

Alternative Energy Markets Innovation Programme: Phase 1 Feasibility

SBRI competition guidance notes



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Contents

Gloss	sary of terms and definitions	8
Supp	orting Documents	12
Alterr	native Energy Markets Innovation Programme: Phase 1 Competition – Guidance for	
Appli	cants	13
1. (Competition Overview	15
1.1	Background & Context	15
1.2	Aims & Objectives	17
1.3	Programme Structure	19
2. F	Phase 1 Scope	20
2.1	. Phase 1 Competition Scope overview	20
2.2	. Scenarios	21
2.3	. Out of scope	25
3. F	Phase 1 Outputs & Deliverables	26
4. V	Vays of Working and Reporting	32
4.1	. Key Performance Indicators	33
4.2	. Evaluation requirements	35
5. F	Phase 1 Competition Timetable, Application and Assessment Process	36
5.1	. Competition Timetable	36
5.2	. Application	37
5.3	. Assessment	40
5.4	. Award	45
	Contract Size and Restrictions on Funding	47
6.1	. Competition budget and availability	47
6.2	. Eligible Costs	48
7. E	Eligibility for Funding	49
7.1	. Competition Eligibility Criteria	49
7.2	. General BEIS Conditions	51
8. F	Financial Eligibility and Viability	53
8.1	. Financial Eligibility	53
8.2	. Financial viability checks	

Alternative Energy Markets Innovation Programme: Phase 1 Feasibility

9. Notifications and Publication of results	56
9.1. Notification	56
9.2. Publication of results	56
10. Intellectual Property	58
11. Feedback, Re-application and Right of Appeal	59
12. Confidentiality and Freedom of Information	60
13. Terms and Conditions	61
14. Further Instructions to Applicants	62
14.1. Application checklist	62
14.2. Definitions	63
14.3. Data Protection and Security	63
15. Non-Collusion	64
16. Phase 2 Information	65
16.1. Phase 2 Scope	65
16.2. Down-Selection Assessment Process	66
16.3. Down-Selection Assessment Criteria	67
16.4. Down-Selection Assessment - Scoring Guidance	71
16.5. Down Selection – Evaluation Approach	72
16.6. Down Selection – Terms and Conditions	72
Appendix 1 – Technology Readiness Levels (TRLs)	73
Appendix 2 - Eligible and Ineligible Costs	74
Appendix 3 - Exclusion Grounds	77
Appendix 4 – Completion of Project Cost Breakdown Form	n 83

Glossary of terms and definitions

AAHEDC	Assistance for Areas with High Electricity Distribution Costs
Applicant	A company, organisation or consortia of companies and/or organisations that submits an application in response to the competition
Assessment Criteria	The criteria against which compliant Competition Applicants will be assessed in relation to awarding of SBRI Contracts. These are set out at Section 5.
Authority / Contracting Authority	The Department for Business, Energy and Industrial Strategy (BEIS), 1 Victoria Street, London SW1H 0ET
BEIS	Department for Business, Energy and Industrial Strategy
CfD	Contract for Difference
Competition	Means the process used to establish awarding of contracts for the provision of Phase 1 feasibility studies relating to the Alternative Energy Markets programme
Cost element	The wholesale costs, network charges and policy costs that contribute to a customer's electricity bill. This excludes any revenue generated from participation in balancing or constraint management services that might factor into Propositions.
Deliverables	Means the reports and other outputs to be delivered under the Contract as detailed at Section 3.
Demand side response service provider (DSRSP)	Organisations who remotely control or configure the electricity consumption or production, typically to benefit organisations responsible for supply, balancing, transmission, or distribution of energy (also known as 'Aggregators' or 'Flexibility Service Providers').
Down-Selection	Means the process as detailed at Section 16 to select Phase 1 Project(s) to advance to Phase 2.
DSO	Distribution System Operation
DSR	Demand Side Response

DuoS	Distribution use of System
ECO	Energy Company Obligation
ESA	Energy Smart Appliance
ESO	Electricity System Operator
FAQs	Frequently asked questions
Flexibility Innovation Programme (FIP)	Flexibility Innovation Programme – the overarching programme that includes this competition and several others. See www.gov.uk/government/publications/flexibility-innovation for more information.
FOIA	Freedom of Information Act (2000)
GDPR	General Data Protection Regulations
HEMS	Home Energy Management System
HMG	Her Majesty's Government
IPR	Intellectual property rights
KPI	Key Performance Indicator
М	Million
MHHS	Market-wide Half Hourly Settlement
Minimum Threshold Scores	Means the minimum scores that Applicants must achieve against the Assessment Criteria to be considered for funding, as detailed at Section 5
NZIP	Net Zero Innovation Portfolio
Phase 1	Means activities and outputs relating to the initial Feasibility phase of the innovation activity as set out at Section 2 and 3.
Phase 2	Means activities and outputs relating to the subsequent phase of the innovation activity as set out at Section 16.
PPA	Power Purchase Agreement

Price profile	An hourly breakdown for a year of the costs and charges that contribute to a consumer's energy bill.
Project Cost	Means the 'BEIS Project Cost Breakdown Form' provided as an
Breakdown Form	electronic Appendix to this Competition pack, and which Applicants
('the')	must complete as their pricing proposal.
Project(s)	Applicants' proposals for which the Competition seeks to award SBRI funding.
Proposition (Demand	An innovative energy supply tariff, product and/or service offered to
side flexibility proposition)	domestic consumers to incentivise the turn up, turn down, or shift of demand. This includes propositions involving singular or multiple domestic customers or community energy schemes. Further detail on the Scope of Propositions under this competition is provided in Section 2.
RAG	Red Amber Green
RTO	Means Research and Technology Organisation. RTOs are (mainly)
	private non-profit research performers or commercial research
	enterprises providing R&D services, both to government and
	business ¹ .
Scenario (Alternative	A description of a future energy market and charging arrangements
energy market	for domestic energy supply. Refers to the alternative energy market
Scenario)	scenarios set out in Section 2.
SME	Small and medium enterprise
T&C	Terms and conditions
TNuoS	Transmission Network use of System
Trial Protocol	A document developed before the start of a trial that outlines the
	design of the trial, the hypotheses being tested and research
	questions being answered, recruitment and size of participant
	(treatment) and non-participant (control) groups, how data will be
	accessed and collected, outcome measures being tested, how
	energy use data will be collected and accessed for the treatment
	and control group, the approach to analysing impact, and the effect
	size calculations.

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 $^{^1\} https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/451265/bis-15-321-research-and-innovation-organisations-in-the-UK-innovation-functions-and-policy-issues.pdf$

Alternative Energy Markets Innovation Programme: Phase 1 Feasibility

UK	United Kingdom
VAT	Value-Added Tax

Please note that references to the "Department" or "Authority" throughout these documents mean The Secretary of State for Business, Energy and Industrial Strategy acting through his/her representatives in the Department for Business Energy & Industrial Strategy (BEIS).

Any reference to "Programme" is a reference to the Net Zero Innovation Portfolio: Alternative Energy Markets Programme, run by the Department for Business Energy and Industrial Strategy (BEIS).

Any reference to "portfolio" is a reference to the Net Zero Innovation Portfolio (NZIP).

Supporting Documents

The following documents support this Competition Guidance and are available within the application form.

- Annex 1: Phase 1 SBRI Contract Terms and Conditions
- Annex 2: Declarations
 - o Declaration 1: Statement of non-collusion
 - o Declaration 2: Form of Bid
 - Declaration 3: Conflict of Interest
 - Declaration 4: Code of Practice for Research
 - Declaration 5: The UK General Data Protection Regulation Assurance Questionnaire for Contractors
 - o Declaration 6: Standard Selection Questionnaire

Annex 3: Project cost breakdown form

Alternative Energy Markets Innovation Programme: Phase 1 Competition – Guidance for Applicants

The purpose of this Guidance is to give a comprehensive overview of the Alternative Energy Markets Innovation Programme: Phase 1 - Feasibility SBRI Competition ("the Competition") and associated procedures for participation in the Competition. This Competition forms part of the overarching up to £65m Flexibility Innovation Programme which seeks to enable electricity system flexibility through smart, flexible, secure and accessible technologies and markets.

The Flexibility Innovation Programme is part of the <u>Net Zero Innovation Portfolio (NZIP)</u>. For further information on other innovation activity under the Net Zero Innovation Portfolio and the Flexibility Innovation Programme, please visit the Gov.uk webpages^{2,3}.

The Alternative Energy Markets Innovation Programme will support the design and demonstration of innovative domestic demand side flexibility propositions in a future energy system. Seeking to quantify the additional flexibility available to the system and the benefits to participating consumers and contributing to the evidence base for how the domestic flexibility market can be grown to inform future policy and regulatory decisions.

The Competition is to be run in two Phases:

• **Phase 1** – Total budget of up to £2,000,000 excluding VAT to fund, through SBRI, around 4 projects.

In Phase 1 BEIS expects to fund efforts to design and simulate innovative tariffs, products, or services (demand side flexibility Propositions) under alternative energy market scenarios (Scenarios) of a future energy system.

Stage gate and down selection

 Phase 2 – Total budget of up to £16,000,000 excluding VAT to fund, through Grant, around 1 to 3 selected Phase 1 Projects to develop and deliver real world demonstration of innovative demand side flexibility propositions.

In Phase 2 BEIS expects to fund secure real world testing environments and the associated costs to delivery partners and consumers of testing Propositions (tariffs, products and services) under alternative energy market Scenarios. This could include some funding for energy assets and infrastructure deemed necessary to demonstrate how innovative

² www.gov.uk/government/collections/net-zero-innovation-portfolio

³ www.gov.uk/government/publications/flexibility-innovation

propositions could work in the real world to deliver a flexible system, but funding under Phase 2 is not focussed on development of technologies and systems.

Definitions for, and the scope of, demand side flexibility propositions (Propositions) and alternative energy scenarios (Scenarios) are provided in the Glossary and in **Section 2**.

This SBRI Competition Guidance Document is for Phase 1 only. Information on Phase 2 is provided in **Section 16**, including the down-selection assessment process and criteria the Authority expects to use to select Project(s) to advance to Phase 2 and access grant funding. Additional detail will be provided on Phase 2 in the Phase 2

Competition Guidance Document to be provided to successful Phase 1 applicants. The Phase 2 Grant Competition Guidance document will be issued within the first 3 months of Phase 1 and prior to Projects progressing onto Phase 2 proposal work.

Phase 2 will be subject to **subsidy requirements and match funding (as in the table below).** Only a portion of the total eligible Phase 2 project costs can be funded by BEIS grant funding & applicants will need to have private funding in place to cover the balance of the eligible costs.

Organisation Size	Maximum amount of public subsidy as a percentage of total eligible project costs
Small	70%
Medium	60%
Large	50%
Small	80%
Medium	75%
Large	65%
Small	45%
Medium	35%
Large	25%
Small	60%
Medium	50%
Large	40%
	Size Small Medium Large Small Medium Large Small Medium Large Small Medium Large Small Medium

1. Competition Overview

1.1 Background & Context

In order to decarbonise the power system by 2035⁴, maintain security of supply, support energy independence and achieve net zero at the least cost by 2050, we need to transition to a smart and flexible electricity system. This transition could reduce costs by up to £10 billion per year by 2050⁵.

In July 2021 the Government, jointly with Ofgem, published the Smart Systems and Flexibility Plan 2021 (SSFP). This sets out the need for much more flexibility in our electricity system- the ability to shift energy in time or location to balance supply and demand, allowing for the effective integration of home grown and decarbonised power, buildings, and transport at least cost. A smart and flexible energy system will be more affordable, reducing consumer energy bills by reducing the amount of generation and network assets that need to be built to meet peak demand, and giving consumers greater control over their energy bills through access to smart technologies and services. Alongside storage and interconnection, a key facet of expected flexibility in a future energy system is demand side response (DSR). The mass uptake of DSR will be key to delivering a smart and flexible energy system, but action is needed to enable DSR to grow. The SSFP outlined how we can deliver the flexibility needed for a net zero system, including actions to facilitate flexibility from consumers, remove barriers to flexibility on the grid, reform markets to reward flexibility, and digitalise the system.

In July 2022 the Government published the Review of Electricity Market Arrangements Consultation. Recognising that cost-effective decarbonisation of the GB energy system may require significant changes in electricity markets, this review will identify reforms needed to drive the investment in, and efficient operation of, a secure, low carbon electricity system by 2035. This contains a vision for future market arrangements that includes providing the right signals for flexibility across the system and facilitating consumers to take greater control of their electricity use by rewarding them through improved price signals, whilst ensuring fair outcomes.

Alongside the actions above, under the Government's Net Zero Innovation Programme, at least £100 million in innovation funding is being dedicated to energy storage and flexibility innovation programmes. This includes the £65m Flexibility Innovation Programme (FIP) which will support electricity system flexibility by funding innovation in smart, flexible, secure, and accessible technologies and markets. The FIP has three focus areas: (i) integrating systems for flexibility-supporting the delivery of technologies and energy smart appliances that enable interoperable electricity system flexibility; (ii) data and digitalisation- supporting a digitalised energy system able to support the data flows and visibility needed to enable system flexibility; (iii) markets for flexibility- ensuring that markets can reward the value of flexibility.

The alternative energy markets innovation programme is seeking to stimulate and demonstrate domestic demand side flexibility propositions (tariffs, products and services) in a future energy

⁴ Subject to security of supply.

⁵ Transitioning to a net zero energy system: smart systems and flexibility plan 2021

system where electricity market arrangements may look different from today. This will demonstrate the value that innovative domestic demand side response Propositions may bring to both the consumer and the system, and contribute to the evidence base for how the domestic flexibility market can be grown to inform future policy and regulatory decisions; supporting the delivery of a smart and flexible energy system.

