

**Ofgem Future Insights:
The Future of Networks – RIIO-2**

Breakout D: Innovation

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#RIIO2
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Technical and commercial innovation encouraged through:

Core price control incentives



Specific Innovation schemes

- **The totex approach** – to equalise incentives between capital expenditure and operational expenditure so companies not unduly incentivised towards ‘capex’ and consider novel ‘non-build’ solutions
- **The totex incentive mechanism (TIM)** – to encourage network company efficiency and innovation; sharing the resulting financial benefits between companies and consumers
- **Longer price control period** – to allow companies to retain the benefits from the TIM for longer

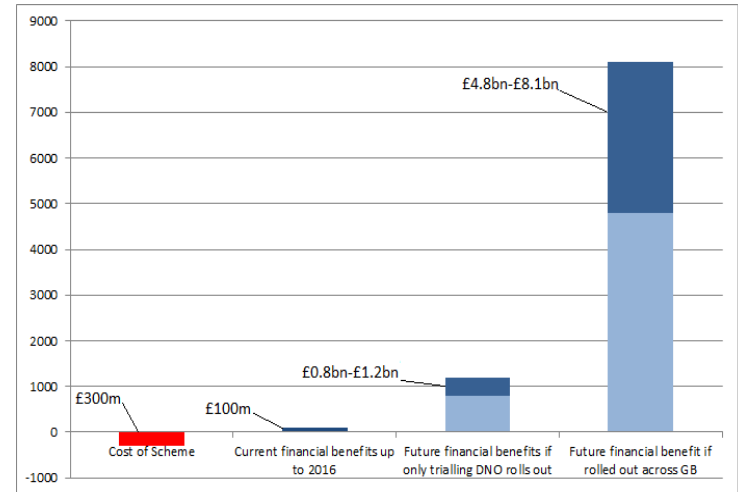
- **Network Innovation Allowance (NIA)** – part of each licensee’s price control allowance to be spent on smaller-scale research, development and demonstration projects
- **A Network Innovation Competition (NIC)** – to fund larger scale flagship development and demonstration projects
- **An Innovation Roll-out Mechanism* (IRM)** – to fund roll-out of proven innovations with carbon and/or environmental benefits in to business as usual



Have innovation schemes delivered value for money?

LCNF Study (Pöyry) – Key findings

- Between £4.8 - £8.1bn of financial benefits by 2030.
- In addition £600m - £1.2bn of carbon abatement benefits.
- Companies are more innovative
- Licensees engaging with customers and third parties at unprecedented level
- Current benefits estimated to be 1/3 of total cost
- Some solutions more likely to make it to BAU, eg connections for distributed generators



Network Innovation Review – Key Lessons

- We want companies to make a real contribution to the costs of projects
- We want to enhance access to the NIC for third parties
- We want the overview and direction for innovation projects to be clearer
- We want to reduce the administrative burden of the innovation mechanisms

Solutions already identified

- Companies to make a 10% non-refundable contribution to the costs of projects
- Companies to issue a call for third party led projects each year
- Companies to work together to develop innovation strategies for the gas and electricity sectors
- Make various changes to make the operation of these mechanisms less onerous



We intend to **transition more innovation spending to BAU** using the incentives framework

We propose to **continue to provide an innovation stimulus** where projects can demonstrate long-term value to consumers but are at higher-risk of under-delivery by the core RIIO-2 framework

We propose **3** broad areas for reform:

Coordination

Greater coordination with wider public sector innovation funding and support where this is in the interest of GB network consumers

Balance of support

Our focus for today...
Increased alignment of funds to support critical issues associated with the energy transition

Role of 3rd parties

Enabling increased 3rd party engagement and exploring direct access in light of disruptive innovation



Where it aligns with our duties, it is essential that any support we provide forms part of a strategic and coordinated approach. This includes linking up with Ofgem's Innovation Link and Regulatory Sandbox

The Government expects to invest more than **£2.5 billion (2015-2021)** in research, development and demonstration of low carbon energy across BEIS, DfT, DfID, Defra, Industrial Strategy Challenge Fund, UK Research and Innovation, Energy Systems Catapult

