessing this criterion we will consider:</p> <ul style="list-style-type: none"> the materiality of the proposed project given the proposed costs, i.e. is the proposed budget for Phase 1 and outline budget for Phase 2 realistic and justified in terms of the proposed project plans; will it be sufficient to deliver the deliverables sought. additionality: whether work on this technology would be taken forwards without public sector funding. price reduction: the price reduction offered by the bidder compared to the price of the project if DECC was retaining exclusive rights to IPR and other project results. the fit with the available funding profile. DECC may choose to prioritise projects with the majority of spending planned for the 2013-14 financial year (1 April 2013 to 31 March 2014).

Scoring	<p>Note: Projects can only be funded at fair market value.</p> <p>Highest marks will be awarded to projects that can demonstrate that the proposed costs:</p> <ul style="list-style-type: none"> • represent fair market value; • are realistic and justified; • represent a good use of public funding; • represent a cost saving compared to the cost if DECC was retaining the IP generated in the project for its exclusive use; and • fit well with the Scheme’s funding profile.
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Criterion 5	The likelihood of the subsequent commercial availability and success of the innovation
Weighting	15%
Guidance	In assessing this criterion we will consider how likely the outcomes of the project are to be commercialised and deployed by reviewing the applicant’s post-project plans for the further development, commercialisation and exploitation of the innovation, if successful. Evidence of a credible commercialisation plan should 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: demonstrate a clear understanding of the potential market for their technology; have a clear considered plan for the commercialisation of the innovation; and can credibly deliver that plan.

Criterion 6	The contribution of the project to wider understanding of energy storage systems and broader economic activity
Weighting	10%
Guidance	In assessing this criterion we will consider a number of factors that will determine the effect that a successful project outcome is likely to have on the energy storage industry and supply chain. These will include, but are not limited to, factors such as: <ul style="list-style-type: none"> • 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; • 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 chain and are likely

	to secure wider economic benefits.
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Detailed Competition Process

Selection process

The competition will run in two phases, with assessment and down selection at the end of Phase 1. Selection for Phases 2 will be based on the outputs of Phase 1.

Phase	Dates	Output (see Deliverables section in this Guidance Note for further details)
1 – demonstration project design and technology analysis	February 2013 to April 2013	Technology assessment report and detailed project plan for the phase 2 demonstration project.
2 – demonstration and trials	May/June 2013 to March 2015	Commercial-scale or near-commercial-scale energy storage system demonstrator working in operational or realistic conditions; Detailed final report, including: test results from demonstration system; detailed cost-benefit analysis; proposed path to commercialisation; methods to address operational, regulatory or commercial barriers to deployment.

The call for applications will open on 18 October 2012. Applicants will be asked to provide a robust, evidence based case for the viability of their proposed technologies against a set of assessment criteria. Applications will need to detail both phases of the project in order to obtain funding for Phase 1.

The output of Phase 1 will be used to assess whether projects will continue forward to demonstrate the proposed technology at near-commercial scale in Phase 2. Assessment criteria set out in this guidance note will be used to select the successful applicants for Phase 2 but the assessment panel will use the additional data and project planning completed in Phase 1 to decide which projects should go forward to Phase 2.

Publication of Results

DECC wishes to publicise the outcome of the Competition. Therefore, on or after issuing a contract to a successful applicant, DECC will publish the following information:

- Identity of the contractor and its key partners;

- Type of technology involved;
- Summary details of the aims and expected outcomes of the project
- Total contract value.

In addition, after the project has been completed DECC expects to publish on its website a summary of the funded activities and the outcomes achieved.

DECC however recognises the need to maintain the confidentiality of commercially sensitive information. DECC will consult applicants in advance about the information to be published, in order to protect commercially sensitive information.

Reporting, evaluation and knowledge sharing requirements

There will be a number of requirements on contractors 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 DECC's technical team and its appointed technical advisers and will not be published. Any changes to schedules or project plans will need to be discussed with DECC 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 whether funds have been used effectively. Evaluation may take place up to several years after completion of the project.
- Knowledge sharing: to benefit the industry as a whole and to avoid repetition of costly or time consuming mistakes there will be an obligation on successful applicants to undertake data gathering and knowledge sharing activities. We will expect applicants to share useful data and experience through relevant industry forums.

How to Apply

Please read this guidance note before filling in and submitting application forms for the DECC Energy Storage Technology Demonstration Competition.

The deadline for applications is **1200 on 13 December 2012**.

You can access the application form and associated documentation by clicking [here](#).

You should endeavour to answer all of the questions on the application in full. Incomplete applications and any containing incorrect or false information will very likely be rejected although DECC may, at its discretion, request clarification or additional data before making a final decision.

Send the completed application form in pdf format to innovation@decc.gsi.gov.uk with 'Energy Storage Demonstration application (name of bidder)' in the subject line.

