
Flexibility Innovation Programme: Inclusive Smart Solutions Programme

Market Engagement Event

Thursday 8 December 2022, 2pm



Welcome and introductions


Department for
Business, Energy
& Industrial Strategy

Housekeeping

- Please note this event is **not** being recorded
- This presentation will be emailed to all attendees after the event

- Please type comments, feedback or questions in the Q&A function on screen
- Comments and feedback can also be submitted via email to FlexibilityInnovation-InclusiveSmartSolutions@beis.gov.uk until **midday on 15th December**.
- Questions will not be answered in this session

- There will be an opportunity to submit further questions following the publication of the ITT. A deadline and process for this will be provided in the ITT.

- **Please be aware that the programme is still in the development stage and details outlined today are subject to change.**

BEIS
Department for
Business, Energy
& Industrial Strategy

Purpose of today



Provide an overview of the proposed
Inclusive Smart Solutions Programme



Provide a summary of the anticipated
structure, timelines and application
process



Provide an opportunity for comments,
feedback, and questions

Agenda

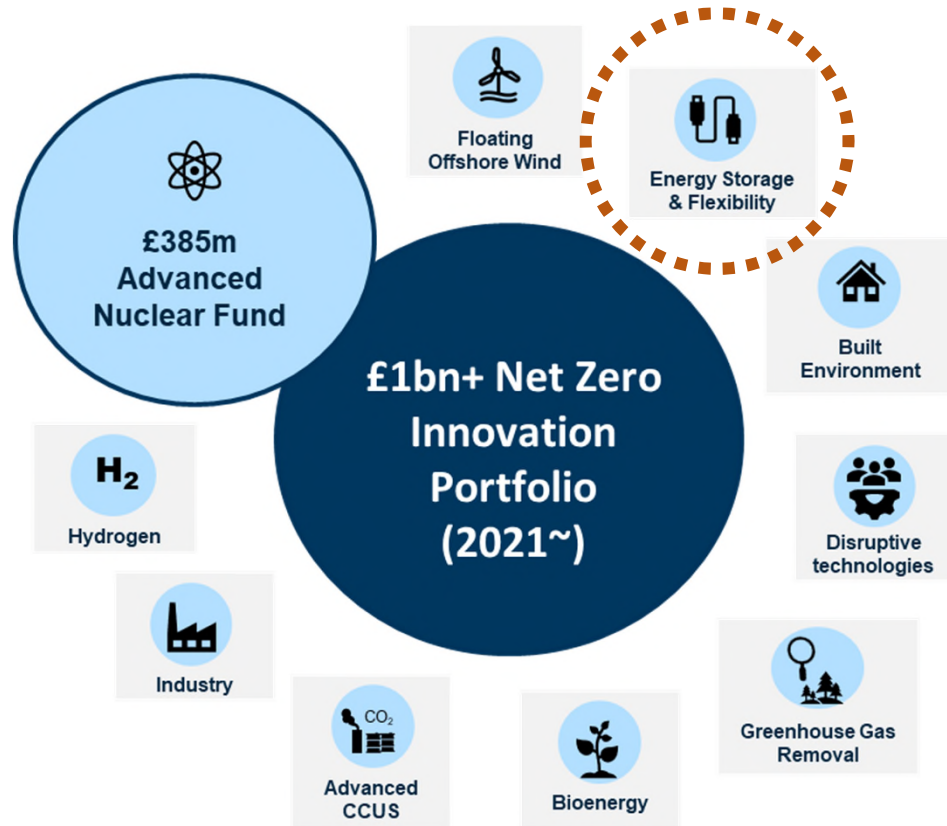
Agenda
Background
Policy Context
Inclusive Smart Solutions Programme Overview
Collaboration Platform
Procurement Process
Opportunity for Comments and Feedback

Background



BEIS Net Zero Innovation Portfolio

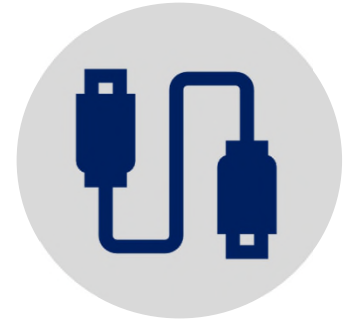
NET ZERO INNOVATION PORTFOLIO



NZIP Energy Storage & Flexibility

Building on BEIS' £505m Energy Innovation Programme (2015 - 2022) – over £70m to support smart energy innovation, over 70 projects developing innovative technologies and approaches