Other smart and flexible energy system initiatives and documents of relevance to this competition include:

- The 2021 Smart Systems and Flexibility Plan⁶ developed by the Government and Ofgem
 in coordination with the energy sector to drive a net zero energy system, with five areas
 of focus: removing barriers to flexibility from consumers; removing barriers to flexibility on
 the grid (including electricity storage and interconnectors); reforming markets to reward
 flexibility; digitalisation of the energy system and monitoring flexibility across the system.
- The Market-Wide Half Hourly Settlement (MHHS) programme^{7,8} Market-wide Half-Hourly Settlement is a key enabler of demand side flexibility from domestic consumers.
 Half-hourly settlement will help to unlock smart tariffs and other services which will help incentivise domestic consumers to participate and benefit from a smart energy system.
- The Review of Electricity Market Arrangements (REMA) programme⁹ this review of electricity market arrangements will identify reforms needed to transition to a decarbonised, cost effective and secure electricity system.
- The British Energy Security Strategy (BESS)¹⁰ sets out how Great Britain will accelerate homegrown power for greater energy independence.
- The Smart and Secure Electricity System Consultation 11- this consultation sets out proposals to ensure consumers and the electricity system are protected, and to develop a competitive market for energy smart appliances and DSR.
- Sub-programmes of the Flexibility Innovation Programme¹² the Flexibility Innovation Programme seeks to enable electricity system flexibility through smart, flexible, secure, and accessible technologies and markets. This programme consists of several subprogrammes, including the following:
 - o V2X (vehicle-to-everything) Innovation Programme¹³, which aims to address barriers to enabling energy flexibility from bi-directional electric vehicle charging.
 - Automatic Asset Registration (AAR) Programme¹⁴, which aims to support the development of an automatic, automated secure data exchange process for

⁶ <u>www.gov.uk/government/publications/transitioning-to-a-net-zero-energy-system-smart-systems-and-flexibility-plan-2021</u>

⁷ www.mhhsprogramme.co.uk/

⁸ www.ofgem.gov.uk/energy-policy-and-regulation/policy-and-regulatory-programmes/electricity-settlement-reform 9 www.gov.uk/government/consultations/review-of-electricity-market-arrangements

¹⁰ www.gov.uk/government/publications/british-energy-security-strategy

¹¹ www.gov.uk/government/consultations/delivering-a-smart-and-secure-electricity-system-the-interoperability-and-cyber-security-of-energy-smart-appliances-and-remote-load-control

¹² www.gov.uk/government/publications/flexibility-innovation

¹³ www.gov.uk/government/publications/v2x-innovation-programme

¹⁴ www.gov.uk/government/publications/automatic-asset-registration-aar-programme

- registering small-scale energy assets and collecting and accessing small-scale energy asset data.
- o Interoperable Demand Side Response Programme (IDSR) Programme¹⁵, which aims to support the development and demonstration of energy smart appliances for the delivery of interoperable demand side response.
- Smart Meter System based Internet of Things (IoT) Applications Programme¹⁶, which aims to support innovation to determine the feasibility of, and trial, Smart Meter System based IoT sensor devices.
- Smart Meter Energy Data Repository (SEDR) Programme¹⁷, which aims to support innovation to determine the technical and commercial feasibility of a smart meter energy data repository.
- National Grid ESO Future Energy Scenarios¹⁸ represent a range of different, credible ways to decarbonise our energy system as we strive towards the Net Zero by 2050 target.
- Ofgem's Strategic TNUoS (Transmission Network Use of System (TNUoS) charges) reform.
- Ofgem's Dedicated DUoS SCR¹⁹ (Distribution Use of System (DUoS) charges)

1.2 Aims & Objectives

The overall aim of the Alternative Energy Markets Innovation Programme is to stimulate and support the development and demonstration of innovative domestic demand side flexibility Propositions in a future energy system. The objectives of the two-phase Programme are:

- Design and simulate innovative domestic flexibility Propositions under potential alternative energy markets, quantifying the additional flexibility available to the system and the benefits to participating consumers
- Contribute to the evidence base for how the domestic flexibility market can be grown and encouraged under a future energy system to inform future policy and regulatory decisions
- Combine domestic flexibility Propositions with low carbon distributed energy assets and other smart energy innovations to demonstrate how these innovative Propositions could work in the real world to deliver a flexible energy system

Definitions for, and the scope of, demand side flexibility propositions (Propositions) and alternative energy scenarios (Scenarios) are provided in the Glossary and in **Section 2**.

The specific aims and objectives for each Phase of the Programme are as follows:

¹⁵ www.gov.uk/government/collections/interoperable-demand-side-response-programme

¹⁶ www.gov.uk/government/publications/smart-meter-system-based-internet-of-things-applications-programme

¹⁷ www.gov.uk/government/publications/smart-meter-energy-data-repository-programme

¹⁸ www.nationalgrideso.com/future-energy/future-energy-scenarios

¹⁹ Distribution Use of System Charges: Significant Code Review Launch | Ofgem

Phase 1 - The aim of the Phase 1 Competition is to support the design, simulation and development of innovative tariffs, products or services (demand side flexibility Propositions) under alternative energy market scenarios (Scenarios) of a future energy system. The objectives of Phase 1 are to:

- Design and simulate potential innovative domestic demand side flexibility Propositions under each specified alternative energy market Scenario and propose any changes within the Scenarios to allow for maximum impact for energy system flexibility and value to consumers.
- Determine the feasibility and quantify the expected benefits and costs to consumers, proposition providers, and the electricity system, of the proposed demand side flexibility Propositions within the Scenarios
- Identify any barriers and/or enablers that help or hinder the proposition due to the market reforms in each scenario
- Produce proposals for a Phase 2 Demonstrator which:
 - Put forward innovative demand side flexibility Proposition(s) to be demonstrated, and the Scenario(s) under which they would be demonstrated
 - Outline how the demonstrator would place Proposition(s) within the context of a future energy system, and any potential collaboration with other Flexibility Innovation Programme (FIP) projects, other innovation programmes across NZIP, and other energy innovation programmes more widely
 - Propose a method for trialling the proposed demand side flexibility Proposition(s) including supporting the production of a trial protocol that outlines the design of the trial, the hypotheses being tested, recruitment and size of participant (treatment) and non-participant (control) groups, how data will be accessed and collected, outcome measures being tested, and approach to analysing impact.

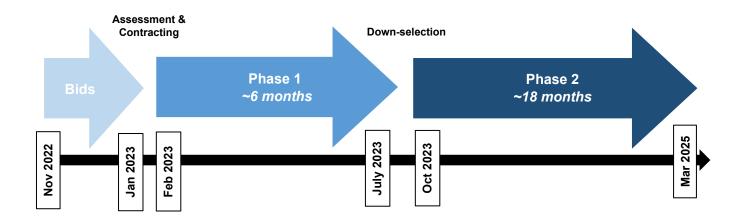
Phase 2 - The aim of the Phase 2 Competition is to deliver real world demonstrators, which would test demand side flexibility Propositions developed in Phase 1 in a real world setting to increase understanding of how such Propositions may work in practice and how consumers respond and participate, and to demonstrate the impact of propositions and potential benefit to the electricity grid and to consumers. Phase 2 will aim to support the demonstration of demand side flexibility Propositions within the context of a future energy system, encouraging collaboration with existing and ongoing innovation programmes and projects across the FIP, NZIP and wider.

1.3 Programme Structure

The diagram below summarises expected dates, activities, and outputs across the two Programme Phases. Timescales given below are indicative and BEIS may alter any or all of the dates below.

It is anticipated that around 4 Projects will be selected to develop Propositions in Phase 1, in line with the selection process as set out at **Section 5**. It is anticipated that, following a stage gate and down selection process, around 1 to 3 Projects would be taken forward to Phase 2. This down selection process is set out in **Section 16**.

Applicants should note that where Phase 1 competition funding mechanism is an SBRI and Phase 2 is a Grant, projects will be subject to different terms and conditions. Projects successful at the down selection into Phase 2 will be subject to a Grant Funding Agreement, replacing the Phase 1 SBRI contract terms and conditions set out in Annex 1.



Down-selection Period – July - October 2023

- During Phase 1 BEIS will issue the Phase 2 Grant Competition Guidance document as detailed indicatively at Section 16.
- The Phase 2 Grant Competition Guidance document will be issued within the first 3 months of Phase 1 and prior to Projects progressing onto Phase 2 proposal work.
- Phase 1 Projects will then submit their Down-Selection Competition submissions by 29th
 July 2023. BEIS reserves the right to alter this date.
- BEIS expects to notify Projects of the outcome of down selection in September/October 2023 ahead of expected kick off of Phase 2 projects in October 2023.

2. Phase 1 Scope

2.1. Phase 1 Competition Scope overview

Projects in scope for this Competition will design, develop, and simulate flexibility propositions targeted at domestic customers under a number of hypothetical 2030 alternative energy market scenarios.

Regarding the scope of demand side flexibility Propositions within this competition, Propositions in scope are those targeted at domestic customers in the UK, excluding all non-domestic customers. Propositions are expected to include, for example, innovative tariffs, products and/or services offered to domestic consumers which incentivise flexibility provision to the energy system (i.e. the turn up, turn down, or shift of demand). Propositions are expected to take into consideration the low carbon and smart technologies of a future energy system and could involve singular or multiple domestic customers or community energy schemes. For example, a Proposition may be a combination of new tariffs with Energy Smart Appliances (ESAs) and Home Energy Management Systems (HEMS), and could include technologies such as EV charge points, heat pumps, storage, and communal solar and battery solutions.

The alternative energy market Scenarios include hypothetical changes to the wholesale market, network charges and policy costs. Suggested price profiles to accompany these Scenarios will be provided to successful Applicants at the start of Phase 1 delivery. The alternative energy market Scenarios set out below, and the accompanying price profiles, are not and should not be taken as a forecast of actual prices under the proposed Scenarios. This is an innovation programme to support the development of innovative Propositions that could emerge under a range of future energy systems, to help understand how this might deliver system flexibility and benefit to consumers. Scenarios and price profiles have therefore been provided to frame this innovation programme.

In Phase 1, Projects should utilise the suggested alternative energy market Scenarios and price profiles as a starting point around which to design and simulate demand side flexibility Propositions. Projects will be able to iterate on the initial Scenarios proposed, detailing any further adjustments (e.g. to assumptions or price profiles) needed to enable their Propositions to unlock optimum domestic flexibility.

It is expected that under Phase 1, Projects would consider all Scenarios provided, designing and developing one or multiple demand side flexibility propositions per Scenario as a result.

Regarding the approach to the simulation of Propositions, simulations are expected to consist of qualitative and quantitative analysis to specify the costs and benefits to customers and characterise the flexibility actions incentivised by the proposition. Project teams are expected to set out their approach for simulation to meet the defined programme outputs.

Phase 1 scope also includes the development of Phase 2 proposals, which will be assessed at down selection. Following the development of Propositions under all Scenarios in Phase 1,

Phase 2 proposals are expected to set out which Proposition(s) are to be tested in Phase 2, and the associated Scenario(s), assumptions and potential sensitivities as well as the approach to demonstration, including the onboarding/recruitment and testing of Propositions with consumers. Further detail on the Phase 2 proposal expected in Phase 1 is provided in **Section 3**.

Phase 1 projects will also be expected to work with an organisation separately commissioned by BEIS that will support in the development of a stand-alone trial protocol document for each proposition to be tested in Phase 2. This will outline the design of the trial, the hypotheses being tested and research questions being answered, recruitment and size of participant (treatment) and non-participant (control) groups, how data will be accessed and collected, outcome measures being tested, how energy use data will be collected and accessed for the treatment and control group, the approach to analysing impact, and the effect size calculations. Further detail on this is provided in **Section 3**.

It is expected that, to deliver on the scope for Phase 1 and 2, Projects (whether they be individual organisations or consortiums) would need to include the participation of an organisation who supplies energy to a domestic consumer or provides energy or an energy supply product to a consumer. This may include an energy supplier, demand side response service providers (DSR service providers) or energy as a service provider. Inclusion of evidence and/or assurance of the involvement of such an organisation is included in the assessment criteria for Phase 1 applications, as outlined in **Section 5.3.1**.

The below sections provide further detail on the scope of Scenarios and sets out what is considered as out of scope.

2.2. Scenarios

Detail on the assumptions underpinning Scenarios, and the Scenarios themselves are provided in the following section. Successful Phase 1 applicants will be provided with an annual hourly price profile and underlying assumptions for each cost element for Scenarios 1-4 on project kick off. The assumptions behind these price profiles can be queried and refined during Workshop 1 (see **Section 3** for further detail on Workshops). Beyond this, it is expected that Projects would undertake any further work on price profiles and set out any further assumptions necessary for the Project's development of demand side flexibility Propositions.

General assumptions that apply across all the scenarios are as follows:

- All Scenarios will be underpinned by ESO Future Energy Scenario Leading the Way assumptions on generation mix and domestic asset deployment in 2030.
- Mandatory half-hourly settlement is in place across all Scenarios for demand and export, as described in Ofgem's Electricity Retail Market-wide Half-hourly Settlement: Decision Document, 2021²⁰.

²⁰ Electricity Retail Market-wide Half-hourly Settlement: Decision and Full Business Case | Ofgem

- TNUoS charges will be determined as followed
 - o Forward looking TNUoS will be charged based on annual consumption between 4pm and 7pm at a fixed p/kWh, determined annually
 - o Residual TNUoS will be charged at a fixed rate per household
- DUoS residual charges consist of a single charge set for each distribution area.
 Approach to forward looking DUoS charges will be specific to each Scenario.
- Three locations will be tested, consistent across all Scenarios:
 - Demand dominated
 - Generation dominated
 - o Balanced
- DSO services in each location will be procured through close to real time local flexibility market platform. Products will be structured based on the ENA Sustain, Secure, Dynamic and Restore definitions²¹.
- ESO balancing services and the balancing mechanism procurement will follow either description laid out in ESO Future of balancing services documentation²² or existing product descriptions as applicable. Further details will be provided at Project Inception.