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

Please also provide 1 signed hard copy of the application to the address below within 10 working days of submitting your electronic application:

**Sally Fenton
Department of Energy and Climate Change
3 Whitehall Place
LONDON
SW1A 2AW**

All answers should be contained within the application form. Small graphical appendices that support the answers in the application form may be appended to the end of the form or attached to the email. The application form must list all appendices and supporting documents. Please also include a list of all attachments in the body of your email. Do not put any further information relating to your application in the text of the email.

Electronic copies of relevant supporting documents are preferred. If electronic copies are not available please send hard copies (not originals) to the address above before the application deadline.

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

Note: DECC may in response to enquiries provide additional information or clarification on its website. Potential applicants are therefore strongly advised to check DECC's innovation pages periodically for any additional information.

Annex 1 – Eligible and Ineligible Costs

Eligible Costs

The contract can cover the following costs, as applicable:

Directly incurred costs:

These are costs that are specific to the project that will be charged to the project as the amount actually spent, fully supported by an audit record justification of a claim, They comprise:

- Labour costs for all those contributing to the project, broken down by individual;
- Material costs (including consumables specific to the project);
- Capital equipment costs;
- Sub-contract costs;
- Travel and subsistence.

Indirect costs

Indirect costs should be charged in proportion to the amount of effort deployed on the project. Applicants should calculate them using their own cost rates. They may include:

- General office and basic laboratory consumables
- Library services / learning resources
- Typing / secretarial
- Finance, personnel, public relations and departmental services
- Central and distributed computing
- Cost of capital employed
- Overheads

Non-eligible costs:

Under no circumstances can costs for the following items be claimed:

- for activities of a political or exclusively religious nature;
- in respect of costs reimbursed or to be reimbursed by funding from other public authorities or from the private sector;

- in connection with the receipt of contributions in kind (a contribution in goods or services as opposed to money);
- to cover interest payments (including service charge payments for finance leases);
- for the giving of gifts to individuals, other than promotional items with a value no more than £10 a year to any one individual;
- 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);
- to pay statutory fines, criminal fines or penalties; or
- in respect of VAT that you are able to claim from HM Revenue and Customs.

Annex 2 – Grounds for Rejecting Bids

Grounds for mandatory rejection

In some circumstances the Department is required by law to exclude you from participating further in a procurement. If organisations cannot answer 'no' to every question in this section it is very unlikely that their application will be accepted.

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?	
(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;	
(ca) bribery within the meaning of section 1 or 6 of the Bribery Act 2010;	
d) 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;	
(e) money laundering within the meaning of section 340(11) of the Proceeds of Crime Act 2002;	
(ea) 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	
(eb) 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	
(f) 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.	

Grounds for discretionary rejection

The Department is entitled to exclude applicants from consideration if any of the following apply but it may decide to allow bids to proceed further. If bidders cannot answer 'no' to every question it is possible that their application might not be accepted. In the event that any of the following do apply, applicants will be required to set out full details of the relevant incident and any remedial action taken subsequently. The information provided will be taken into account by the Department in considering whether or not the bidder will be able to proceed any further in respect of this procurement exercise.

The Department is also entitled to exclude bidders in the event they are guilty of serious misrepresentation in providing any information referred to within regulation 23, 24, 25, 26 or 27 of the Public Contracts Regulations 2006 or fail to provide any such information requested by DECC.

Is any of the following true of your organisation?	
(a) being an individual is a person in respect of whom a debt relief order has been made or is bankrupt or has had a receiving order or administration order or bankruptcy restrictions order or a debt relief restrictions order made against him or has made any composition or arrangement with or for the benefit of his creditors or has made any conveyance or assignment for the benefit of his creditors or appears unable to pay, or to have no reasonable prospect of being able to pay, a debt within the meaning of section 268 of the Insolvency Act 1986, or article 242 of the Insolvency (Northern Ireland) Order 1989, or in Scotland has granted a trust deed for creditors or become otherwise apparently insolvent, or is the subject of a petition presented for sequestration of his estate, or is the subject of any similar procedure under the law of any other state;	
(b) <u>being a partnership constituted under Scots law</u> , has granted a trust deed or become otherwise apparently insolvent, or is the subject of a petition presented for sequestration of its estate; or	
(c) <u>being a company or any other entity within the meaning of section 255 of the Enterprise Act 2002</u> has passed a resolution or is the subject of an order by the court for the company's winding up otherwise than for the purpose of bona fide reconstruction or amalgamation, or had a receiver, manager or administrator on behalf of a creditor appointed in respect of the company's business or any part thereof or is the subject of similar procedures under the law of any other state?	
Has your organisation	
(a) been convicted of a criminal offence relating to the conduct of your business or profession;	
(b) committed an act of grave misconduct in the course of your business or profession;	
(c) failed to fulfil obligations relating to the payment of social security contributions under the law of any part of the United Kingdom or of the relevant State in which you are established; or	

<p>(d) failed to fulfil obligations relating to the payment of taxes under the law of any part of the United Kingdom or of the relevant State in which you are established?</p>	
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