Supporting the delivery of a smart and flexible system, facilitating integration of flexible low carbon power, heat and transport into the energy system



Long Duration Energy Storage Programme (LODES)

Up to
£68 m

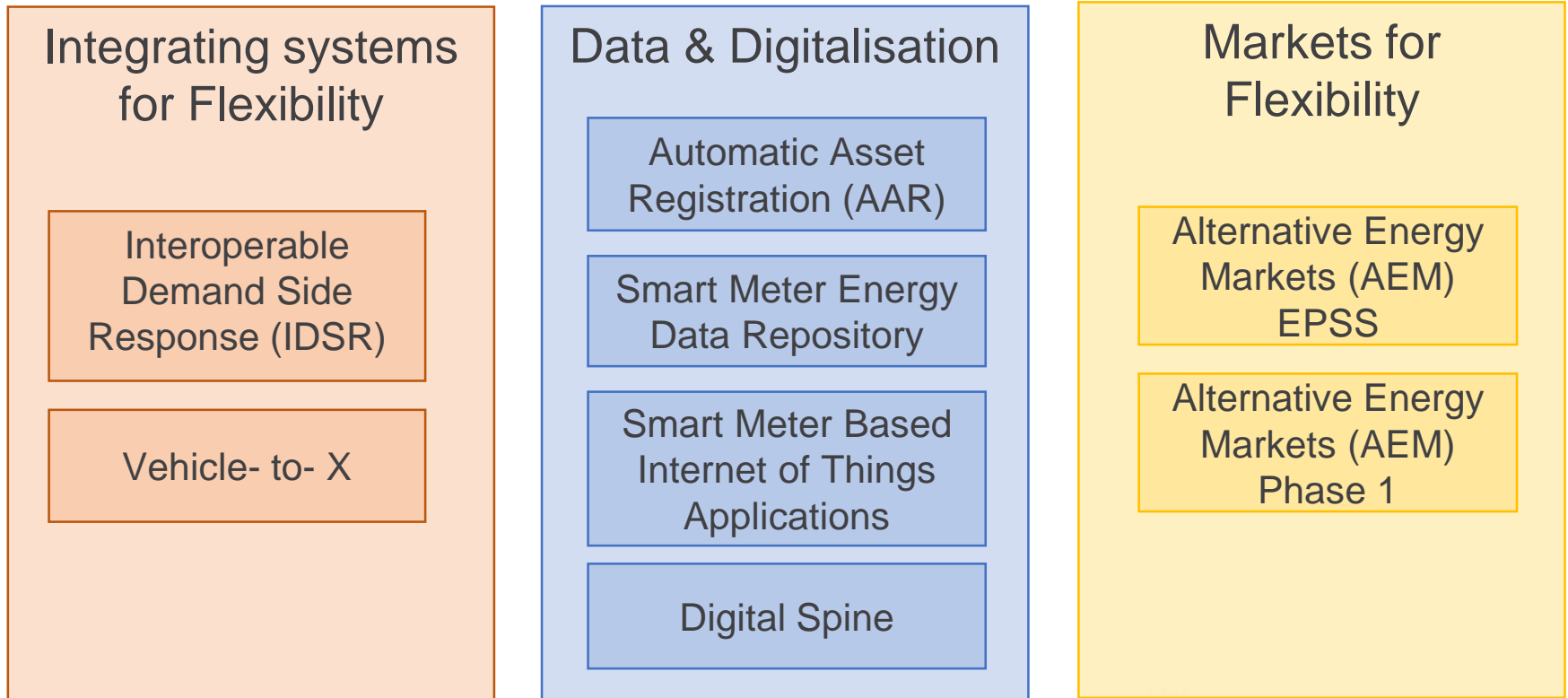
To accelerate commercialisation of innovative longer duration energy storage projects

Flexibility Innovation Programme (FIP)

Up to
£65 m

To enable large-scale widespread electricity system flexibility through smart, flexible, secure, and accessible technologies and markets