Scenario summary table

Scenario	Retail market	Wholesale market	DUoS forward looking charges	Policy costs
Scenario 1	Mandatory half hourly settlement	Current arrangements	Current arrangements	Current arrangements
Scenario 2a	Mandatory half hourly settlement	Current arrangements	More locationally granular annual RAG times and rates	General taxation
Scenario 2b	Mandatory half hourly settlement	Current arrangements	More locationally granular seasonal RAG times and rates	Renewable support costs and capacity market costs moved to dynamic rates
Scenario 3	Mandatory half hourly settlement	Generation-only nodal pricing, with opt-in to nodal pricing available for domestic consumers.	More locationally granular annual RAG times and rates	Current arrangements

²¹ Flexibility services – Energy Networks Association (ENA)

²² Future of balancing services | National Grid ESO

Scenario 4	Mandatory half hourly settlement	Split market	More locationally granular annual RAG times and rates	Current arrangements
Scenario 5		To be defin	ed by Applicant	

Scenario 1 - Baseline scenario

This Scenario assumes a market structure similar to 2022, with the addition of mandatory half-hourly settlement. The purpose of this Scenario is to act as a baseline in the analysis, allowing quantification of the additional domestic flexibility unlocked under each subsequent Scenario.

Scenario 2a – Policy costs moved to general taxation; granular annual DUoS charging

This Scenario explores the removal of renewable support schemes costs and capacity market costs from domestic energy supply. These costs are currently recovered through effectively a non-time-varying charge per kWh of gross electricity demand. Instead, in this Scenario these costs will be assumed to be covered through general taxation. Social support costs such as the cost recovery of ECO, the Warm Homes Discount and AAHEDC will continue through existing arrangements.

DUoS forward looking charges will continue to be set 15 months in advance. However, charges will be set at an Energy Supply Area level, with rates and time bands specific to the network costs in that area.

The purpose of this Scenario is to understand the level to which these currently flat charges mask incentives for households to provide grid support and distorts household investment decisions with respect to electrification.

Scenario 2b - Dynamic policy costs and granular seasonal DUoS charging

This Scenario explores the move to dynamic cost recovery of renewable support schemes and capacity market costs from domestic energy supply. These costs are currently recovered through effectively a non-time-varying charge per kWh of gross electricity demand. Instead, in this scenario these costs will be recovered through p/kWh rates that vary each settlement period based on:

- Renewables support schemes: national electricity grid carbon intensity
- · Capacity market: loss of load potential

DUoS forward looking charges will continue to be set fifteen months in advance of implementation date. However, charges will be set at an Energy Supply Area level, with rates and time bands specific to the network costs in that area.

The purpose of this Scenario is to understand the level to which these charges mask incentives for households to provide grid support and distorts household investment decisions with respect to electrification. Recovery through a dynamic p/kWh charge linked to carbon intensity or the share of renewables on the electricity system would create an incentive for households to

increase demand during low emission periods and reduce it during higher emissions periods. Such shifts in demand could reduce the need to curtail renewable generation as we move into higher-renewable systems.

Scenario 3 - Locational Marginal Pricing

This Scenario explores a move to nodal pricing of generation and zonal pricing in the domestic retail market as standard (generation-only nodal pricing), with customers able to opt-in to nodal pricing if desired. Locational pricing sends locational signals in operational timeframes, so the price in each location in the transmission network represents the locational value of energy, meaning that the wholesale price differs from node to node. This means that energy system users in each location, including domestic customers, are encouraged to produce or consume in a way that benefits the system as a whole, given the physical limitations of the transmission network.

The purpose of this Scenario is to understand how nodal and zonal pricing of domestic customers effects the different propositions being offered to customers in different parts of the country and the expected timing and quantity of load shifting expected to occur in response to these price signals.

Scenario 4 - Split markets

This Scenario explores the impact on domestic supply propositions of separating the wholesale market into an "as available" market for procurement of power from renewable and nuclear generators and an "on demand" market for procurement of additional power from flexible generators, including thermal generators, energy storage and demand side flexibility. Renewables and nuclear generation is anticipated to be procured by suppliers through Power Purchase Agreements, underpinned by the CfD scheme. Prices in the "on demand" wholesale markets will be set based on the marginal cost generator, as under current arrangements.

The purpose of this Scenario is to understand the likely proportions of a customer's energy to be procured from each market, the expected timing and quantity of load shifting expected to occur in response to these price signals and the way this is likely to be communicated to customers as part of a supply proposition.

Scenario 5 - Wildcard

Projects are offered the opportunity to design a further alternative energy market Scenario(s) around which to develop propositions. The scope of this Scenario must be limited to the markets listed above, with reform options consisting of those described in Scenarios 1-4 with small variations or combined in novel ways, reforms described in the REMA consultation, Ofgem Charging Reviews or alternative market reforms agreed on a bilateral basis with the Authority. Wild card scenarios must be specified in Applicant's proposal for the Competition to an equivalent level of detail as Scenarios 1-4 in this document. The Authority may choose not to proceed with any or all Wildcard scenarios.

Price profiles for the Wildcard Scenario must be defined by the Project and agreed with the Authority at or before Workshop 1 (see **Section 3**). These prices profiles can utilise elements of the price shapes provided by the Authority for Scenarios 1-4.

2.3. Out of scope

The purpose of this programme is to build an evidence base to inform potential future policy and regulatory decisions.

Market areas that are out of scope include frequency, voltage and system inertia needs, the gas system, the residual component of network charges, the Climate Change Levy paid by businesses and the UK Emissions Trading Scheme.

Propositions are expected to focus on domestic consumers and non-domestic (including businesses, commercial and industrial) is out of scope. A definition for, and information on the scope of Propositions is provided in the Glossary and in **Section 2**.

It is expected that to deliver on the scope for Phase 1 and 2, Projects (whether they be individual organisations or consortiums) would need to include the participation of an organisation who supplies energy to a domestic consumer or provides an energy supply product to a consumer. This may include an energy supplier, DSR service providers or energy as a service provider. Therefore, Projects which do not include such an organisation would be out of scope. Inclusion of evidence and/or assurance of the involvement of such an organisation is included in the assessment criteria for Phase 1 applications, as outlined in **Section 5.3.1.**

Technology and systems to enable flexibility are recognised as important elements that are likely to be incorporated into Projects but developing and improving these are not the main purpose of this programme. As such Projects which have a focus on improvement to technology and systems to enable flexibility are out of scope for Phase 1. Any suggested modification or development of technologies made during Phase 1 to enable Proposition development and trial in Phase 2 would need to be achievable within the timelines set out for the Programme. Any inclusion of modification or development of technologies and systems would need to be accompanied by a clear rationale as to why this is needed in order to demonstrate Propositions in Phase 2, and why the Programme's aims and objective cannot be achieved utilising existing technologies.

3. Phase 1 Outputs & Deliverables

During Phase 1, Projects will be expected to design and simulate flexibility propositions targeted at domestic customers under alternative energy market scenarios; and develop proposals for how Proposition(s) could be trialled in real world environments in Phase 2. The below table details the outputs expected from projects in Phase 1 and the associated deliverables.

Phase 1 Outputs and Deliverables Table

Category	Outputs	Deliverables
Kick-off and ongoing reporting	 Projects shall: Organise a kick-off meeting to discuss and agree detailed approach in relation to:	Monthly Project Updates – ongoing requirement
Scenario Workshops	Projects shall: Attend two workshops, each of approximately three hours, as organised by the Authority. Workshop 1: Held shortly (~2 weeks) after Project kick-off. Projects will be expected to provide feedback on provided Scenario assumptions and price profiles and engage with the Authority and other project teams on discussion of proposed changes or refinements.	Presentation at workshop- Circulated at least 3 days prior to the Workshops

Category	Outputs	Deliverables
	 Project teams that intend to use a Wildcard Scenario should outline their assumptions at or before this workshop. Workshop 2: Held 8-weeks into project delivery. Projects will be expected to present their most recent views on what barriers or challenges are emerging in each scenario based on their Scenario simulation work to date, from a market, regulatory or infrastructure/practicality perspective. It is expected that projects will use an iterative approach to refining the Scenario(s) and associated Proposition(s) and projects will be given the opportunity to propose further changes to scenario assumptions during this session. Projects will be expected to provide narrative on how they are shaping Propositions and early thoughts on Proposition development Projects should be aware that information may be shared with stakeholders in BEIS, Ofgem, National Grid ESO and other relevant industry bodies such as Energy UK and ENA, and that representatives of these organisations may be present at the workshops. 	Written summaries of feedback 1 week following Workshop 1; and 1 week following Workshop 2
Proposition Simulations	Projects shall: Design and simulate customer propositions under the alternative energy market Scenarios. Simulations are expected to consist of qualitative and quantitative analysis to specify the costs and benefits to customers and characterise the flexibility actions incentivised by the proposition. Simulations should include consideration of:	Report and presentation – 4 months into Phase 1
	<u>Locations:</u> Projects are expected to simulate their propositions in all three locations specified in the Scenarios.	
	 Consumer segments: Projects are expected to consider the following customer segments at a minimum: Fuel poor with no pre-existing smart home infrastructure, heat pump or electric vehicle 	

Category	Outputs	Deliverables
	 Non-fuel poor with no pre-existing smart home infrastructure, heat pump or electric vehicle Fuel poor with pre-existing smart home infrastructure and either a heat pump or electric vehicle Non-fuel poor with pre-existing smart home infrastructure and heat pump or electric vehicle Situations and sensitivities: Dependent on data inputs, Projects are expected to explore the impact of different situations and sensitivities in their simulation of Propositions under the Scenarios, such as extremes in weather, renewable generation, demand and price periods. 	
Final Report	Projects shall summarise and present the results of the simulations setting out clearly whether there is a net benefit (for the system and consumers) and the associated assumptions and sensitivities, as well as the expected boundaries required for technical and commercial feasibility of the Propositions. The Final Report should address, at a minimum, the following points and questions, and Projects should expect review and subsequent iterations of the Final Report:	months into Phase
	Outline of the approach taken Provide a description of the final approach taken to simulation, and how costs and benefits of propositions were quantified and assessed. This should include a summary of the final Scenario assumptions and price profiles used.	Presentation of Final Report- 5 months into Phase 1
	 Description of wild card scenario (if applicable) Description of the market reforms and underlying assumptions applied across each cost element Methodology for development of price profiles for the scenario Details of final price profiles used in the simulations Propositions description and costs and benefits Description of the customer propositions being put forward under each scenario, including details on: 	Final report (Version for public publication)- 5 months into Phase 1

Category	Outputs	Deliverables
	 How do these propositions work with different consumer segments? What assets are required for each proposition? What's making your proposition attractive to your target customer segments? How do you communicate with customers on tariffs? For direct load control/automated control how is this a) achieved and b) communicated to customers? How do offerings developed accelerate uptake of low carbon technology and protect consumers? Quantify the expected benefits and costs of the Propositions within the selected Scenarios, including: Costs and benefits to the system- the additional expected flexibility that would be provided to the electricity system by the demand side flexibility proposition, including: What are the typical times of day and system conditions/price elements that trigger flexibility actions? Which scenario enabled greatest uptake of domestic flexibility? Costs and benefits to the consumer, including the cost benefit for each customer segment under each proposition and how does this vary by location? Comment on the sensitivities of the Proposition, including: How sensitive is your proposition to gas price assumptions? How much is your proposition dependent on stacking value between different cost and revenue opportunities? Comment on the technical and commercial feasibility of the Propositions 	
	 Market reforms Describe any additional assumptions that were made with regard to market operation What were the main barriers identified to developing propositions for each scenario from a market or regulatory perspective? What changes to the retail market might be required to enable your proposition e.g., to enable "as a service" models? Outline any hedging mechanisms or secondary markets needed to de-risk the propositions 	

Category	Outputs	Deliverables
	<u>NZIP Objectives</u> Commentary on the extent to which overarching Competition aims and objectives – including NZIP and AEM/Flexibility Innovation Programme aims and KPIs have been satisfied (see Section 4.1).	
Trial Protocol Design Workshop and Support	Projects shall: Attend 1 workshop of approximately 2 hours, as organised by the Authority, collaborate with an organisation commissioned by BEIS to develop a trial protocol for each proposition being proposed for Phase 2.	Participation in Workshop- within first month of Phase 1
	 Workshop The workshop shall be held within the first month of Phase 1 commencing. It will provide projects with information on how to run a trial in such a way that allows for a robust evaluation of impact of each Proposition, and comparison of that impact across Propositions. The workshop will include information on: Developing research questions and project hypotheses Types of trial design Recruitment of consumers to treatment and control groups Sample sizes Access to and collection of data Limitations and risks 	Input to Trial Protocol for each Proposition proposed to be trialled in Phase 2- during last two months of Phase 1
	Collaborate in trial protocol development Following Proposition Simulation, projects will be expected to decide which Propositions they are taking forward to include in their Phase 2 application. At this point, Projects will be expected to work with an organisation commissioned by BEIS who will lead the development of a trial protocol for each proposition being proposed for Phase 2. This trial protocol will outline the design of the trial, the hypotheses being tested and research questions being answered, recruitment and size of participant (treatment) and non-participant (control) groups, how data will be accessed and collected, outcome measures being tested, how energy use data will be collected and accessed for the treatment and control group, the approach to analysing impact, and the effect size calculations. The trial protocol will be a stand-alone document and will not be assessed as part of the Phase 2 application. Projects are expected to engage and collaborate in the development of the trial protocol to ensure the trial protocol	document (produced by an organisation commissioned by BEIS with input from Projects; this will not be

Category	Outputs	Deliverables	
	reflects proposition design and vice versa. This will include sharing with this organisation emerging thinking about the scope of each proposition. Projects can include the cost of this engagement in their Phase 1 project application.	of the Phase 2 down-selection)- end of Phase 1	
Phase 2 Proposal	2 Projects shall:		

4. Ways of Working and Reporting

Project monitoring and reporting is required to track Project progress and ensure payments are made according to a schedule of milestones to be agreed with selected Projects. This progress reporting will be in confidence to BEIS and its technical advisers and will not be published. Any proposed 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.

