

An illustration showing four stylized figures in business attire jumping over a gap between two large, low-poly mountains. The mountains are rendered in shades of grey and white. The background is a blue sky with a network of white lines and colorful paper airplanes flying through the air.

Ofgem's Strategic Innovation Fund (SIF): a brief guide

Transforming energy networks
through innovation

First edition
May 2023

What is the SIF?

...a major investment programme to drive energy network innovation

Decarbonising Great Britain's energy networks is a huge undertaking - and it is urgent.

Government and industry have a joint goal to fully decarbonise the UK's electricity system by 2035. This cannot be done without innovation.

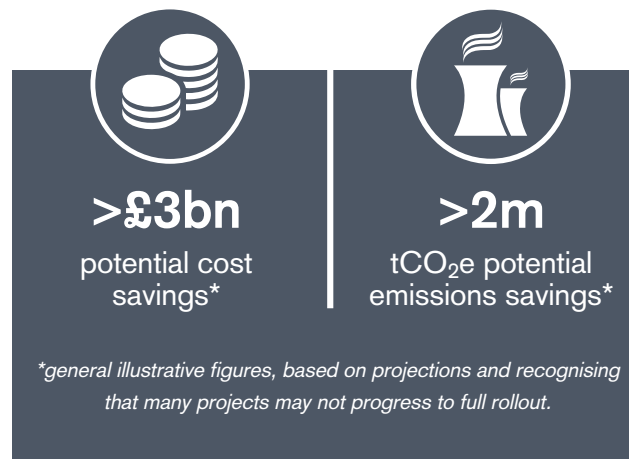
We have to develop and deploy new ideas to drive the transition - on a large scale, as fast as possible, and at the lowest cost to consumers.

This scale of innovation will not 'just happen'. It takes vision, fresh thinking, investment, working together, and the right processes to find the highest-potential projects and bring them to reality.

At the same time, this is an opportunity to help the UK become a world leader in energy innovation and entrepreneurship – the Silicon Valley of energy.

This is why the SIF was established in 2021, as a programme with funding of £450m+ over five years, to drive innovation and transformation in energy networks.

111 projects funded (to April 2023)	194 different organisations funded
£18.7m SIF funding allocated to projects	£3.8m additional contributions from industry



The vision of the SIF

To facilitate the UK's transition to net zero, at lowest cost to the consumer.

To position the UK as the 'Silicon Valley' of energy, making it the best place for high potential businesses to grow and scale in the energy market.

How the SIF works

Funded by consumers, delivered by experts

The SIF is part of the price control system managed by industry regulator Ofgem. Energy network companies bid for approval to run transformative innovation projects, funded by a very small proportion of the payments received from energy consumers.

The SIF is delivered through a partnership between Ofgem and Innovate UK. This draws on Innovate UK's established expertise in managing innovation programmes, convening partners, and fostering entrepreneurship.



Innovate UK's mission for the SIF

Helping people

- Reducing costs for energy consumers
- Creating new products and services
- Engaging people across industry and society

Helping the planet

- Reducing carbon emissions
- Improving energy security
- Making energy systems more resilient

Helping business

- Helping the industry create an innovative energy system
- Generating economic growth
- Encouraging finance and investment

A strategic approach to innovation

Innovate UK's and Ofgem's **strategy** in delivering the SIF focuses on:

- Encouraging innovation **alignment** – between different funders, across different industry sectors, and in line with regulatory change
- Being **responsive** – making sure that projects are targeted at challenges and can develop in an agile way
- Enabling **commercialisation** – helping innovative ideas find markets across the UK energy system and internationally

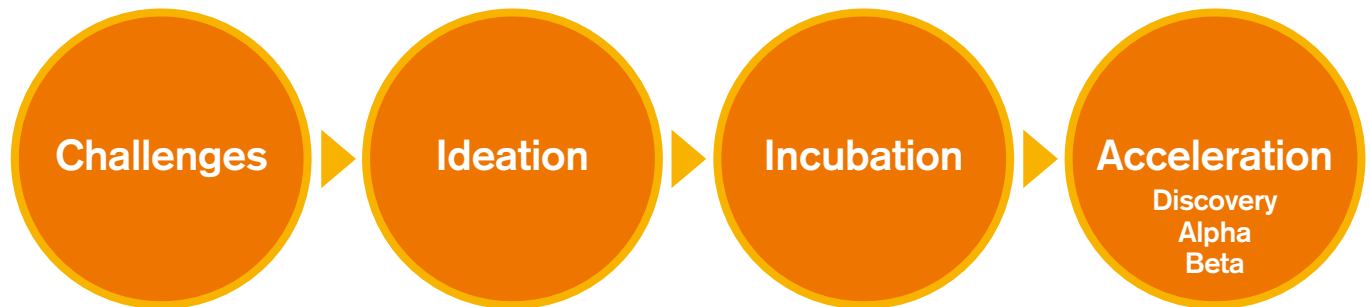
To achieve this strategy, Innovate UK uses an end-to-end innovation process called Giant Leap Together.