Flexibility Innovation Programme: Innovation activity launched to date

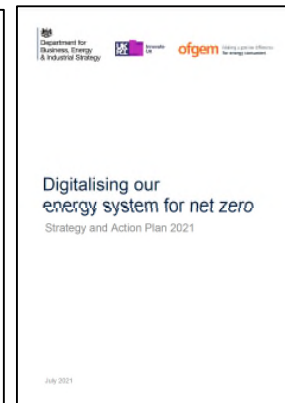
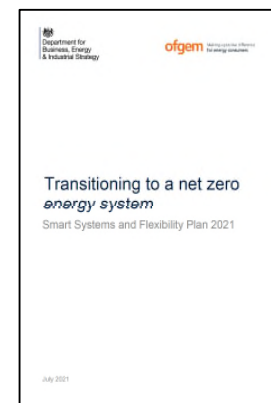
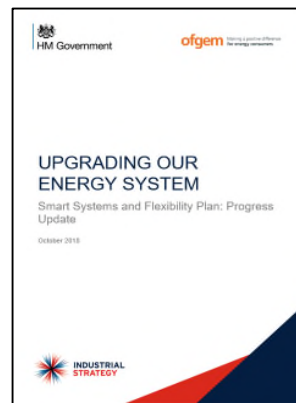
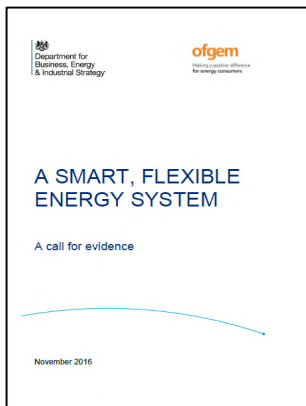


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Policy Context

BEIS Smart Energy team
Russell Jenkins

The transition to a smart & flexible energy system...



What is a smart, flexible energy system?

We need much more **flexibility** in our electricity system. The ability to shift energy consumption to balance supply and demand is essential for decarbonising power, buildings and transport.

To meet the UK's target to have net zero emissions by 2050, we will have to shift away from fossil fuels to use low carbon sources of energy. This means:

- **More intermittent or inflexible generation**, particularly from wind and solar.
- **Increased electricity demand**, as we electrify transport and heat.

To overcome these challenges the system should match energy from the wind and sun to these new sources of demand, and harness assets across the system, from large power stations to local-based solutions.

We need to use low carbon sources for flexibility. These low carbon sources will be used in a **smart** way – enabled by data and digitalisation.

It will be more affordable than a system with minimal flexibility, **giving consumers more control** over their bills, and more **security**. It will also create **jobs and exports** for the UK economy.

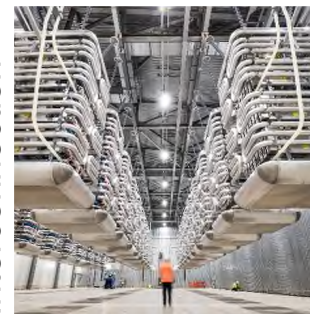
Electric batteries



DSR



Interconnection



What is DSR?

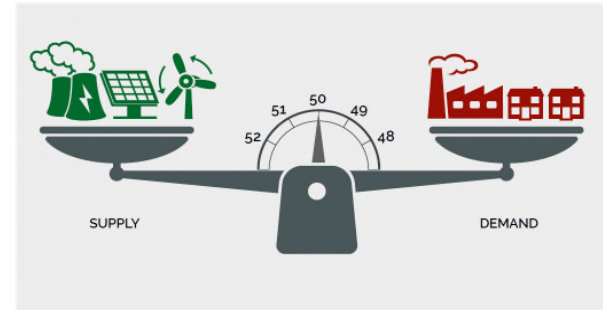
Demand Side Response is defined as “actions taken by consumers to change the amount of electricity they take off the grid at particular times in response to a signal”

What does this mean in practice?

DSR = **consumers using electricity at times that are beneficial to the electricity system** and being rewarded for doing so.

Through DSR consumers can:

- save money
- reduce the cost of the electricity system
- help us to achieve Net Zero



Source: AEMO

Our **policy focus** is to:

- **Remove barriers and mitigate risks** to enable consumers of all sizes to participate in DSR.
- **Protect and engage consumers** to maximise participation and help realise the benefits of smart energy.