The successful Applicants will be expected to identify one named point of contact through whom all enquiries can be filtered. A BEIS project manager will be assigned to the project and will be the central point of contact, responsible for programme coordination and regular dissemination of learnings to relevant stakeholders. A Monitoring Officer may be appointed by BEIS to oversee Project progress and provide additional assurance to the BEIS project manager.

With regards to any change in Project team composition during the Project, the lead project member must immediately inform BEIS when they become aware of a likely change in project team composition. Where a new project team member is proposed as replacement, the lead project member must provide the same information for the proposed replacement team as would have been required at the initial application stage.

BEIS will review the proposed change and linked implications and raise clarification questions as required for any identified areas of risk associated with the proposed change. BEIS reserves the right to withhold future SBRI funding where it does not believe these clarification questions have been adequately addressed and mitigated.

Throughout both phases of the Programme, Project teams will be expected to attend monthly meetings with the BEIS project manager and/or Monitoring Officer to discuss progress and highlight successes, issues and risks. As part of monthly reporting, Project teams will be expected to provide Monthly Project Updates via a standardised proforma, agreed at the Contract Award Stage. As a minimum this will include an overview of:

- Progress against key work packages and deliverables
- Status of invoices
- o Risks, and approach to mitigation of these

Additionally, during Phase 1 Project teams will be expected to prepare for and attend two workshops organised by the BEIS project manager and attended by relevant stakeholders across BEIS, Ofgem, National Grid ESO and other industry bodies. The objectives of these workshops are to allow refinement of Scenarios if required, and as part of early-stage knowledge dissemination. Commercially sensitive information is not expected to be shared at these workshops, so further discussion may be required outside of the workshops. Further detail on expected contribution to and outputs from these workshops is provided in the related deliverables and outputs in **Section 3**.

BEIS may choose to publish learnings from the AEM programme and will agree a way to share such findings publicly with successful Projects. For this purpose, a Final report (Version for public publication) has been included as a deliverable in **Section 3.**

4.1. Key Performance Indicators

BEIS requires all funded projects under the Net Zero Innovation Portfolio (NZIP) to report on key performance indicators (referred to as NZIP KPIs) to provide a consistent approach to reporting evidence, and to track and measure key outputs, outcomes and impacts. The evidence collected is used to demonstrate the impact of the NZIP on achieving the government's Net Zero ambitions and is necessary to be able to run future competitions²³.

Project lead organisations will be required to report on KPIs at various intervals for each project, including at the start of the project, during project delivery, at project closure and for three years after project closure. BEIS will supply funded projects with a reporting template to complete at set intervals, and recipients are expected to return the template to their Monitoring Officer upon completion, who will review and quality assure it. Projects will only be required to report on KPIs that are relevant to their project. At project start, your BEIS Monitoring Officer will provide further details about the calculation of these KPIs, support in the selection of relevant KPIs, and assist with the initial completion and measurement.

Please note that it may at times be necessary to make changes to the NZIP KPIs, data collection modes or frequencies. We will endeavour to keep all changes to a minimum and communicate any implications to you via the Monitoring Officers in advance of collection.

BEIS will be collecting the following KPIs, with data provided by Monitoring Officers marked in italics. Not all data will be collected annually, nor will projects be required to report on KPIs not relevant to this project.

Table 4.1: NZIP KPIs

KPI	KPI description	Metrics	
KPI 1	Number of NZIP projects supported	Project start and completion.	
KPI 2	Number of NZIP projects that have met objectives	 Extent to which project objectives have been met to date Change in objectives and reasons for change 	
KPI 3	Number of organisations supported to deliver the project	 Lead partner delivering the project: name, organisation size and number and type of jobs supported within the organisation to deliver the project. Other partner organisations involved in delivering the project as named on the Contract or Grant: name, organisation size and number and type of jobs supported within the organisation(s) to deliver the project. 	
KPI 4	Number of active contractual and non-contractual business relationships supported	Number of contractual relationships: name and type of contractual relationship.	

²³ However KPIs are not used as a project management tool and the KPI collection process is not designed to have a bearing on project delivery decisions (such as invoice payments)

		 Number of informal non-contractual business relationships: name and type of non-contractual relationship Extent to which your organisation expanded its network of business relationships as a result of the project 	
KPI 5*	Technology Advancement	 Technology Readiness Levels (current and anticipated) Other technology improvement indicators: patents applied for or granted; academic, technical or non-technical publications generated and knowledge exchange events attended (such as conferences) 	
KPI 6i	Initial Financial Leverage to deliver project	Project funding structure: Amount in £m of BEIS, Other Public Sector and Private Funding.	
6ii	Follow-on Funding secured	Amount of follow-on funding raised and the source (public or private).	
KPI 7i	Reduction in energy costs	Scope and scale of impact on reducing energy costs Route to reducing energy costs	
7ii	Increased energy efficiency/ Reduced energy demand	Scope and scale of impact on reducing energy demand/ increasing energy efficiency	
7iii	Increase in energy system flexibility	Scope and scale of impact on energy system flexibility Route to increasing energy system flexibility	
KPI 8**	Commercialisation advancement	 Commercial readiness levels (current and anticipated) Steps towards commercialisation incl. licensing agreements, commercial partnerships, product certifications etc.; national/ international standards passed UK and International sales secured and their value (£m) 	
KPI 9	CO2 emissions reductions	Scope and scale of project impact on carbon emissions Route to achieving carbon emissions reductions	
KPI 10	Policy impact	 Whether, how, and to what effect evidence from the project has informed policy development Whether projects have engaged in activities with industry or civil society 	

^{*} BEIS expects successful Projects to take the existing technology from TRL 3 to 5 across Phase 1 and from TRL 5 to 6 across Phase 2. A full description of TRL levels can be found at **Appendix 1**.

^{**} BEIS will measure this outcome (KPI 8) over the longer term – but related targets and attainment will not form part of the assessment of the tender, nor of satisfactory completion of the contract itself. BEIS will expect the successful Applicant to fulfil an obligation however, to submit an update of progress on this KPI at least annually, for a period of three to five years following completion.

4.2. Evaluation requirements

Successful Applicants will also be required to participate in and facilitate an evaluation of this programme, which will be delivered by an external contractor commissioned by BEIS. The specific role of the external evaluator and scope of the evaluation is yet to be confirmed, though it is likely to include qualitative and quantitative data collection and analysis in order to assess programme delivery, impact and value for money and identify lessons learned. Projects will be required to participate in and contribute to the evaluation activities, both during and after final contract payments, including, but not limited to, providing programme specific KPIs, completing questionnaires or surveys, participating in interviews and workshops, communicating the learning from the project, providing costs/sales data, and elaboration of any of the measures covered in the NZIP KPIs.

Phase 1 Competition Timetable, Application and Assessment Process

This SBRI Competition Guidance Document focuses on Phase 1. Additional detail will be provided on Phase 2 in the Phase 2 Grant Competition Guidance document issued to successful Phase 1 Applicants during Phase 1 delivery.

The Competition funding will be awarded using the Small Business Research Initiative (SBRI) approach²⁴. SBRIs are a well-established pre-commercial procurement process that enables the development of innovative products and services in response to specific challenges faced by government departments and public sector bodies. Successful business partners receive the finance to develop their innovative ideas, generating new business opportunities and routes to market.

Separate evaluation criteria will be used for Phase 1 and Phase 2. Evaluation Criteria for Phase 1 is set out in **Section 5**. Criteria for Phase 2 are set out in **Section 16**, these are subject to additional detail which will be provided in the Phase 2 Grant Competition Guidance document issued to successful Phase 1 Applicants during Phase 1 delivery.

5.1. Competition Timetable

Table 5.1: Competition timetable

The Competition is expected to run from November 2022 until March 2025. Indicative key Competition dates are shown in Table 5.1 below. Please note BEIS reserves the right to vary these dates.

Stage	Activity	Target Date		
Phase 1 -	Phase 1 – Projects awarded SBRI funding			
Launch	Competition opens to Applicants:	15 th November 2022		
	Briefing events for potential Applicants:	30 th November 2022		
	Submit Applicant clarification questions via e-mail ²⁵	7 th December 2022 2pm		
	Publication of Applicant clarification questions and answers	w/c 12 th December 2022		

²⁵ Applicants should use 'AEM-Phase 1 Competition' as the header to alternativeenergymarkets@beis.gov.uk

²⁴ https://www.gov.uk/government/collections/sbri-the-small-business-research-initiative

Apply	Submit registration online by ²⁶ :	2pm 16 th December 2022
	Submit proposal online by:	2pm 16 th January 2023
Assess	Eligibility check, technical assessment and moderation:	January 2023
	Notification of award:	February 2023
Award	Award Agreement / Contract signature	February 2023
Delivery	Phase 1 Contract start date	February/March 2023
	Phase 1 Contract end date	July 2023
Phase 2 -	- Phase 1 Project(s) awarded further Grant funding	
Issue	Confirmation of Down-Selection assessment process and issue of Phase 2 Grant Competition Guidance documentation	April/May 2023
Apply	Submit Down-Selection documentation online	29 th July 2023
Assess	Further Eligibility check, technical assessment and moderation	August 2023
Award	Confirmation of subsequent Grant Award	September/October 2023
.	Phase 2 Contract start date	October 2023
Delivery		

5.2. Application

The Application process is as follows:

1 - Accessing application documentation

Applicants will be asked to complete an online Registration Form, following which a unique password will be generated. This will be required to access and complete the online Competition application form. The online Registration Form is available here. Applicants are encouraged to register their interest by submitting registration forms by 16th December 2022 at 14:00.

²⁶ Applicants are able to register after this date, but early registration is advised.

- Within a week of receipt of the Registration Form, BEIS will issue a confirmation e-mail to the Applicant, with a password to log into the online application system and submit a subsequent application.
- Potential Applicants can also find further information on how to apply at the information event on 30th November 2022. Please visit the competition website for details on how to register for the event. Documentation from the event will be published on the <u>Competition</u> website.

2 - Completion of online application including clarification stage

- On receipt of the unique password, Applicants can then complete the online application form and submit supporting information outlining their proposal.
- To inform their application, Applicants are able to submit clarification questions to <u>AlternativeEnergyMarkets@beis.gov.uk</u>. Applicants should state in the e-mail header that the clarification question(s) relate to the 'AEM Competition'. The deadline for submitting clarification questions is 7th December 2022 at 14:00. Questions submitted after this deadline may not be answered.
- The Authority will publish replies to any questions which, in our judgement, are of material significance through an online anonymised FAQ sheet, in the week commencing 12th December 2022.
- All Applicants should consider the answers to the clarification questions and this Competition Guidance when preparing applications. BEIS will evaluate applications on the assumption that they have done so.
- Applicants should ensure they have read this Competition Guidance document before starting to complete the application form.
- Applicants can save their application at any time by clicking "Save and Continue Later."
 You will then be e-mailed a link which you can use to return to your application and complete it, logging in with the same password.
- Any queries with the online application should be e-mailed to <u>AlternativeEnergyMarkets@beis.gov.uk</u>. Applicants should state in the e-mail header that the clarification question(s) relate to the 'AEM Competition'.

3 - Submission of Proposal

- The full proposal including uploads of all required supporting documents (see 'Submission Content' bullet below) must be submitted online by 16th January 2023 at 14:00. Please note that each supporting document cannot exceed the size limit as set out within the application form.
- Any applications or supporting documentation received after the application deadline will not be considered.

Submission Content: Each proposal must include the following:

• Completed application form (online) including responses to relevant Assessment Criteria as set out at **Section 5** to this document.

- The following signed declaration forms. Applicants must download through the online application form, sign, and re-upload to their application:
 - o Declaration 1: Statement of non-collusion
 - Declaration 2: Form of Bid agreeing to the terms of the Competition application process
 - Declaration 3: Conflict of Interest
 - Declaration 4: Code of Practice for Research
 - Declaration 5: The UK General Data Protection Regulation Assurance Questionnaire for Contractors
 - Declaration 6: Standard Selection Questionnaire
- Completed Cost Breakdown Form, [downloadable through the online application form; Applicants must sign and re-upload to their application].
- Completed Project Plan, e.g., detailed project Gantt chart and description of work packages, [to be attached by applicant to their online application].

You should answer all questions on the application form in full. Incomplete applications are likely to be rejected, although BEIS may, at its discretion, request clarification or additional data before making a final decision.

Submission Costs: You will not be entitled to claim from BEIS any costs or expenses that you incur in preparing your application, whether or not your proposal is successful.

Consortium Applications: Applications may be submitted by project teams (consortia). Only one application should be submitted for each application, but all consortium partners are required to sign the completed declaration form for their application (Form of Tender).

If a consortium is not proposing to form a separate legal entity, the project partners will need to complete a Consortium Agreement and funding will not be provided by BEIS until a signed consortium agreement has been finalised between all the members of the project consortium. A satisfactory Consortium Agreement must be signed within one (1) month of SBRI Funding Agreement signature. Please note that BEIS reserves the right to require a successful consortium to form a single legal.

BEIS recognises that arrangements in relation to consortia and sub-contractors may (within limits) be subject to future change. Applicants should therefore respond in the light of the arrangements as currently envisaged and are reminded that any future proposed changes in relation to the consortium must be submitted to BEIS for approval.

Tender Validity. Tenders shall be valid for a minimum of 120 calendar days from the submission deadline.

Information Sharing. BEIS may share information from applications with other UK Government departments, UKRI or with Ofgem for evaluation of the programme against broader decarbonisation efforts.

5.3. Assessment

Applications will initially be assessed against the Eligibility Criteria in Section 7 below. Applications which fail to satisfy 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. Ineligible applications will receive brief feedback on the reason for their ineligibility.

This Section sets out the Assessment process and criteria for the Phase 1 contract award. The Assessment process will be conducted as follows:

- Applications will be considered initially against the Competition eligibility criteria as set out in Section 7.
- Applications which meet all relevant eligibility criteria as detailed at Stage 1 will be further assessed against a number of Assessment Criteria by a minimum of three (3) assessors (BEIS or BEIS appointed assessors). The Assessment Criteria and linked scoring approach are set out at Sections 5.3.1 and 5.3.2 respectively.
- Project scores will then be moderated to determine a ranking list that will be used to allocate the funding in line with guidance at **Section 5.3.3.**

5.3.1. Assessment Criteria

Applicants will be assessed against their response to the Assessment Criteria as set out below. Each of the six (6) criteria will be scored independently and will be given a score between 1 and 5 consistent with the guidance at **Section 5.3.2** below. Applicants should ensure that their responses specifically address the requirements as set out in the 'Guidance' section linked to each Assessment Criterion.

