Strategic Innovation Fund

ESO

Agenda

- What is SIF?
- How does SIF work?
- SIF vs NIA
- Partnering with us
- Common reasons why we aren’t able to take ideas forward
- ESO Innovation Priorities

What is SIF?

What is SIF?

- SIF replaces the Network Innovation Competition (NIC)
- SIF aims to tackle big sector-wide questions about the future (2028+) energy system
- Aims to:
  - Deliver a net zero energy system at lowest costs to consumers
  - Position the UK as the ‘Silicon Valley’ of energy systems
- Paid for by consumers on their energy bills
- Designed to help energy networks users and consumers
- Only licensed energy networks are eligible to lead an application/project
- Project participants need to provide a minimum of 10% of total project costs as a compulsory contribution from alternative funds
- Project participants must read and accept the terms of the SIF Governance Document when applying

What is SIF? (continued)

- Ofgem, working with UKRI, sets the strategic direction by using Innovation Challenges
- Applications must align with one out of 4 Innovation Challenges launched with each SIF Round
- Each Innovation Challenge has minimum partner requirements, e.g. another energy network licensee or research and technology organization (RTO)
- Project ideas move through the sequential phases of SIF (Discovery, Alpha, Beta)
- As of Round 2, it is possible to apply directly to Alpha or Beta phases if eligible
- SIF is competitive, and projects need to apply to each phase separately
- Receiving funding for one phase does not guarantee funding for next phases

SIF projects must demonstrate benefits across:

- Financial cost reductions for network operation/energy bills/network users
- Carbon emissions reductions
- Improved access to revenues for users of network services, or the creation of new revenue streams
- Number of products, processes, and services launched which are new to the market within Great Britain

How does SIF work?

How does SIF work?

A new type of innovation competition process

DISCOVERY (feasibility study)	ALPHA (experimental development)	BETA (build, operation and/or demonstration)
Up to **3 months** Capped at **£150k** **define the problem and** the **value** in solving the Problem understanding what consumers and network users need and identify any constraints	Up to **6 months** Capped at **£500k** preparing and **testing** the **different solutions** to the Problem and test the riskiest assumptions	Duration will depend on the scale and complexity of the solution (**between 6 months and 5 years**) **c. £10m+** **deployment of the solution** to the Problem