Consumer Protection

Smart Systems and Flexibility Plan 2021

- Without enduring participation across consumers of all sizes we will not realise the smart and flexible energy system we need.
- Robust consumer protection and engagement is essential to give consumers confidence to participate in a smart and flexible energy system.
- We want to protect consumers who participate in smart energy, support consumers to participate who might otherwise struggle to do so, and ensure consumers who cannot participate are not unduly penalised.
- We have committed to use the findings of Project InvoLVE, which identified how innovation may help enable low income and vulnerable consumers to participate, to inform and shape our future innovation initiatives.

In the context of this programme, "low income and vulnerable consumers" includes all energy consumers for whom an accessibility, usability or affordability issue may exist or arise in the transition to a smart, flexible energy system, making it disproportionately challenging for these consumers to benefit from new technologies, markets and business models.

Project InvoLve

- Identified risks for low income and vulnerable consumers in a smart energy system.
- Proposed areas of focus for future innovation activity should include:



Increasing Access - for example, enabling low income and vulnerable tenants to access smart energy products and services.



Assisting Purchase - for example, providing affordable payment options for low income and vulnerable consumers.



Supporting Use - for example, enabling digitally excluded consumers and those with energy-related health conditions to benefit from smart energy products and services.

Inclusive Smart Solutions Programme – Overview

Inclusive Smart Solutions Programme

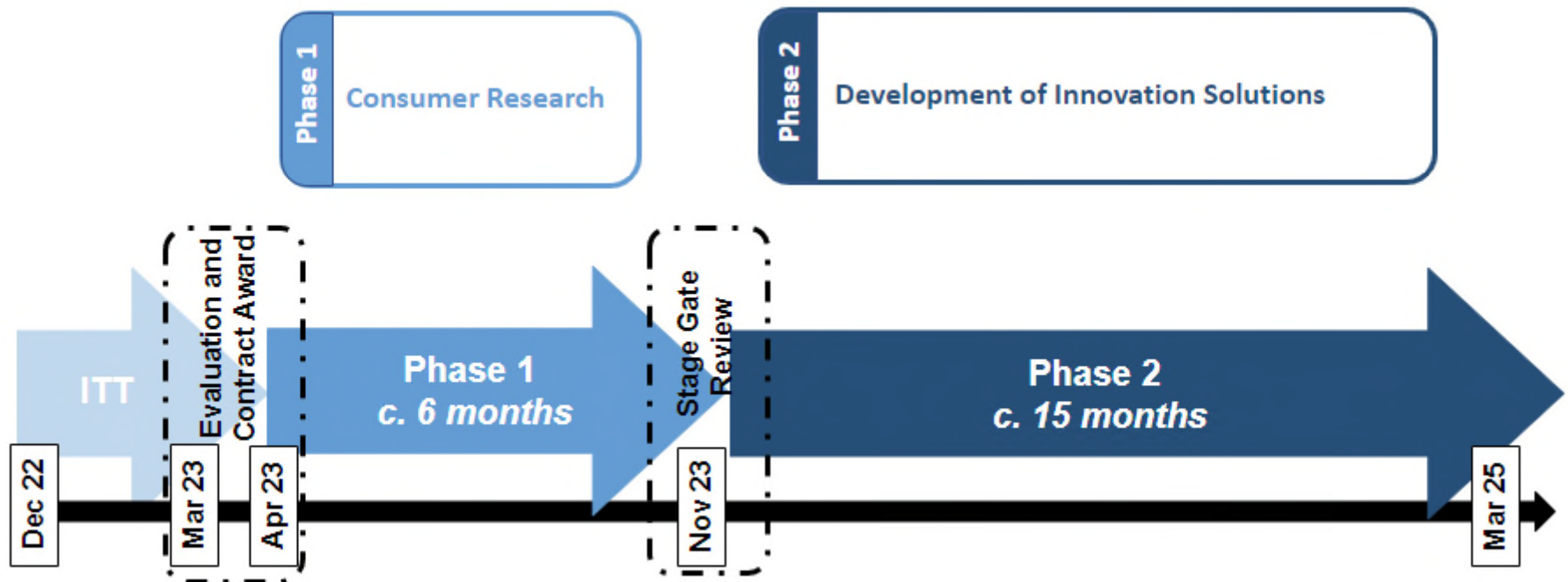
Aims:

- Gain a better understanding of the barriers faced by low income and vulnerable consumers in the transition to a smart, flexible energy system.
- Develop and test a suite of innovative solutions that will facilitate increased participation of low and income vulnerable consumers in the emerging smart, flexible energy system.