Assessment Criterion 1 - Description of approach to developing Propositions and alignment with key Competition aims and objectives			
Weighting	30%	Maximum Word Count	3,000
		File uploads not accepted.	

Guidance

Applicants should use their responses to describe their approach to developing Propositions and alignment with key competition aims and objectives, this should include:

- Demonstrate a clear understanding of the Competition Requirements, including a clear relation of proposed Project to the overall aims of the NZIP and the Flexibility Innovation Programme
- How they plan to meet all Project Objectives as set out at Section 1.2.
- How their Project is within the Competition Scope as set out in Section 2.
- Where the Applicant has chosen to use the 'Wildcard' Scenario which is optional, state whether they plan to use the 'Wildcard' Scenario (see Section 2), and if so, what elements their proposed Wildcard Scenario would include, and how appropriate

price profiles will be developed. Wildcard scenarios must be specified in the Applicant's proposal for the Competition to an equivalent level of detail as Scenarios 1-4 in this document.

- Summarise the approach to developing the Propositions
- Summarise the approach to simulation and assessing the impact of Propositions developed and quantification of system and consumer benefit
- Set out how they may determine which Proposition(s) to demonstrate and test in Phase 2

Assessment Criterion 2 - Project Team and Expertise				
Weighting	20%	Maximum Word Count – not including file uploads for the organogram, CVs and letters of support	1,500	

Guidance

Applicants should use their responses to detail how their organisation(s) and proposed project team can offer the relevant skills, capabilities and expertise required to meet the Competition Requirements, as set out in **Section 1-4**. Responses should include:

- An organogram (one file upload maximum 1 A4 side) with accompanying narrative clearly detailing the roles of all personnel from the lead Applicant – and consortium partners and sub-contractors as relevant – in delivery of the Project.
- The relevant skills, qualifications, and expertise of main Project team members mapped against key requirements. One file upload of summary CVs for relevant personnel – maximum one A4 side per person – should be attached to your application.
- Details of projects completed by the applicant in the last five (5) years that you consider of relevance to this Competition including key lessons learnt.
- A description of the Project team's quality management standards, including a
 description of how the Project team will quality assure both technical outputs and
 report writing. Any relevant external QA accreditation should also be referenced.
- A letter of support for every project partner (consortium member) one file upload of maximum one A4 side per letter of support.
- Evidence and/or assurance of the involvement of an organisation who supplies energy to a domestic consumer or provides energy or an energy supply product to a consumer. This may include an energy supplier, demand side response service providers (DSR service providers) or energy as a service provider. An example of involvement could include having such an organisation as a project partner and/or a letter of support from such an organisation including the role they would play. It is expected that, to deliver on the scope for Phase 1 Projects (whether they be individual organisations or consortiums) would need such participation.

Assessment Criterion 3 – Project Management and Risk			
Weighting	20%	Maximum Word Count – Not including Gantt chart/Project Plan	1,500

Guidance

Project Management

Applicants' responses should include:

A separate A3 Gantt chart (one file upload of maximum 1 A3 side) – or similarly detailed Project Plan attachment which is structured on a monthly basis for Phase 1:

- Clearly sets out key monthly tasks and milestones associated with the production of Project Deliverables as set out at Section 3.
- Highlights critical dependencies with accompanying narrative to be provided within main body response.
- Accompanying narrative detailing how you will ensure effective and appropriate project management.

Risk

Applicants' responses should include:

- A summary of the approach to risk management, including cybersecurity and privacy protocols around the collection, handling and storing of data.
- What they regard as the top key risks to successful delivery of the Phase 1 Requirements including:
 - o A summary of the risk including dependencies
 - The potential risk impact; and
 - Proposed approach to risk mitigation

Assessment Criterion 4 – Knowledge Dissemination			
Weighting	5%	Maximum Word Count File uploads not accepted.	1,000

Guidance

Consistent with relevant Intellectual Property requirements as set out at **Paragraph 27 to Annex 1**, Applicants are required to set out their plans for wider knowledge dissemination.

Applicants' responses should include:

- A detailed Phase 1 knowledge dissemination plan, describing:
 - How outcomes from Phase 1 will be shared with industry, and key stakeholders, including lessons learned, and challenges faced.
 - The scale and scope of the proposed dissemination and knowledge transfer activities.

Assessment Criterion 5 – Social Value			
Weighting	10%	Maximum Word Count File uploads not accepted.	1,000

Guidance

Applicants are required to provide commentary on how and why they believe the Project for which they are seeking SBRI funding support can positively contribute to the following "Tacking Economic Inequality" and "Equal Opportunity" Policy Outcomes as set out in HMG's Social Value Model.

- Creating new businesses, jobs and skills
- Tackle workforce inequality

Please include:

- your 'Method Statement', stating how you will achieve this and how your commitment meets the Award Criteria, and
- a timed project plan and process, including how you will implement your commitment and by when. Also, how you will monitor, measure and report on your commitments/the impact of your proposals. You should include but not be limited to:
 - Timed action plan
 - Use of metrics
 - Tools/processes used to gather data
 - Reporting
 - Feedback and improvement
 - Transparency

Assessment Criterion 6 – Value for Money

Weighting	15%	Maximum Word Count – Not including words in Project Cost Breakdown Form	1,500
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Guidance

Applicants are required to complete the Project Cost Breakdown Form included as an electronic attachment in the Competition Pack – the 'Phase 1 Project Cost Breakdown Form' in line with guidance within the pack and at Appendix 4.

In addition, Applicants are required to provide overarching commentary (max 1,500 words) to accompany the detailed breakdown of their Project costs for all phases as set out in the Project Cost Breakdown Form. This commentary should:

- Detail how you have satisfied yourself that all costs and overheads are realistic, robust, justified, and fair market value.
- Demonstrate Project additionality, clearly setting out why SBRI funding is necessary
 for the Project to be taken forward, and why, without funding, the Project would either:
 not go ahead as planned, go ahead but on a reduced scale, or go ahead but over a
 longer timescale.

Applicants should note that BEIS anticipates Phase 1 being largely desk-top and hence person-intensive exercise. On this basis additional justifying narrative should be provided for Phase 1 costs other than those captured on the 'Labour and Overheads' tab.

Applicants should include within their cost submissions eligible travel costs linked to attending scenario workshops and a maximum of two Flexibility Innovation programme showcase events at one of the BEIS offices in either London or Salford²⁷

Applicants should also note that BEIS will not normally pay overheads of over 50%, and overheads above this amount will need to be fully justified.

5.3.2. Scoring Guidance

Applicants' Assessment Criteria 1 – 6 responses will be scored system outlined below.

Table 5.1: Scoring Guidance

Score Description

1 Not Satisfactory: There is no evidence to very little evidence that the question has been satisfactorily answered and major omissions are evident.

²⁷ Within the Phase 1 Project Cost Breakdown Form Applicants are asked to include reasonable Travel and Subsistence costs (from within the UK) for one person to attend one Programme Showcase event in central London and one in Salford – see stipulated rows on the 'Travel and Subsistence' tab

2	Partially Satisfactory : There is little evidence that the question has been satisfactorily answered and some omissions are evident. Much more detail is needed.
3	Satisfactory : There is reasonable evidence that the question has been satisfactorily addressed but some omissions are still evident and further detail is needed.
4	Good: The question has been well addressed with a good evidence base, with only minor omissions or lack of detail.
5	Excellent : There is clear evidence that the question has been completely addressed in all aspects, with questions answered clearly, concisely with a strong evidence base.

5.3.3. Selection Approach

The Authority will select those applications that offer the best overall value for money, based on their assessment against the criteria outlined in **Section 5.3.1**. Applications will be assessed by a minimum of three assessors, which could include BEIS assessors and independent assessors (technical and commercial experts). A moderation meeting will be held at the end of the assessment process to agree the overall weighted scores for each of the applications.

Applications responses to Assessment Criteria 1-6 will be scored using the scoring system outlined at Table 5.1. To be eligible to receive funding, a Project application must achieve the following Minimum Threshold Scores:

- Achieve a score of at least 3 out of 5 for Assessment Criteria 1.
- Achieve a score of at least 2 out of 5 for Assessment Criteria 2-6.
- Achieve an overall minimum weighted score across all Assessment Criteria of 50%.

Applicants will be ranked in order of merit based on overall weighted score achieved. The up to four (4) highest-scoring eligible proposals which satisfy the relevant Minimum Threshold Scores will be put forward for funding.

In the event that two or more eligible applications receive the same overall weighted score, then the funding will be awarded to the Applicant with the highest score for the highest weighted criteria. In the event that two or more eligible applications receive the same scores across each criteria, then the assessors will reconvene for a further moderation session to agree a consensus position around who should receive funding.

5.4. Award

The Competition contract agreements are expected to be signed in **February/March 2023**. Please note that BEIS reserves its right to not award any Contract agreements under this Competition.

Contract terms: The Contract Agreement will be based on the BEIS pre-commercial procurement contract. The terms and conditions for this agreement are provided in Annex 1. These terms and conditions are final and non-negotiable: by applying to the Competition, you are agreeing to these terms and conditions.

Whilst no changes to the Contract will be permitted, there will be an opportunity for successful Applicants, prior to contracts being signed, to discuss the Contract at a meeting with official(s) from BEIS. The BEIS official(s) will explain the contractual terms and conditions and respond to any queries that the Applicant may have at this stage. It is crucial that all Applicants review the terms and conditions prior to the submission of their application and ask any questions prior to submitting the application. BEIS officials will also discuss any risks raised through the assessment process and finalise the formal project milestones with the project team before issue of the Contract.

Consortium applications: For consortium applications, the lead company (project co-ordinator) will be the recipient of the Contract (the Supplier) and will be responsible for managing payment to the other project partners as well as sub-contractors.

Contract Size and Restrictions on Funding

This SBRI Competition Guidance Document focuses on Phase 1. Additional detail will be provided on Phase 2 in the Phase 2 Grant Competition Guidance document issued to successful Phase 1 Applicants during Phase 1 delivery.

6.1. Competition budget and availability

The total budget available for this Competition covering Phase 1 is up to £2,000,000 excluding VAT although BEIS may, at its discretion, choose not to make an award, increase the available budget, or allocate an award that is less than the total budget depending on the quality of applications. BEIS anticipates funding up to 4 Projects with a maximum value of £500,000 excluding VAT per Project. Funding will be allocated based on the assessment process as set out at Section 5.

A maximum of £16,000,000 excluding VAT will be available for Phase 2 funding. BEIS anticipates funding 1 to 3 Projects at Phase 2, with funding to be allocated based on the assessment process as set out at **Section 16.**

Should further budget become available, BEIS may, at its discretion, choose to award funding to additional projects in order of total scores achieved in line with the process as set out at **Section 5.**

When applying, all costs should be provided excluding VAT²⁸.

IMPORTANT INFORMATION - No Reliance

Nothing in this funding call requires BEIS to award any Applicant a contract of any particular amount or on any particular terms. BEIS reserves the right not to award any contracts.

Applicants apply for funding in this Competition at their own risk and expense. BEIS will not, under any circumstances, be liable nor make any contribution to the costs of participation, preparing proposals and taking any professional or specialist advice. Applicants accept the risk that they may not be awarded a contract. BEIS gives no guarantee or warranty as to the nature, or number of projects funded.

²⁸ SBRI funding is within the scope of VAT so you can charge output VAT on top of your submitted costs. If you incur non-recoverable input VAT costs, you can pass this on to BEIS but these irrecoverable VAT costs will be included within the cost.

6.2. Eligible Costs

Applicants are instructed that the Project costs quoted must reflect actual costs at a 'fair market value' and for this Competition, suppliers' profit must not be included. Your application must have at least 50% of the contract value attributed directly and exclusively to research and development services.

Applicants are required to complete the Project Cost Breakdown Form (attached to the online application form) to provide the necessary cost information for the assessment process. With the Competition requiring production of desktop reports, BEIS anticipates that Applicants costs are likely to relate to people costs and linked overheads.

Project costs quoted must meet the requirements linked to eligible and ineligible costs as set out in **Appendix 2**. Further itemisation of costs and methods of calculation may be requested to support the application.

7. Eligibility for Funding

This SBRI Competition Guidance Document focuses on Phase 1. Additional detail will be provided on Phase 2 in the Phase 2 Grant Competition Guidance document issued to successful Phase 1 Applicants during Phase 1 delivery.

7.1. Competition Eligibility Criteria

To be eligible for funding, proposed Projects must meet all the following eligibility criteria. These will be listed in the online application form as the Yes/No questions exemplified below. Unless otherwise stated all criteria will apply to both this Phase 1 Competition, and the down selection of one Supplier to deliver against Phase 2 requirements.

1.Project Location

Over 50% of the Project's activities (as measured by eligible Project costs) must be conducted in the UK.

2. Scope and Applications

Please see Section 2 for detail regarding scope of this Competition.

3. Project Status

BEIS cannot provide funding for retrospective work on projects or provide funding to projects which have already begun. The value of retrospective work may, however, be considered in the assessment process.

4. Project Timescales

Target dates for key Project milestones will be agreed between successful Applicants and BEIS prior to awarding the contract. Awarded contracts cannot fund retrospective work.

5.Additionality

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

6. Terms and Conditions

Applicants must agree to the published Terms and Conditions. The terms and conditions for this agreement are provided in Annex 1. These terms and conditions are final and non-negotiable: by applying to the Competition, you are agreeing to these terms and conditions.

7.Contract size

Alternative Energy Markets Innovation Programme: Phase 1 Feasibility

Funding will be awarded for up to 4 Projects

As detailed at **Section 6**, the indicative maximum award size per Project is £500,000 excluding VAT (this must cover 100% of project costs).