Smart Systems (incl. energy storage) - **£265m**

Power sector (incl. renewables) - **£638m**

Homes (incl. heat & energy efficiency) - **£184m**

£2.5bn Innovation Funding

Cross-Sector Clean Tech - **£387m**

Transport (incl. EVs & batteries) - **£184m**

Natural Resources - **£99m**

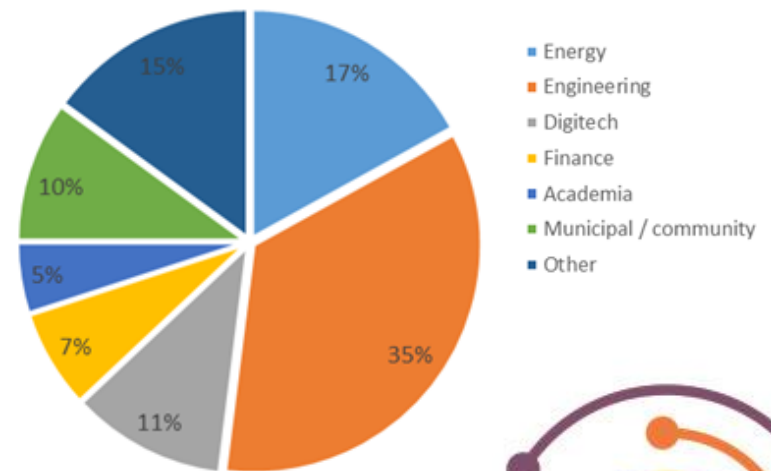
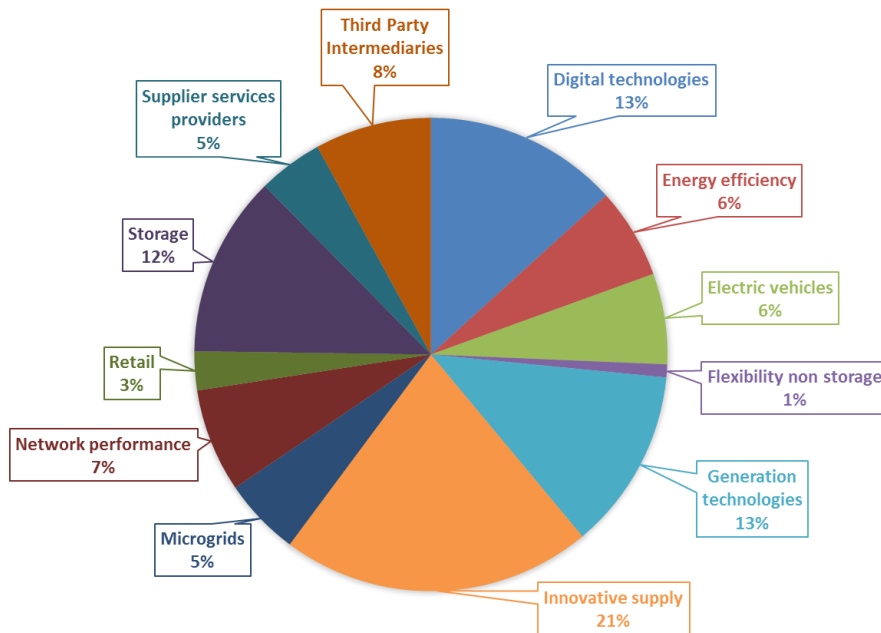
Business & Industry (incl. CCUS) - **£184m**

➤ **There are also other areas of public funding we need to consider to ensure that our stimulus effectively dovetails to provide greatest value to consumers**



Given the increasing scope and range of potentially transformative and disruptive new business models and innovative solutions (even since 2016) we want to seek views on ways in which we can build on increased third party engagement and explore the potential for direct access to funding

The Innovation Link have engaged a diverse group of **over 150 innovators...**



We propose to take a more targeted approach to innovation support in RIIO-2 by considering how funding can best contribute to some of the critical issues associated with the energy transition.

In order to effectively target the innovation funding we need to consider the following areas.

Framework Challenges

- We want to ensure that we have the right balance between what is incentivised through the framework and what support the stimulus provides.
- We want to minimise the barriers to innovation that could be created by the framework where possible and consider how best to encourage innovation as BAU.

Energy Transition Challenges

- We want to ensure that network companies are supported in driving the energy transition and the challenges that may be faced going forward.
- These challenges may change over time and we want to ensure that we create an innovation framework with greater alignment to these challenges whilst not creating a bias towards certain types of innovation

Prioritisation

- We want to ensure that any innovation supported delivers value for consumers.
- We need to consider how we will prioritise the innovation support and how we can make those decisions in an ever changing environment



1. What types of innovation are most at risk of being under-delivered without an innovation stimulus?
2. How do we identify and define “critical issues” associated with the energy transition?
3. How can Ofgem and stakeholders decide on which areas of innovation to prioritise, for example through the Network Innovation Strategies, coordination bodies (i.e. Energy Innovation Board)?



Ofgem is the Office of Gas and Electricity Markets.

Our priority is to protect and to make a positive difference for all energy consumers. We work to promote value for money, security of supply and sustainability for present and future generations. We do this through the supervision and development of markets, regulation and the delivery of government schemes.

We work effectively with, but independently of, government, the energy industry and other stakeholders. We do so within a legal framework determined by the UK government and the European Union.