3 Phase Approach

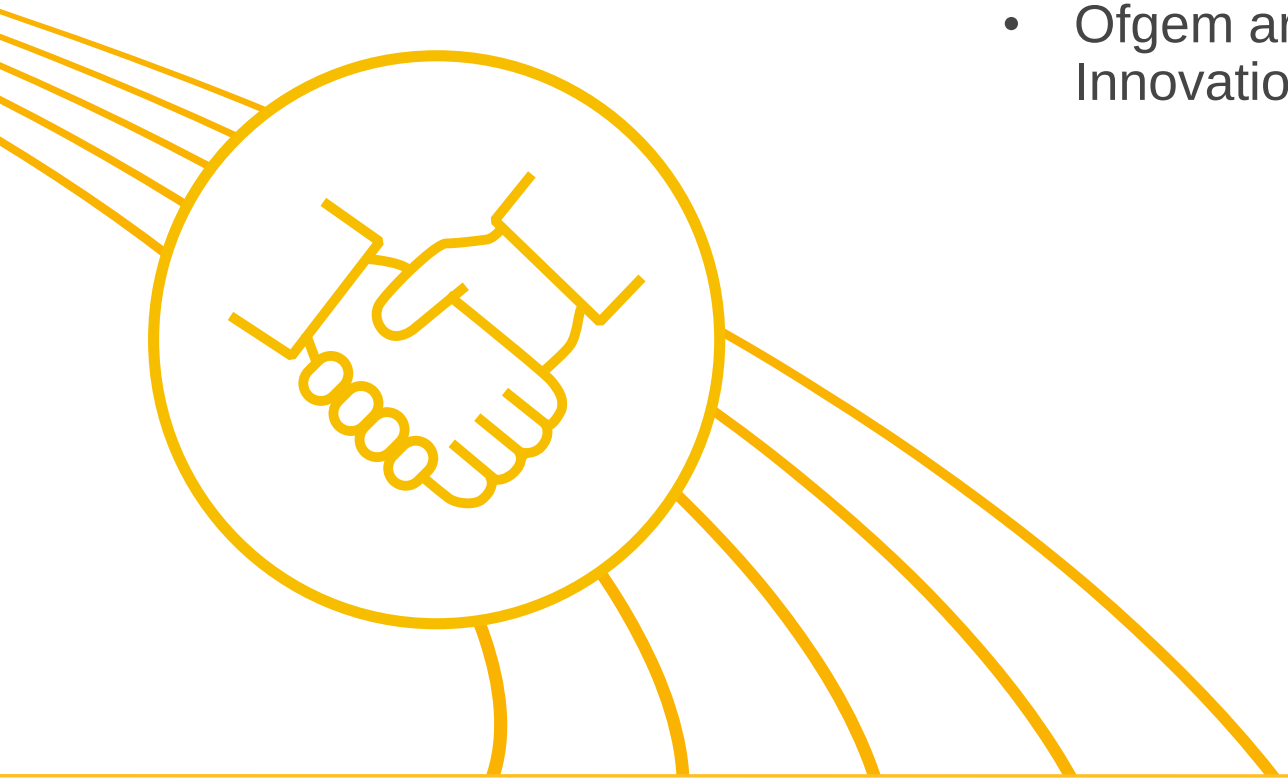
SIF vs NIA

Strategic Innovation Fund (SIF)	Network Innovation Allowance (NIA)
Ofgem administers funding with support from Innovate UK (UKRI) – new fund to replace Network Innovation Competition	Each network receives a set allowance to administer as part of their network price control
SIF is expected to invest **£450m by 2026**	ESO will have ongoing access to **£47m (inc. 10% ESO contribution)** to fund innovation projects over RIIO-2
Focused on funding **large-scale transformational research and development** projects in 3 phases. UKRI open a funding round for each phase. **(Discovery - £150k , Alpha – up to £500k, Beta – up to £30m)**	Focused on funding **early-stage research and development** or **small-scale demonstration projects**. Each network has their own process for approving funding for projects.
For each funding round application, **Ofgem and UKRI publish challenge areas** related to the energy transition to net zero that projects should address	Projects must have the potential to deliver **benefits to consumers in vulnerable situations, or the energy transition to net zero**
Each Innovation Challenge of SIF has **minimum partner requirements** (e.g. another energy network licensee)	No minimum partner requirements

Partnering with us

Partnering with ESO

- Project ideas need to meet one of the SIF Innovation Challenges and address at least one of ESO's innovation priorities
- There will be an Open Call for SIF ideas for each SIF Round and timelines for submitting ideas to us will follow on our website/newsletter
- Ofgem are the final decision makers of the Strategic Innovation Fund



How can I get involved?

Submit your project idea via the online form or contact us directly with project ideas that you think may be appropriate for SIF (innovation@nationalgrideso.com)

Book a slot to speak to ESO SIF Team (coming soon)

Common reasons why we aren’t able to take ideas forward

Common reasons why we aren't able to take ideas forward

- Innovation funding cannot be used to validate commercial models – we must remain as impartial as possible in supporting market participants
- Duplication of a previous project or Business as Usual activity
- We don't have sufficient ESO Subject Matter expert resource to support the project at the time
- ESO is not an appropriate lead – other energy network licensees are more suited to lead
- The project does not follow the phased approach or does not align to the funding cap of each phase
- The scope and scale of the project is more suitable for NIA than SIF

ESO Innovation priorities

Our 2023 – 24 Innovation Priorities

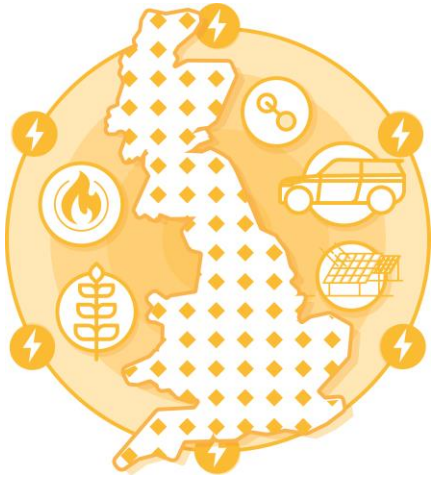
Zero Carbon Transition

- It is difficult to remove the final, harder-to-decarbonise aspects of the system
- Fundamental changes need to be made to system planning and operation
- Finding a standard way to calculate the carbon intensity of generators

Digital & Data Transformation

- Driving digitalisation and a whole system approach requires greater transparency and open access to data
- Risk of cyber-attacks is growing
- Processing calculations from data and algorithm intensive models

Our 2023 – 24 Innovation Priorities



Whole Energy System

- How can we improve efficiency and enable decarbonisation by considering energy vectors and different sectors alongside each other?
- How can products, markets and best practice be aligned across distribution and transmission networks?

Future Markets

- Understanding what and how different aspects of the energy system will change how markets function
- Understanding and testing different market reforms
- Exploring how consumers can become active participants in the system

Our 2023 – 24 Innovation Priorities

Constraint Management

- Changes in the volume and location of electricity generation will lead to significant constraint costs
- One of the key areas of congestion is the Anglo-Scottish boundary (B6)

System Stability & Resilience

- As we move towards zero carbon operation and synchronous generation capacity decreases, the system becomes less stable
- This means faster frequency changes, less voltage and fault ride-through stability which makes it more difficult for both synchronous and non-synchronous generators to operate safely