This is a model for identifying challenges and developing ideas, forging partnerships and exchanging the knowledge needed to find and nurture the ideas with the highest potential to meet energy challenges.

Giant Leap Together has four main phases, which run on an annual cycle

- **Challenges:** Innovate UK and Ofgem work with industry to develop challenge areas for projects to focus on
- **Targeted Ideation:** innovators come forward with new ideas that could become projects
- **Incubation:** consortia form, project teams shape proposals and apply for funding
- **Acceleration:** projects gain funding approval and begin work on Discovery projects - with potential to go on to further funding phases in future.

The SIF innovation process: Giant Leap Together



Tackling the biggest challenges facing energy networks

The SIF's focus on innovation challenges ensures that the projects funded are targeting the most pressing issues facing energy networks in the drive to decarbonise.

For each round of the SIF, a fresh set of challenges is defined, in consultation with industry, for project teams to respond to.



SIF Innovation Challenges to date

Round 1 - 2021

- Whole system integration
- Data and digitalisation
- Zero emission transport
- Heat

Round 2 - 2022

- Supporting a just energy transition
- Preparing for a net zero power system
- Improving energy system resilience and robustness
- Accelerating decarbonisation of major energy demands

Round 3 - 2023

- Whole system planning and utilisation of networks to facilitate faster and cheaper network transformation and asset rollout
- Novel technical, process and market approaches to deliver an equitable and secure net zero power system
- Unlocking energy system flexibility to accelerate electrification of heat
- Enabling power-to-gas (P2G) to provide system flexibility and energy network optimisation

Which projects have the most transformative potential?

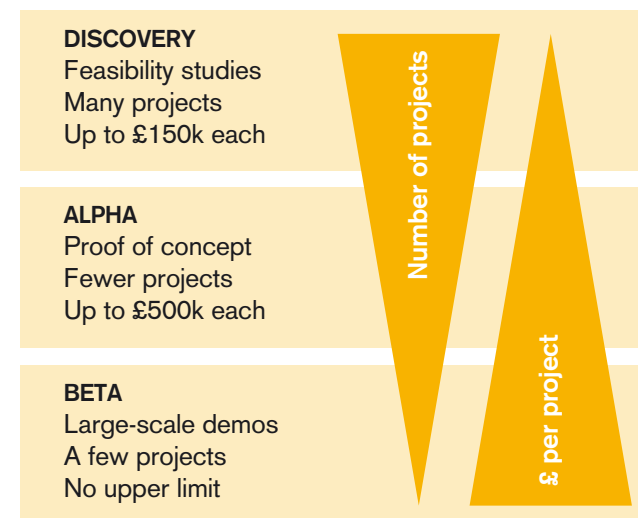
In the Acceleration stage, SIF projects approved for funding begin a journey with three phases:

- Discovery: feasibility studies, lasting 2-3 months
- Alpha: proof of concept projects, lasting 6 months
- Beta: large-scale demonstrator developments, lasting up to 5 years.

The aim is to find many potential ideas and identify those with greatest promise as quickly as possible, giving them the support they need to become business-as-usual.

At each phase a project competes for progressively higher levels of funding, with fewer projects going through each time.

All projects have the potential to generate valuable learning. Some will go no further than the Discovery phase and some will end after Alpha. Those that go on to Beta will typically be able to invest millions of pounds in real-world demonstrator projects.



SIF project facts

Each SIF project must be led by one of the regulated energy network companies

Projects must be collaborative, involving partners

Partners can be innovative businesses, other energy networks, local authorities or academics, for example.

