
Automatic Asset Registration Engagement Session

Net Zero Innovation Portfolio – Flexibility Innovation Programme

4th March 2022

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Agenda

Item
Housekeeping
Purpose of today
Background <ul style="list-style-type: none">• NZIP Overview• Flexibility Innovation Programme Overview
Future Proposed Innovation Activity
Closing remarks

Housekeeping

- The event is **not** being recorded. This presentation will be published on the [Flexibility Innovation Programme website](#)
- Please type any comments and into the Question and Answer function (top right of screen). The Q&A function will be kept open for 10 minutes after the event has finished to allow for any feedback.
- Feedback can also be submitted via email to Flexibilityinnovation-AAR@beis.gov.uk until **midday 11th March 2022**. Any comments and feedback received will not published.
- We will **not** be responding to questions at this event.
- Please note, the proposed innovation activity is under development and therefore proposals in these slides are **subject to change**.

Purpose of Today

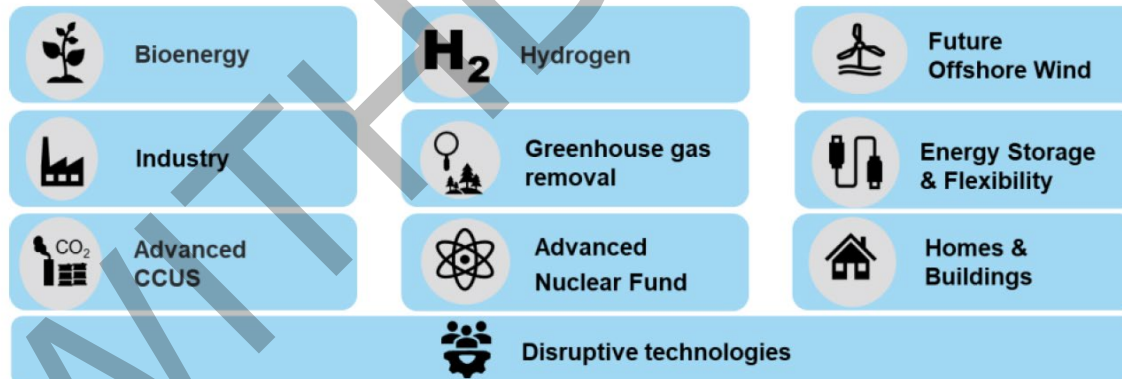
The outcome of today's market engagement is to provide an overview of proposed future innovation activity in the area of automatic asset registration and to give an opportunity to provide feedback

Net Zero Innovation Portfolio: Background



NZIP Overview

- The Government has set out a commitment to reach net zero emissions by 2050
- The Prime Minister's Ten Point Plan for a Green Industrial Revolution announced a **£1 billion Net Zero Innovation Portfolio (NZIP)**
- NZIP will accelerate the commercialisation of innovative low-carbon technologies, systems and processes in the power, buildings and industrial sectors.
- The portfolio will focus on ten priority areas:



Flexibility Innovation Programme Overview

- An up to £65 million overarching programme
- Part of BEIS' Net Zero Innovation Portfolio
- Forms a substantial part of the at least £100m funding for energy storage and flexibility challenges as set out in the Prime Minister's ten point plan for a green industrial revolution
- Seeks to enable large-scale widespread electricity system flexibility through smart, flexible, secure, and accessible technologies and markets.
- To achieve this, the programme aims to fund innovation across a range of key smart energy applications.
- It is expected that the programme will run to the end of March 2025
- Updates to the Flexibility Innovation Programme will be provided on the [Flexibility Innovation Programme Webpage](#)

Automatic Asset Registration: Background



Background to asset registration

- Achieving net zero will require the deployment of millions of low-carbon technologies. These technologies will need to be seamlessly integrated onto our electricity system. This will rely on the digitalised exchange of data to facilitate a system that can automate, plan and anticipate processes and energy flows in order to ensure grid stability.
- As outlined in the [Digitalising our energy system for net zero: Strategy and Action Plan 2021](#), the government is developing a coordinated asset registration strategy in order to streamline existing registration processes.
- Whilst **registration with network companies is a legal requirement** for some assets, it is thought that only 40% of new energy assets are currently being registered and hence visible to the networks. Stakeholder engagement revealed several **barriers to registration**:
 - Unclear responsibilities
 - Over-complicated processes
 - No benefits/penalties to the installer
 - Data not being shared effectively