Please be aware that the programme is still in the development stage and details outlined today are subject to change

Overview

The supplier will carry out primary research with low income and vulnerable consumers (Phase 1) to inform the design, development and testing of innovative solutions to meet the needs of these consumers (Phase 2).



Phase 1

Aim:

Provide a better understanding of the barriers faced by low income and vulnerable consumers in the transition to a smart, flexible energy system.

Key research questions:

- What are the facilitators and barriers to the ability of consumers to participate in a smart energy system
- In what ways can a smart energy system provide benefits to consumers
- What solution types could increase participation

Key activities:

- Review existing evidence into the barriers low income and vulnerable consumers face
- Plan research and consumer engagement activity
 - Including identification and recruitment of consumer groups
- Implement research and engagement plan to collect evidence
- Develop long-list of proposed innovation solutions that have the potential to address identified needs

Indicative budget of up to £500,000 (excluding VAT) allocated to Phase 1

Stage-gate review

Aim:

To confirm the proposed Innovation Solutions that will be progressed to Phase 2.

Supplier:

- Prepare report and presentation
- Attend Stage Gate Review meeting

Department:

- Approve / Decline progression for each proposed solution
- Provide written feedback

Format, requirements and criteria of stage-gate review process are still under development

Phase 2

Aim:

Develop and test a suite of up to four innovative solutions that will facilitate increased participation of low and income vulnerable consumers in the emerging smart, flexible energy system.

Key activities:

- Establish any partner or other commercial relationships necessary for development and testing
- Coordinate the day-to-day development of the agreed innovation solutions
- Conduct frequent engagement and testing with low income and vulnerable consumers during the development and testing phases

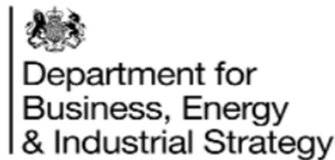
Final reporting:

- Report on key findings and conclusions for each of the innovation solutions
- Outline next steps e.g. ongoing commercialisation

Indicative budget of up to £2,250,000 (excluding VAT) allocated to Phase 2, depending on the number and quality of Innovative Solutions being development.

Finding collaboration partners

<https://flexibility-innovation-programme-collaboration.b2match.io/>



NET
ZERO
INNOVATION
PORTFOLIO

Flexibility Innovation
Programme Collaboration
Platform

[Info](#) [How it works](#) [FAQ](#) [Contact](#)

BEIS Flexibility Innovation Collaboration Platform

Find your collaboration partners to support your application.

The Flexibility Innovation Programme aims looks to support innovative solutions to enable large-scale widespread electricity system flexibility.

This match-making platform brings together organisations to connect and collaborate, in order to support the development of collaborative applications under the Flexibility Innovation Programme.

This platform enables you to view other individuals interested in applying to innovation activity under the Flexibility Innovation Programme, and request virtual meetings with potential collaboration partners.

REGISTRATION

ORGANISED BY



Procurement Process

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Procurement approach

Open procurement posted via Find a Tender Service

Single contract for whole project (Phase 1 and Phase 2)

Total indicative budget of £2.75 m (excluding VAT)

- Phase 1 - £500,000 (excluding VAT)
- Phase 2 - £2,250,000 (excluding VAT)

The Department's Standard Terms and Conditions for the Procurement of Services will be used for this contract

Indicative timeline

- A Prior Information Notice published - 22nd November 2022
- Potential launch of ITT – **22nd December 2022**
 - Q&A process
- Anticipated application deadline – **23rd February 2023**
- Contract award – April/May 2023
- Phase 1 to November 2023
- Phase 2 to March 2025

Comments, Feedback and Questions

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& Industrial Strategy

Comments, feedback and questions

We welcome feedback on the information presented today

Comments and feedback can be submitted until **midday on 15th December** via email to:

FlexibilityInnovation-InclusiveSmartSolutions@beis.gov.uk

Thank you for listening

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& Industrial Strategy