Funding for Phase 1 and Phase 2 will be awarded under two separate contracts – see **Annex 1**.

8. Eligible Project costs

BEIS will fund 100% of eligible Phase 1 Project costs through this competition; no match or inkind funding is allowed.

SBRI is aimed at organisations working on research and development (R&D) of an innovative process, material, device, product, or service prior to commercialisation. Projects requesting funding for commercialisation activities are not eligible. Project teams are not permitted to include profit or contingency costs in the eligible project costs

Further information on eligible project costs is set out in **Appendix 2**.

9.Risk-Benefit Sharing

The sharing of risks and benefits is an important aspect to the SBRI approach. Projects receive financial support and retain any intellectual property generated, with certain rights of use retained by BEIS (see **Section 10**). Project outputs are also expected to be shared widely and publicly and project teams are not permitted to include profit in the eligible project costs.

10.Applicants and Project team composition

Based on anticipated skills and expertise requirements, the Project team is likely to be drawn from the following (noting that this list is not exhaustive and that some organisations may combine some of these attributes):

- Electricity suppliers
- Demand side response service provider (DSRSP) (also known as 'Aggregators' or 'Flexibility Service Providers')
- Technology providers
- · Academic organisations or consultancies

Special Purpose Vehicles are permitted to lead consortia only if constituted as legal entities.

For consortium applications, a single project application must be submitted by the lead project member (the project co-ordinator) on behalf of the consortium (please note that all consortium members will be required to sign the declaration form for their application).

Applicants (sole Applicants and lead project members of consortium applications) must be able to demonstrate that they are financially viable. Applicants based in Northern Ireland, or with significant interests or subsidiaries in Northern Ireland, will also be subject to scrutiny from the European Commission in accordance with Article 10 of the Northern Ireland Protocol to the UK/EU Withdrawal Agreement.

11. Multiple Applications

If project consortium members or subcontractors are part of multiple successful applications, they must be able to deliver on them and they must not have applied for funding for the same piece of work more than once.

No organisation may lead more than one application.

7.2. General BEIS Conditions

Applicants must not meet any of the BEIS grounds for mandatory exclusion, and as a general rule they should not meet any of the BEIS grounds for discretionary exclusion (**see Appendix 3**). Applicants will be required to declare this as part of completing the Standard Selection Questionnaire.

Conflicts of interest

The BEIS standard terms and conditions of contract include reference to conflict of interest and require Suppliers to declare any potential conflict of interest to the Secretary of State.

For research and analysis, conflict of interest is defined as the presence of an interest or involvement of the Supplier, subcontractor (or consortium member) which could affect the actual or perceived impartiality of the research or analysis.

Where there may be a potential conflict of interest, it is suggested that the consortium or organisation designs working arrangements such that the findings cannot be influenced (or perceived to be influenced) by the organisation which is the owner of a potential conflict of interest. For example, consideration should be given to the different roles which organisations play in the research or analysis, and how these can be structured to ensure an impartial approach to the project is maintained.

This is managed in the procurement process as follows:

- During the application process, Applicants may contact BEIS to discuss whether or not their proposed arrangement is likely to yield a conflict of interest.
- Suppliers are asked to sign and return Declaration 3 (this is embedded in the online application form and is included for reference in Annex 2) to indicate whether or not any conflict of interest may be, or be perceived to be, an issue. If this is the case, the contractor or consortium should give a full account of the actions or processes that it will use to ensure that conflict of interest is avoided. In any statement of mitigating actions, contractors are expected to outline how they propose to achieve a robust, impartial and credible approach to the research.
- When applications are scored, this declaration will be subject to a pass/fail score, according to whether, on the basis of the information in the proposal and declaration, there remains a conflict of interest which may affect the impartiality of the research.

Alternative Energy Markets Innovation Programme: Phase 1 Feasibility

• Failure to declare or avoid conflict of interest at this or a later stage may result in exclusion from the procurement competition, or in BEIS exercising its right to terminate any contract awarded.

Applicants will be subject to financial viability checks, as described in **Section 8**. BEIS will make a decision as to the eligibility of projects based on the results of these checks.

8. Financial Eligibility and Viability

This SBRI Competition Guidance Document focuses on Phase 1. Grant conditions for Phase 2 will be issued at a later date.

8.1. Financial Eligibility

Applicants are required to complete the relevant tabs of the BEIS Project costs breakdown form contracts (the 'Project Cost Breakdown Form') which is provided as **Annex 3** setting out their capped funding requirement to carry out the project. Applicants should only input in the specified light blue input cells and should consult guidance on completion which is embedded within the Form and can be accessed by clicking on the relevant cell.

BEIS reserves the right to exclude Applicants from the Competition where they cannot satisfactorily evidence the eligibility of costs and overheads in line with guidance provided at **Appendix 2**. Financial information should include costs for the entire project, detailing labour (including personnel day rates), material and capital equipment costs, and any travel and subsistence requirements.

BEIS can only provide funding for eligible costs and overheads incurred up to the end of the Contract.

8.2. Financial viability checks

Economic and Financial Assessment of Applicants

BEIS will undertake financial viability checks on all provisionally successful Applicants. Where there is more than one organisation in the Applicant group, the required financial information (see below) should be provided for any entity who is forecast to deliver at least 25% of the Contract by value – including sub-contractors. Applicants may be asked to respond to clarification questions linked to these financial viability checks and, where relevant asked to provide satisfactory evidence of how identified financial risks are being actively managed and mitigated.

The Applicant's/Project's Financial Viability will take into account (amongst other things) whether the Applicant is able to demonstrate a robust business plan and financially sustainable business model in respect of the relevant Project. Tests of financial viability will be conducted in line with industry best practice. They may include (but are not limited to):

- whether an Applicant/Project/ultimate parent company has sufficient liquidity (it is capable of covering its short-term commitments);
- whether an Applicant/Project/ultimate parent company is financially autonomous (it is capable of covering its debt costs); and

• whether an Applicant/Project/ultimate parent company is solvent (it is capable of covering its medium and long-term commitments).

Checks will include reviewing the latest independently audited accounts filed on the Companies House database. Where a company or organisation is not required to file accounts with Companies House, other financial information will be requested to enable an appropriate financial viability review to be undertaken. This might include:

- A copy of last two years accounts as filed with Companies House; or
- A copy of last two years accounts if not obliged to file with Companies House; or
- A statement of the turnover, Profit and Loss Account/Income Statement, Balance Sheet/Statement of Financial Position and Statement of Cash Flow for the most recent year of trading for this company or organisation
- Alternative means of demonstrating financial status if any of the above are not available (e.g., forecast of turnover for the current year and a statement of funding provided by the owners and/or the bank, charity accruals accounts or an alternative means of demonstrating financial status).

For Applicants bidding as a newly constituted company, BEIS will review letters of support from relevant partners / investors and may also review the financial statements of each partner.

Parent Company Guarantees and other potential mitigations

Where an Applicant is a special purpose vehicle (SPV), BEIS will require a parent company guarantee(s) (PCG) from relevant companies or organisations. BEIS shall accept this as satisfying the applicant's financial viability checks subject to the necessary financial viability checks being performed on the parent company to BEIS' satisfaction.

The Department may also, at its discretion require PCGs or other satisfactory mitigations to be put in place in relation to other provisionally successful Applicants, ahead of Contract award. Acceptable mitigations may include, but are not limited to those set out in Section 3 to the Government and Commercial Function's' Assessing and monitoring the economic and financial standing of suppliers guidance no te May 2021.pdf (publishing.service.gov.uk).

Where provisionally successful applicants are unable to provide mitigations to BEIS' satisfaction they will be excluded from the Competition.

Financial Viability checks Post-Contract Award

During both the Phase 1 and Phase 2 Contract period, successful Projects must provide to BEIS all subsequent year end accounting data – audited or alternative as set out above – within 30 days of accounts being issued, and this will be subject to the same scrutiny as set out above. Successful Applicants should also immediately notify BEIS, in writing, where they believe, on the balance of probabilities, that they will not be able to access sufficient match funding to complete the Project.

BEIS reserves the right to cease payment of allocated SBRI funding where it has reasonable grounds to believe that the successful Applicant is unlikely to be able to complete delivery of the Contract.

Contractual payments

BEIS will not make payments in advance of need and typically makes Contract payments in arrears on satisfactory completion of agreed milestones and deliverables. BEIS therefore anticipates making payment after delivery of Feasibility Studies that meets all relevant quality content and format requirements as detailed at **Section 3** to this document.

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 Contract 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 operate.

9. Notifications and Publication of results

This SBRI Competition Guidance Document focuses on Phase 1. Additional detail will be provided on Phase 2 in the Phase 2 Grant Competition Guidance document issued to successful Phase 1 Applicants during Phase 1 delivery.

9.1. Notification

Applicants will be informed by email whether their application has been successful.

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.

Confidentiality request: 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. As such, you must provide a short description (Maximum 500 words) of your proposed project.

In addition, all funded projects must include reporting and dissemination milestones – agreed with BEIS - as part of their project Deliverables, determined after the award of the contract (see **Section 3** for further information on Deliverables). Information about all contract awards will also be published on Contracts Finder.

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

9.2. Publication of results

SBRI involves a high degree of risk-benefit sharing. In return for provision of funding and non-financial support during project activities, BEIS expects to be able to use and share the results and outputs of the project activities with other Government Departments, industry and other stakeholders to further understanding and progress technology development and deployment.

BEIS also wishes to publicise details of the award recipients. Therefore, on or after issuing the SBRI contract agreement, BEIS will publish the following information:

Identity of the participant and its partners.

Alternative Energy Markets Innovation Programme: Phase 1 Feasibility

- Project summary information including aims and expected outcomes of the project and technology area.
- Total award value.

Following completion of the funded projects, BEIS will publish on its website a summary of the funded activities and the outcomes achieved. This will include a final summary report from each project.

BEIS may also revisit projects at a later date and publish an evaluation report for the scheme as a whole.

BEIS however recognise the need to maintain confidentiality of commercially sensitive information. BEIS will consult Applicants regarding the nature of information to be published, in order to protect commercially sensitive information. The notice of the award on Contracts Finder will also include the value of the contract.

10. Intellectual Property

This SBRI Competition Guidance Document focuses on Phase 1. Grant conditions for Phase 2 will be issued at a later date.

The proposed arrangements for intellectual property rights (IPR) and exploitation of IPR for Phase 1 are set out in the contract terms and conditions for this competition, in **Annex 1**

Subject to the requirements of **Conditions 27 and 28** of the standard terms and conditions (Annex 1) Applicants will retain ownership of the intellectual property generated from the project. Applicants are required to identify and record any such intellectual property and to protect patentable knowledge in accordance with **Condition 28** of the standard terms and conditions. If within five years of its creation Applicants have not commercially exploited intellectual property generated from the work, then in line with **clause 28 (5)** of the standard terms and conditions, BEIS may request the intellectual property be assigned to BEIS.

Consistent with the good management of Intellectual Property Rights and the continued agreement of the Authority, successful Applicants shall be expected to promote the dissemination of the arising Intellectual Property.

11. 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 technical assessors. BEIS provide comments where an Applicant in considered ineligible in light of financial viability checks. 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 checklist of points which must be answered or argued in a resubmitted application as the assessors/requirements may be different and it is your decision as to whether you act on the suggestions made.

BEIS' decision regarding any application is final and no appeal process is in place, so it is important that you make any points you wish to make clearly and concisely in the Application Form.

12. Confidentiality and Freedom of Information

The Freedom of Information Act 2000 ("FOIA") and the Environmental Information Regulations 2004 ("EIR") apply to the Department.

You should be aware of the Department's obligations and responsibilities under FOIA or EIR to disclose, on written request, recorded information held by the Department. Information provided in connection with this procurement exercise, or with any contract that may be awarded through this exercise, may therefore have to be disclosed by the Department in response to such a request, unless the Department decides that one of the statutory exemptions under the FOIA or the exceptions in the EIR applies. Where any request is made to BEIS under the FOIA for the release of information relating to any project or Applicant, which would otherwise be reasonably regarded as confidential information, BEIS will notify you of the request as soon as we become aware of it.

If you wish to designate information supplied as part of your tender as confidential, of if you believe that its disclosure would be prejudicial to any person's commercial interests, you must provide clear and specific detail as to the precise information involved and explain (in broad terms) what harm may result from disclosure if a request is received, and the time period applicable to that sensitivity. Such designation alone may not prevent disclosure if in the Department's reasonable opinion publication is required by applicable legislation or Government policy or where disclosure is required by the Information Commissioner or the First-tier Tribunal (Information Rights).

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.

Additionally, the Government's transparency agenda requires that tender documents (including competition guidance such as this) are published on a designated, publicly searchable web site. The same applies to other tender documents issued by the Department (including the original advertisement and the pre-qualification questionnaire (if used)), and any contract entered into by the Department with its preferred supplier(s) once the procurement is complete. By submitting a tender, you agree that your participation in this procurement may be made public. Aside from the public description of your project (see above), the answers you give in this response will not be published on the transparency web site (but may fall to be disclosed under FOIA or EIR (see above)). Where tender documents issued by the Department or contracts with its suppliers fall to be disclosed the Department will redact them as it thinks necessary, having regard (inter alia) to the exemptions/exceptions in the FOIA or EIR.

13. Terms and Conditions

This SBRI Competition Guidance Document focuses on Phase 1.

The Department's Standard Terms and Conditions of Contract as amended for the purposes of this Competition will apply to this contract (**see Annex 1**).

Applicants should note that where Phase 1 competition funding is via SBRI and Phase 2 is a Grant, projects will be subject to different terms and conditions. Projects successful at the down selection into Phase 2 will be subject to a Grant Funding Agreement, replacing the Phase 1 SBRI contract terms and conditions set out in Annex 1.

14. Further Instructions to Applicants

This SBRI Competition Guidance Document focuses on Phase 1. Additional detail will be provided on Phase 2 in the Phase 2 Grant Competition Guidance document issued to successful Phase 1 Applicants during Phase 1 delivery.