Proposed Innovation Activity

- In order to overcome the barriers with manual registration, BEIS is considering the development of an automatic, automated secure data exchange process for registering energy assets and collecting and accessing small-scale asset data, making grid connected assets more visible, helping with network planning and operability.
- Achieving this will require embedding the principles of **cyber security** and **data privacy**, as set out in [Transitioning to a net zero energy system - Smart Systems and Flexibility Plan 2021](#).

Scope of Proposed Innovation Activity

- Assets in scope of this proposed innovation activity could include all **small-scale domestic and small business energy assets*** that are currently required to be registered.

Example assets include, but are not limited to:

- Solar photovoltaic (PV)
- Heat pumps
- Smart EV charge points
- Home battery storage

- For **'connect and notify' connections** (i.e. Power Generating Modules with a capacity of 16A per phase or less, connected at low voltages, and single-phase load and generation up to 60A), the solution will automatically register the asset to a Central Asset Register/Portal upon installation.
- For **'apply to connect' connections** (Power Generating Modules with a capacity of more than 16A per phase and single-phase load and generation above 60A) the solution will automatically confirm registration once the asset has been installed, once prior approval has been obtained.

**Asset in domestic and smaller non-domestic dwellings, up to 1MW, that typically require registration by an installer*

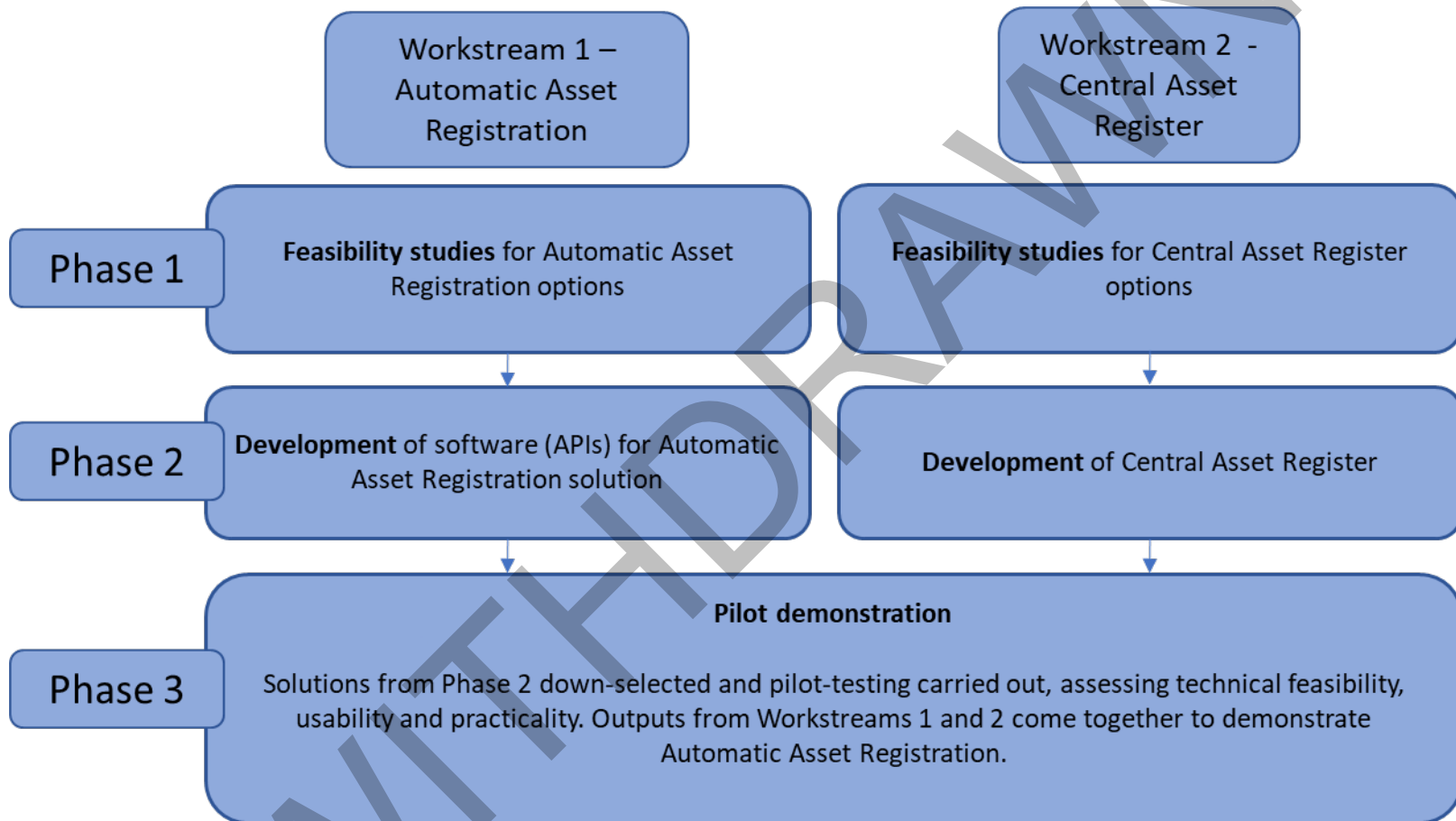
Scope of Proposed Innovation Activity

Any future solution must, at least, satisfy existing registration requirements, and will therefore be required to collect 'static' or 'standing' asset data, including but not limited to:

- Asset type
- Postcode location
- Rated capacity
- Rated export/import limit
- Serial number
- MPAN

In order to appropriately future-proof the system, API links developed to exchange this 'static' asset data should also be capable of facilitating the exchange of 'live' or 'dynamic' asset data. For example, state of charge/discharge, voltage, current.

Structure of Proposed Innovation Activity



Phase 1: Feasibility



Phase 1: Feasibility

Under this proposed innovation activity, BEIS would look to fund:

- The **delivery of detailed platform architectural (flow) diagrams**, demonstrating how data is moving and what will happen to it at each stage for both Workstream 1 and 2.
- **Feasibility studies** on the proposed solutions, including cyber security, data privacy, legal, data collection and access requirements and proposed business models for deployment.

**Funding
mechanism: SBRI**

The solutions should dovetail with existing industry datasets and processes. For example, the [ENA Type Test Register](#), the [Embedded Capacity Register](#) and existing [ENA work on the operational visibility of larger assets](#).

Phase 2: Development



Phase 2: Development

Under this proposed innovation activity, BEIS would look to fund:

- The **development of a fully working software solution** for automatically registering small-scale energy assets with the networks, and other relevant bodies, accounting for all appropriate data sharing and access requirements (Workstream 1).
- The **development of a fully working Central Asset Register/Portal** (Workstream 2)

BEIS is minded to consider how funding could also support solutions capable of **facilitating the exchange of dynamic, live asset data**, in addition to automatically registering assets.

Funding mechanism:
SBRI

Phase 3: Pilot testing



Phase 3: Pilot testing

Under this proposed innovation activity, BEIS would look to fund:

- The delivery of pilot testing in an environment indicative of the real world to provide evidence on the scalability, usability and resilience of the solution(s) developed in Phase 2.

**Funding mechanism:
SBRI**

Comments & Feedback

- We welcome feedback on the proposed innovation activity. The feedback will not be published but BEIS may use it to inform future innovation competitions.
- The Q&A function will be kept open for 10 minutes after the event has finished to allow for any feedback.
- If you would like to provide further feedback after the event, please submit this via email to flexibilityinnovation-aar@beis.gov.uk. The deadline for providing feedback is **midday 11th March 2022**. Feedback received after this deadline may not be considered.
- We will **not** be providing responses to questions at this time.
- Updates to the Flexibility Innovation Programme will be provided on the [Flexibility Innovation Programme Webpage](#)

Thank you for listening!

WITHDRAWN