SIF Round 1

Launched summer 2021

40 Discovery projects

18 Alpha projects

XX Beta projects
(to be announced Summer 2023)

Find out more about the SIF projects on YouTube



Round 1
Discovery projects



Project
'show and tells'

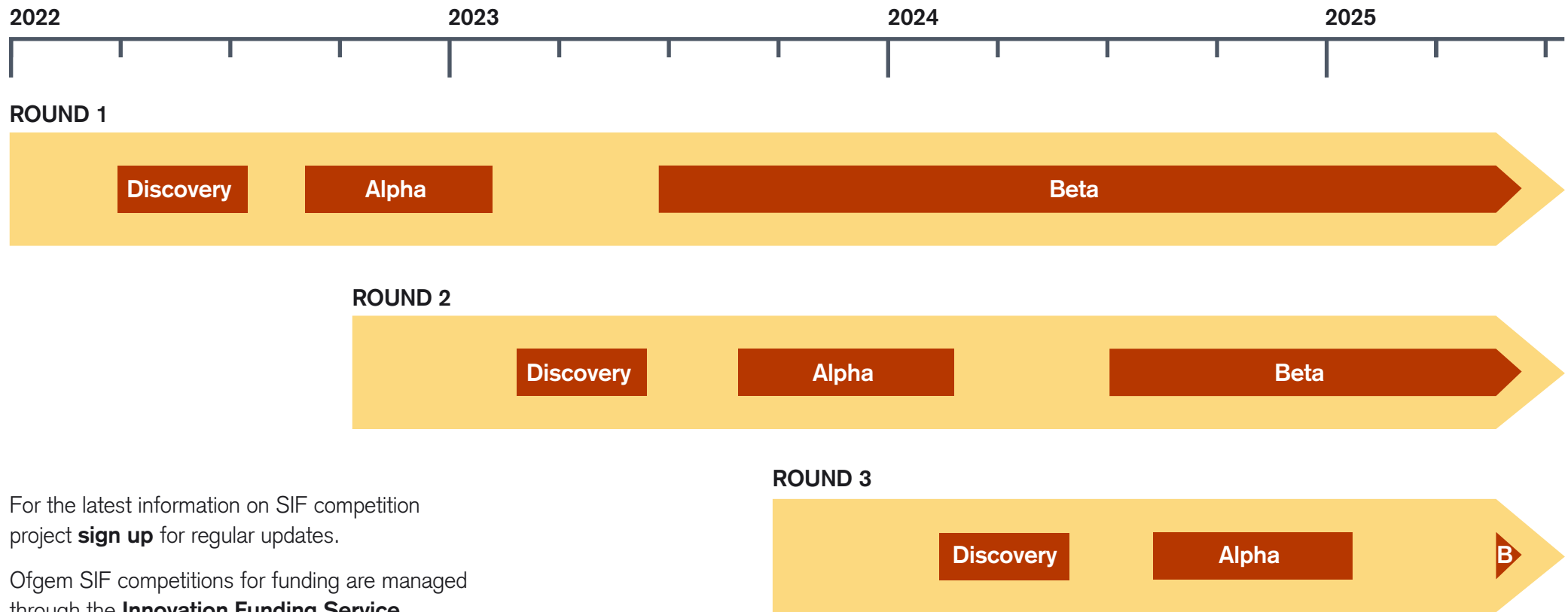


Round 2
Discovery projects



Timelines

A new round of the SIF begins each year, and runs in parallel with the previous rounds. The SIF is generating a growing portfolio of projects which are at different phases of the Discovery/Alpha/Beta journey. This is how the timings work:



For the latest information on SIF competition project **sign up** for regular updates.

Ofgem SIF competitions for funding are managed through the **Innovation Funding Service**.

Get involved

Depending on your role, there are many ways to play your part in the SIF's drive to transform energy networks for the future.

- **Energy network companies:** you can potentially access many millions of pounds for innovation projects that will make the difference. Stay engaged with the SIF so you are ready to respond to challenges, submit proposals and speed up the journey to a decarbonised energy system by 2035.
- **Innovators from all areas of industry:** your ideas could have a ready application in energy network innovation. Stay abreast of the SIF challenges, join the ideation process to help find answers, pitch your project ideas, build your business and play your part in helping the UK to become the Silicon Valley of energy.
- **Other potential project partners:** whether a local authority, community group, research organisation or other establishment with a role in energy innovation, look for opportunities to work with energy networks on projects which tackle SIF challenges.



More information

- 🔗 [SIF information on the Ofgem website](#)
- 🔗 [The Innovate UK Ofgem SIF YouTube channel](#)
- 🔗 [Read our first year Annual Report](#)
- 🔗 [Explore Innovate UK blog posts on energy innovation and the SIF](#)
- 🔗 [Listen to the energy network innovation podcast, Bright Spark](#)



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