The Department reserves the right to amend the enclosed Competition documents at any time prior to the publication of supplier questions and answers on the w/c 12th December 2022. Any changes are most likely to include editorial errors and include FAQs from questions asked from stakeholders/applications before 7th December 2022. Any such amendment will be numbered, dated and issued on the <u>Programme website</u> as well as on the <u>Contracts Finder Website</u>. Where amendments are significant, the Department may, at its discretion, extend the deadline for receipt of tenders.

The Department reserves the right to withdraw this contract opportunity without notice and will not be liable for any costs incurred by applicants during any stage of the process. Applicants should also note that, in the event a proposal is considered to be fundamentally unacceptable on a key issue, regardless of its other merits, that proposal may be rejected. By issuing this Competition document, the Department is not bound in any way and does not have to accept the lowest, or any, proposal and reserves the right to accept a portion of any proposal unless the tenderer expressly stipulates otherwise.

14.1. Application checklist

To submit an application for this Competition, you must complete the online registration form, available here, and use the resulting password to complete your online application form.

Please answer all questions on the application form fully.

Please download from your application form, complete and upload to your application form the following documents. All these documents are also available on the Programme website.

- Project Cost Breakdown Form
- Signed Declarations:
 - Declaration 1: Signed Statement of Non-Collusion
 - Declaration 2: Signed Form of Bid
 - Declaration 3: Signed Conflict of Interests statement
 - Declaration 4: Code of Practice for Research
 - Declaration 5: UK GDPR Assurance Questionnaire
 - Declaration 6: Signed Standard Selection Questionnaire, including addressing the BEIS Exclusion Grounds

14.2. Definitions

Please note that references to the "Department" throughout these documents mean The Secretary of State for Business, Energy and Industrial Strategy acting through his/her representatives in the Department for Business Energy & Industrial Strategy.

14.3. Data Protection and Security

The successful Applicant must comply with all relevant Data Protection Legislation, as defined in the terms and conditions applying to this Competition. A guide to the UK General Data Protection Regulation published by the Information Commissioner's Office, can be found <a href="https://example.com/here.com/

Annex 2 contains a "The General Data Protection Regulation Assurance Questionnaire for Contractors" (Declaration 5) to evidence the extent of readiness. The Authority may ask the Contractor to provide evidence to support the position stated in the questionnaire. The Authority may require the successful Applicant to increase their preparedness where the Authority is not satisfied that the Applicant will be in a position to meet its obligations under the terms and conditions. If the Applicant fails to satisfy the Authority that it will be in a position to meet its obligations under the terms and conditions in the event that the Applicant is successful, the Authority reserves the right to exclude the Applicant from this procurement.

15. Non-Collusion

No application will be considered for acceptance if the Applicant has indulged or attempted to indulge in any corrupt practice or canvassed the tender with an officer of the Department. Annex 2 contains a "Statement of non-collusion" (Declaration 1); any breach of the undertakings covered under items 1 - 3 inclusive will invalidate your tender. If a Supplier has indulged or attempted to indulge in such practices and the tender is accepted, then grounds shall exist for the Authority to terminate the contract and claim damages from the successful contractors. You must not:

- Tell anyone else what your capped price is or will be before the time limit for delivery of tenders.
- Try to obtain any information about anyone else's application or proposed application before the time limit for delivery of applications.
- Make any arrangements with another organisation about whether or not they should apply, or about their or your capped price.

Offering an inducement of any kind in relation to obtaining this or any other contract with the Department will disqualify your tender from being considered and may constitute a criminal offence.

16. Phase 2 Information

Phase 2 has an anticipated total budget of up to £16,000,000 excluding VAT to fund, through Grant, around 1 to 3 selected Phase 1 Projects to develop and deliver real world demonstrators which trial innovative demand side flexibility proposition(s).

Information on the anticipated funding and scope of Phase 2 is being provided to inform Phase 1 applicants. Additional detail on Phase 2 will be provided in the Phase 2 Grant Competition Guidance Notes issued to successful Phase 1 Applicants within the first 3 months of Phase 1, and prior to Projects working on and submitting Phase 2 proposals.

16.1. Phase 2 Scope

In Phase 2 BEIS expects to fund demonstrators- secure real-world testing 'environments' and the associated costs to delivery partners and consumers of trialling Propositions under alternative energy market scenarios. Each Proposition tested is expected to constitute a trial, and there may be one or multiple trials in a Project's proposed demonstrator.

The anticipated scope of Phase 2 is for projects to trial the innovative demand side flexibility Proposition(s) designed and simulated in Phase 1, in a real-world setting in the UK, contributing to the evidence base of how domestic flexibility can be grown and encouraged under a future energy system to inform future policy and regulatory decisions.

Phase 2 proposals developed under Phase 1 are expected to have identified the Proposition(s) to be trialled in Phase 2, and the associated scenario(s), assumptions and potential sensitivities.

It is anticipated that grant funding provided to successful projects under Phase 2 will support the trialling of Propositions that may not be commercially viable under current market arrangements but may be so within the alternative energy market Scenario(s) under which the Project would be demonstrating their Proposition.

It is anticipated that Phase 2 demonstrator Projects involve trials with consumers, preferably in a real-world setting; and would include the demonstration and quantification of how innovative domestic flexibility Propositions under potential alternative energy markets bring additional flexibility to the electricity system and benefits to participating consumers. This may include understanding consumer uptake and response to innovative Propositions across consumer segments, routes to market for flexibility Propositions, and understanding any barriers and next steps to further commercial development of Propositions.

As with Phase 1, it is anticipated that Projects with a focus solely on improvements to technologies and systems to enable flexibility will not be in scope. However, as noted in the Phase 2 aims outlined in Section 1, Phase 2 will look to support the demonstration of demand

side flexibility propositions within the context of a future energy system. This is likely to require energy assets and infrastructure (both physical and digital). Phase 2 demonstrators may collaborate with existing and ongoing energy innovation programmes and projects across the FIP, NZIP and wider to utilise the learnings and outputs (particularly those delivered under the FIP); build on investments in low carbon energy assets, technologies and systems across the UK; and best represent a future energy system environment. Within Phase 2 proposals, any inclusion of modification or development of technologies and systems would need to be accompanied by a clear rationale as to why this is needed in order to demonstrate Propositions in Phase 2, and why the Programme's aims and objective cannot be achieved utilising existing technologies.

16.2. Down-Selection Assessment Process

The Authority will use the Down-Selection Assessment process to select Project(s) to advance to Phase 2 and access grant funding. The down-selection assessment process expected to be used is provided in this section (16.2) and a final version will be provided in the Phase 2 Grant Competition Guidance Document to be provided to successful Phase 1 applicants. The Phase 2 Grant Competition Guidance document will be issued within the first 3 months of Phase 1 and prior to Projects progressing onto Phase 2 proposal work.

The process to select the Phase 1 Project(s) to progress to Phase 2 will include assessment of the Phase 2 proposals which Phase 1 Projects are expected to produce (see **Section 3** 'Outputs & Deliverables). The Phase 2 proposal deliverable as submitted in Phase 1 will therefore form the submission for Assessment Criteria 1 of the down-selection process and an amended version of this deliverable is not expected nor accepted.

Projects will also need to provide updated Project Plans, cost projections, risk analysis and Project team organograms. Regarding updated Project team organograms, it is acknowledged that the lead partners in Projects may differ between Phase 1 and Phase 2 and Projects are expected to put forward organograms which best reflect how they intend to deliver Phase 2. As part of Phase 1, as detailed in **Section 3**, Projects are expected to support the development of a trial protocol, this is a stand-alone document and will *not* be assessed as part of the Phase 2 application.

The Down-Selection Assessment process is set out below:

- Phase 1 Projects will be considered against Competition eligibility criteria as set out in Section 7 to ensure ongoing compliance.
- Phase 1 Projects which meet all relevant eligibility criteria will then be further assessed against a number of Assessment Criteria by a minimum of three assessors (BEIS or BEIS appointed assessors). The Assessment Criteria and linked scoring approach are set out at Sections 16.3 and 16.4 respectively.

- Project scores will then be moderated to determine a ranking list that will be used to allocate the funding in line with guidance at Section 16.5.
- The Phase 2 Proposal, the Project Cost Breakdown Form and Phase 2 Project Plan
 as submitted by the successful Phase 1 Project -and updated as required in line with
 BEIS clarification—will form the basis of the Grant Agreement over the Phase 2 period.

16.3. Down-Selection Assessment Criteria

The Authority will use the Down-Selection Assessment process to select Project(s) to advance to Phase 2 and access grant funding. The down-selection assessment criteria expected to be used is provided in this section (16.3) and a final version will be provided in the Phase 2 Grant Competition Guidance Document to be provided to successful Phase 1 applicants. The Phase 2 Grant Competition Guidance document will be issued within the first 3 months of Phase 1 and prior to Projects progressing onto Phase 2 proposal work.

The down-selection assessment criteria are set out below. Phase 1 Projects will be assessed against their responses to the 6 Assessment Criterion as set out below.

Criteria will be scored independently and will be given a score between 1 and 5 consistent with the guidance at **Section 16.4** below.

No additional submissions will be required for **Assessment Criteria 1** as the submission for this will be the Phase 2 proposal as developed by Phase 1 projects and submitted at the end of Phase 1 as per the deliverable in **Section 3**. The Phase 2 proposal deliverable as submitted in Phase 1 will therefore be taken as the submission for Assessment Criteria 1 and an amended version is not expected nor accepted.

Assessment Criteria 2-6 will require additional submissions, in line with the content requirements as set out at **Table 16.1** below.

Applicants should ensure that their responses specifically address the requirements as set out in the 'Guidance' section linked to each Assessment Criteria.

Table 16.1 - Down Selection - Assessment Criteria

Assessment Criterion 1 – Phase 2 Proposals			
Weighting	30%	Maximum Word Count	Phase 2 Proposal as submitted at end of Phase 1
Guidance			

Projects will be assessed on the scope and quality of their Phase 2 proposals for demonstrators which trial innovative Proposition(s) developed during Phase 1. As per the Phase 2 Proposal deliverable detailed in **Section 3** of the Phase 1 Competition Guidance, the Phase 2 proposal should include at minimum:

- Identification of Proposition(s) to be tested in Phase 2 trial(s), and the associated Scenario(s), assumptions and potential sensitivities.
- A credible plan for identifying and onboarding consumers within the Competition timelines, with target consumer numbers and justification for these. GDPR and other consumer protections should be taken into account.
- High-level identification of the infrastructure needed (both physical and digital), and proposals for how this may be secured and utilised during Phase 2. Noting that any modification or development of technologies and systems requires a clear rationale as to why this is needed in order to demonstrate Propositions in Phase 2, and why the Programme's aims and objective cannot be achieved utilising existing technologies.
- Engagement and any proposed collaboration with other programmes and projects under the FIP, NZIP and wider.
- Identification of any risks and dependencies for delivery of Phase 2

Responses to this assessment criteria are not expected to include the Trial Protocol developed for Proposition(s). The trial protocol will be a stand-alone document and will *not* be assessed as part of the Phase 2 application.

Assessment Criterion 2- Project Team and Expertise Weighting 20% Maximum Word Count- not including words in Accompanying organogram 1,500

Guidance

Applicants should use their responses to detail how their organisation(s) and proposed project team can offer the relevant skills, capabilities and expertise required to deliver demonstrators as set out in their Phase 2 proposals. Responses should include:

- An organogram (one file upload maximum 1 A4 side) with accompanying narrative clearly detailing the roles of all personnel from the lead Applicant and consortium partners and sub-contractors as relevant in delivery of the Project. Regarding updated Project team organigrams, it is acknowledged that the lead partners in Projects may differ between Phase 1 and Phase 2 and Projects are expected to put forward organograms which best reflect how they intend to deliver Phase 2
- The relevant skills, qualifications, and expertise of main Project team members mapped against key requirements. One file upload of summary

CVs for relevant personnel – maximum one A4 side per person – should be attached to your application.

- Details of projects completed by the applicant in the last five (5) years that you consider of relevance to this Competition including key lessons learnt.
- A description of the Project team's quality management standards, including a description of how the Project team will quality assure both technical outputs and report writing. Any relevant external QA accreditation should also be referenced.
- A letter of support for every project partner (consortium member) one file upload of maximum one A4 side per letter of support.
- Evidence and/or assurance of the involvement of an organisation who supplies energy to a domestic consumer or provides energy or an energy supply product to a consumer. This may include an energy supplier, demand side response service providers (DSR service providers) or energy as a service provider. An example of involvement could include having such an organisation as a project partner and/or a letter of support from such an organisation including the role they would play. It is expected that, to deliver on the scope for Phase 1 Projects (whether they be individual organisations or consortiums) would need such participation.

Assessment Criterion 3 – Value for Money			
Weighting	15%	Maximum Word Count – not including words in Project Cost Breakdown Form	1,500

Guidance

Phase 1 Projects will be asked to complete a further, more detailed version of the Project Cost Breakdown Form – the 'Project Cost Breakdown Form – Phase 2'.

In addition, Projects are required to provide overarching commentary (max 1,500 words) to accompany the detailed breakdown of their Project costs for Phases 2 as set out in the Project Cost Breakdown Form. This commentary should:

- Detail how Projects are satisfied that all costs and overheads are realistic, robust, justified, and fair market value.
- Demonstrate Project **additionality**, clearly setting out why funding remains necessary for the Project to be taken forward.

BEIS will not normally pay overheads of over 50%, and overheads above this amount will need to be fully justified.

Assessment Criterion 4 – Project Management			
Weighting	20%	Maximum Word Count – not including Gantt chart	1,500

Guidance

Responses should include:

- A separate A3 Gannt chart or similarly detailed Project Plan attachment which:
 - Is structured on a monthly basis;
 - Summarises key monthly tasks and assumed milestones to meet Phase
 Deliverable requirements including task owners for consortia; and
 - Identifies any critical dependencies linked to achieving overarching Phase 2 Requirements.
- Accompanying narrative detailing how you will ensure effective and appropriate project management throughout Phase 2. This should factor in lessons learnt during Phase 1.

