

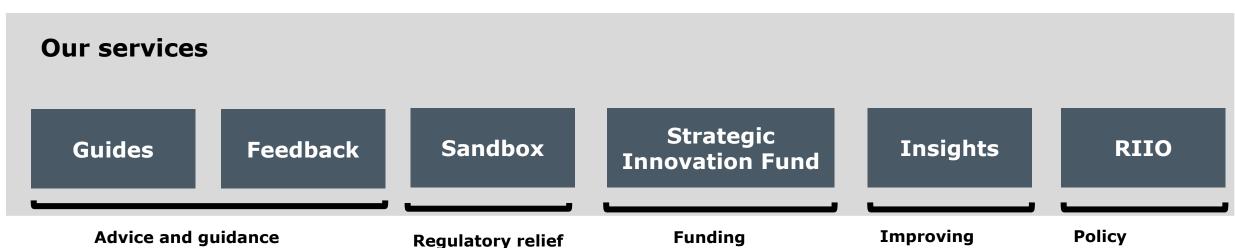
Energy Innovation SummitCurrent approach to innovation





Ofgem's Innovation Hub

Our mission is to provide regulatory support and advice to energy sector innovators, and to find and fund transformative innovation across the energy sector, to best enable and stimulate innovation (in technologies, products, services, business models and methodologies) that benefits current and future consumers and delivers Net Zero at least cost.



OFFICIAL-InternalOnly

regulation

development

Energy generation, transmission and consumption is changing rapidly



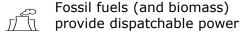
Electricity

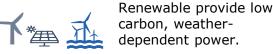
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Generation / Supply

Nuclear provides continuous baseline power, number of stations in decline.





Interconnectors enable export and import to Europe

Offshore production (primarily North Sea)

Undersea pipes enable export and import to Europe

Import of liquefied natural gas via ship

Transmission

Transmission network

transports electricity

at high voltage

Some industrial

demand supplied

by transmission

Distribution

Some small-scale generation feeds into distribution networks, some is colocated with demand

Distribution networks (regional monopolies) transports electricity at lower voltages

Demand

Suppliers (or retailers) are responsible for the supply of gas and electricity to end-consumers

> Deliver electricity to consumers, in particular for lighting and appliances. May play significant role in future heating and transport

In future, industry and households may supply power back to system at times of stress







Deliver gas to consumers, iii particular for heat consumers, in and hot water





Transmission network (national monopolies)

transports gas at high pressure

(regional monopolies) transports gas at lower pressure

Distribution networks

Future energy generation and consumption will be very different to today

Generation

More intermittent generation Higher need for LDES Larger total gen required

Distribution & transmission

Large capacity required Rapid decommissioning and retrofitting of gas infrastructure

Demand

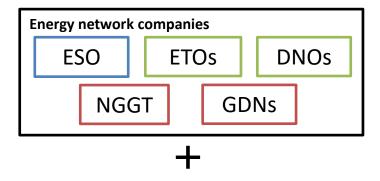
14m Evs by 2030 1.4m homes on heat networks by 2030 Heat-pump rollout to 11m+ homes by 2035 Innovation is required to enable this

From RIIO-2 to RIIO-3



Through the RIIO (Revenue = Incentives + **Innovation** + Outputs) price control process Ofgem sets out the mechanisms through which networks can fund innovation. We are currently in RIIO-2 (2021-2026) and are in the process of developing our position on RIIO-3 (2026-2031).

RIIO-2 settlement:



Partners

- Universities
- Large tech providers
- SME innovators
- Consultancies
- Research councils
- Other innovators

RIIO-3:.

 RIIO-3 gives us an opportunity to develop a framework that better enables innovation – we recently consulted to get feedback on RIIO-2 and explore improvements.

Business as Usual

- Totex Incentive Mechanism (TIM) incentivises deployment of innovative processes/technology
- Networks can also seek further funding for individual innovation projects (via re-openers)

Network Innovation Allowance (NIA)

- Each RIIO network licensee receives an allowance as part of their price control allowance, based on information provided in their Business Plan.
- £278m in RIIO-2, focused on smaller projects

Strategic Innovation Fund (SIF)

 £450m fund designed to drive the innovation needed to transform gas and electricity networks for a low-carbon future, focused on large, strategic projects

These 3 areas of funding/incentives (in theory) should provide networks and innovators with access to funding that is relatively low risk and spans the full TRL range.

How the SIF works



WHAT IT IS

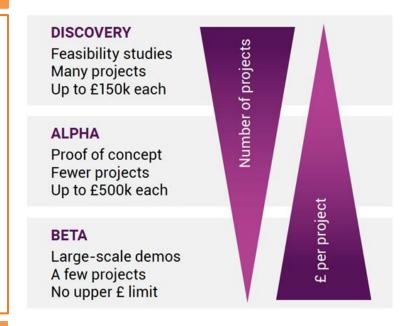
The SIF (Strategic Innovation Fund) is a £450m fund designed to drive the innovation needed to transform gas and electricity networks for a low-carbon future, with the investment from 2021-26 (ES0/GT/GD/ET) and 2023-2028 (ED).

- focuses on 'big, strategic, risky' projects, with projects typically being within the 3-8 TRL range.
- funding drawn through compulsory levy (consumers paying). Only licensees and their partners can access the fund.
- part of RIIO-2 price controls.

VISION & MISSION

- 1. To **find and fund** ambitious, innovative projects which can **facilitate the UK's transition to net zero**, **at lowest cost to consumers**.
- 2. To help transform the UK into the 'Silicon Valley' of energy.

SIF FUNDING MODEL



The SIF utilises a phased funding model (roughly aligned in scale to pre-seed, seed and Series A). This allows us to:

- De-risk the funding by ensuring scrutiny at each phase of funding
- Create a coordinated funding timeline for the innovation landscape to work to

SIF OPERATING MODEL

Understand market and system needs



Develop national and international partnerships and exchange knowledge

RIIO-3 – improvements we are planning on introducing



We are retaining BAU incentives, the NIA and SIF, but following market consultation are exploring improvements for RIIO-3 to better enable our strategic ambitions

Clearer direction to the market

- We are exploring how we can set clearer direction to the market on priority areas for innovation
- This will build on the current challenge setting process

A more programmatic approach to innovation

 We are exploring how we can introduce a more structured approach to innovation, such that networks and project partners are able to collaboratively deliver innovation to address system challenges

Empower SME innovators

 We are exploring how to best support SMEs to engage with innovation funding – this will improve the quality of work undertaken, as we seek transformative innovation

Enable Deployment

- We are seeking to introduce greater transparency on reporting on deployment, alongside increased scrutiny on deployment delivered
- We are also exploring financial support for deployment of innovation

We are seeking feedback on these changes at the moment – please do reach out to me and my team if you wish to input as part of the RIIO-3 innovation policy development process.