Assessment Criterion 5 – Project Risks			
Weighting	10%	Maximum Word Count	1,000
Guidance			

Applicants' responses should include:

- A summary of the approach to risk management, including cybersecurity and privacy protocols around the collection, handling and storing of data.
- What they regard as the top key risks to successful delivery of the Phase 1 Requirements including:
 - o A summary of the risk including dependencies
 - The potential risk impact; and
 - o Proposed approach to risk mitigation

Assessment Criterion 6 – Knowledge Dissemination – Phase 2				
Weighting	5%	Maximum Word Count	1,000	

Guidance

Applicants are required to set out their plans for Phase 2 knowledge dissemination.

Applicants' responses should include:

- A detailed knowledge dissemination plan, describing:
 - How outcomes from Phase 2 will be shared with industry and key stakeholders, including lessons learned, and challenges faced.
 - The scale and scope of the proposed dissemination and knowledge transfer activities.

16.4. Down-Selection Assessment - Scoring Guidance

Applicants' Assessment Criteria 1 – 5 responses will be scored based on the system below:

Table 16.3: Scoring Guidance

Score	Description
1	Not Satisfactory : There is no evidence to very little evidence that the question has been satisfactorily answered and major omissions are evident.
2	Partially Satisfactory : There is little evidence that the question has been satisfactorily answered and some omissions are evident. Much more detail is needed.

3	Satisfactory : There is reasonable evidence that the question has been satisfactorily addressed but some omissions are still evident and further detail is needed.
4	Good: The question has been well addressed with a good evidence base, with only minor omissions or lack of detail.
5	Excellent: There is clear evidence that the question has been completely addressed in all aspects, with questions answered clearly, concisely with a strong evidence base.

16.5. Down Selection – Evaluation Approach

BEIS will select the Phase 1 Project(s) that offers the best overall value for money, based on their assessment against the criteria outlined in **Section 1**. Projects will be assessed by a minimum of three assessors, which could include BEIS assessors and independent assessors (technical and commercial experts). A moderation meeting will be held at the end of the assessment process to agree the overall weighted scores for each of the projects.

Responses to Assessment Criteria 1-6 will be scored using the scoring system outlined at **Table 16.3**. To be eligible to receive funding, a Project application must achieve the following Minimum Threshold Scores:

- Achieve a score of at least 2 out of 5 for Assessment Criteria 1-6.
- Achieve an overall minimum weighted score across all Criteria of 50%.

The highest-scoring eligible Phase 1 Project(s) which satisfies the relevant Minimum Threshold Scores will be put forward for funding of at Phase 2 (subject to meeting relevant Phase 2 Stage Gate Review requirements).

In the event that two or more eligible Projects receive the same highest ranking overall weighted score, then the assessors will reconvene for a further moderation session to agree a consensus position around who should receive funding.

16.6. Down Selection – Terms and Conditions

Applicants should note that where Phase 1 competition funding mechanism is an SBRI and Phase 2 is a Grant, projects will be subject to different terms and conditions. Projects successful at the down selection into Phase 2 will be subject to a Grant Funding Agreement, replacing the Phase 1 SBRI contract terms and conditions set out in Annex 1.

Appendix 1 – Technology Readiness Levels (TRLs)

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

TRL	Description
Research and Development	
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 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 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.

Appendix 2 - Eligible and Ineligible Costs

This SBRI Competition Guidance Document focuses on Phase 1. Grant conditions for Phase 2 will be issued at a later date.

General Requirements

Timing: BEIS will only provide the funding to cover eligible costs incurred and defrayed in the period between the project start date specified in the contract, and the deadline specified in the contract 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 as defined in the application or subsequent agreements between the successful Applicant and BEIS.

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.

Research and development costs: Your application must have at least 50% of the Contract value attributed directly and exclusively to research and development services.

Eligible Costs:

Directly incurred costs:

These are costs that are specific to the project that will be charged to the project as the amount 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

*Under SBRI rules, BEIS will only pay full capital equipment costs for equipment that is specialised and bespoke enough that it only has a value for the duration of the project. For capital equipment that has a value at the end of the contract, BEIS will only pay depreciation costs for the duration of the project, in line with your accounting policy for depreciation. For example, if a project budget includes the cost of purchasing six new laptops, it is highly likely that these will still have value at the end of the project. As such, BEIS would only pay depreciation costs on these laptops across the duration of the project.

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
- Overheads

BEIS will not normally pay overheads of over 50%, and any overheads above this amount will need to be fully justified.

Ineligible Costs:

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

- Commercialisation activities
- Profit (i.e. Applicants should not include profit for themselves or the other project team members within indirect costs or include it as a separate project cost)
- Profit on contractors (i.e., where contractors are used in key posts, these contractors should be paid at the standard market rate)
- Contingency / Contingent costs
- Protection of IPR (including patent costs)
- 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
- In respect of VAT that you are able to claim from HM Revenue and Customs.

Appendix 3 - Exclusion Grounds

Mandatory Exclusion Grounds

Public Contract Regulations 2015 R57(1), (2) and (3)

Public Contract Directives 2014/24/EU Article 57(1)

Participation in a criminal organisation

Participation offence as defined by section 45 of the Serious Crime Act 2015

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 on the fight against organised crime;

Corruption

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;

The common law offence of bribery;

Bribery within the meaning of sections 1, 2 or 6 of the Bribery Act 2010, or section 113 of the Representation of the People Act 1983;

Fraud

Any of the following offences, 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:

- the common law offence of cheating the Revenue;
- the common law offence of conspiracy to defraud;
- 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;

- 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;
- 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;
- an offence in connection with taxation in the European Union within the meaning of section 71 of the Criminal Justice Act 1993;
- 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;
- fraud within the meaning of section 2, 3 or 4 of the Fraud Act 2006;
- the possession of articles for use in frauds within the meaning of section 6 of the Fraud Act 2006, or the making, adapting, supplying or offering to supply articles for use in frauds within the meaning of section 7 of that Act;

Terrorist offences or offences linked to terrorist activities

Any offence:

- listed in section 41 of the Counter Terrorism Act 2008;
- listed in schedule 2 to that Act where the court has determined that there is a terrorist connection;
- under sections 44 to 46 of the Serious Crime Act 2007 which relates to an offence covered by the previous two points;

Money laundering or terrorist financing

Money laundering within the meaning of sections 340(11) and 415 of the Proceeds of Crime Act 2002

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

Child labour and other forms of trafficking human beings

An offence under section 4 of the Asylum and Immigration (Treatment of Claimants etc.) Act 2004;

An offence under section 59A of the Sexual Offences Act 2003

An offence under section 71 of the Coroners and Justice Act 2009;

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

An offence under section 2 or section 4 of the Modern Slavery Act 2015

Non-payment of tax and social security contributions

Breach of obligations relating to the payment of taxes or social security contributions that has been established by a judicial or administrative decision.

Where any tax returns submitted on or after 1 October 2012 have been found to be incorrect as a result of:

- HMRC successfully challenging the potential supplier under the General Anti
 Abuse Rule (GAAR) or the "Halifax" abuse principle; or
- a tax authority in a jurisdiction in which the potential supplier is established successfully challenging it under any tax rules or legislation that have an effect equivalent or similar to the GAAR or "Halifax" abuse principle;
- a failure to notify, or failure of an avoidance scheme which the supplier is or was involved in, under the Disclosure of Tax Avoidance Scheme rules (DOTAS) or any equivalent or similar regime in a jurisdiction in which the supplier is established

Other offences

Any other offence within the meaning of Article 57(1) of the Directive as defined by the law of any jurisdiction outside England, Wales and Northern Ireland

Any other offence within the meaning of Article 57(1) of the Directive created after 26th February 2015 in England, Wales or Northern Ireland

Discretionary exclusions

Obligations in the field of environment, social and labour law.

Where an organisation has violated applicable obligations in the fields of environmental, social and labour law established by EU law (as retained in UK law in accordance with Section 4 of the EU Withdrawal Act 2018 (as amended by the EU (Withdrawal Agreement) Act 2020)), national law, collective agreements or by the international environmental, social and labour law provisions listed in Annex X to the Directive (see copy below) as amended from time to time; including the following:-

Where the organisation or any of its Directors or Executive Officers has been in receipt of enforcement/remedial orders in relation to the Health and Safety Executive (or equivalent body) in the last 3 years.

In the last three years, where the organisation has had a complaint upheld following an investigation by the Equality and Human Rights Commission or its predecessors (or a comparable body in any jurisdiction other than the UK), on grounds of alleged unlawful discrimination.

In the last three years, where any finding of unlawful discrimination has been made against the organisation by an Employment Tribunal, an Employment Appeal Tribunal or any other court (or incomparable proceedings in any jurisdiction other than the UK).

Where the organisation has been in breach of section 15 of the Immigration, Asylum, and Nationality Act 2006;

Where the organisation has a conviction under section 21 of the Immigration, Asylum, and Nationality Act 2006;

Where the organisation has been in breach of the National Minimum Wage Act 1998.

Bankruptcy, insolvency

Bankrupt or is the subject of insolvency or winding-up proceedings, where the organisation's assets are being administered by a liquidator or by the court, where it is in an arrangement with creditors, where its business activities are suspended or it is in any analogous situation arising from a similar procedure under the laws and regulations of any State;

Grave professional misconduct

Guilty of grave professional misconduct

Distortion of competition

Entered into agreements with other economic operators aimed at distorting competition

Conflict of interest

Aware of any conflict of interest within the meaning of regulation 24 due to the participation in the procurement procedure

Been involved in the preparation of the procurement procedure

Prior performance issues

Shown significant or persistent deficiencies in the performance of a substantive requirement under a prior public contract, a prior contract with a contracting entity, or

a prior concession contract, which led to early termination of that prior contract, damages or other comparable sanctions.

Misrepresentation and undue influence

The organisation has influenced the decision-making process of the contracting authority to obtain confidential information that may confer upon the organisation undue advantages in the procurement procedure, or to negligently provided misleading information that may have a material influence on decisions concerning exclusion, selection, or award.

Additional exclusion grounds

Breach of obligations relating to the payment of taxes or social security contributions.

ANNEX X Extract from Public Procurement Directive 2014/24/EU

LIST OF INTERNATIONAL SOCIAL AND ENVIRONMENTAL CONVENTIONS REFERRED TO IN ARTICLE 18(2) —

- ILO Convention 87 on Freedom of Association and the Protection of the Right to Organise;
- ILO Convention 98 on the Right to Organise and Collective Bargaining;
- ILO Convention 29 on Forced Labour;
- ILO Convention 105 on the Abolition of Forced Labour;
- ILO Convention 138 on Minimum Age;
- ILO Convention 111 on Discrimination (Employment and Occupation);
- ILO Convention 100 on Equal Remuneration;
- ILO Convention 182 on Worst Forms of Child Labour;
- Vienna Convention for the protection of the Ozone Layer and its Montreal Protocol on substances that deplete the Ozone Layer;
- Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (Basel Convention);
- Stockholm Convention on Persistent Organic Pollutants (Stockholm POPs Convention)
- Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (UNEP/FAO) (The PIC Convention) Rotterdam, 10 September 1998, and its 3 regional Protocols.

Consequences of misrepresentation

A serious misrepresentation which induces a contracting authority to enter into a contract may have the following consequences for the signatory that made the misrepresentation: -

- The potential supplier may be excluded from bidding for contracts for three years, under regulation 57(8)(h)(i) of the PCR 2015;
- The contracting authority may sue the supplier for damages and may rescind the contract under the Misrepresentation Act 1967.
- If fraud, or fraudulent intent, can be proved, the potential supplier or the responsible officers of the potential supplier may be prosecuted and convicted of the offence of fraud by false representation under s.2 of the Fraud Act 2006, which can carry a sentence of up to 10 years or a fine (or both).

If there is a conviction, then the company must be excluded from procurement for five years under reg. 57(1) of the PCR (subject to self-cleaning).

Appendix 4 – Completion of Project Cost Breakdown Form

Overview

The BEIS Project Cost Breakdown Form is a standard template used to capture costs and overheads to inform multiple procurement competitions of varying size and scope. As a result, whilst it contains multiple green input tabs, not all will require completing, particularly for lower value or less complex procurements.

Alternative Energy Markets Innovation Programme: Phase 1 Feasibility—Mandatory input tabs for all Applicants

Based on project requirements as detailed at **Section 2 and 3**, Applicants must **as a minimum**, complete the following tabs:

Labour & Overhead Costs tab

For all project team members for whom the Applicant wishes to recover costs or overheads they must complete all light blue input cells (columns C,E,G,I and M) following the example format provided at Row 18.

Project Quarterly Breakdown tab

At columns H and I Applicants should provide a quarterly profile for each Cost or Overhead category where £ amounts have been entered. Please note the FY22-23 totals at column L must equal the equivalent total on the 'Summary' tab – Thus the 'Total Labour costs' figure at cell L10 of the Project Quarterly Breakdown tab must equal the 'Total Labour Costs, exc Overheads' figure at cell E17 of the 'Summary' tab.

Alternative Energy Markets Innovation Programme Phase 1 Feasibility– Other potential input tabs

Applicants intending to claim eligible Travel and Subsistence Costs must complete the relevant blue input fields in the **Travel & Subsistence tab.**

Applicants intending to utilise one or more Sub-Contractors must complete the relevant blue input fields in the **Sub-Contract Costs tab**.

For consortia applications, each Partner must complete the relevant light blue input cells in the **Partner Breakdown tab.**

Applicants intending to claim for other costs should complete the relevant light blue input cells in either the **Material Costs**, **Capital Equipment or Other Costs tab.** light

Alternative Energy Markets Innovation Programme: Phase 1 Feasibility

blue. Given the anticipated desktop nature of work associated with production of the Feasibility Reports, this should include full justification for costs being claimed.

Alternative Energy Markets Innovation Programme: Phase 1 Feasibility

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