

## ESO RIIO-2 Stakeholder group Innovation

### Our ambition

In RIIO-2 we want to build on the successes we've delivered from innovation during the current price control, learn from our mistakes, and ensure we undertake only the most efficient and beneficial innovation activities going forward. How we do this will depend on how the innovation stimulus is designed for RIIO-2, which we seek your opinions on. We also welcome your feedback on our current process for Innovation in the SO, as set out in the SO Innovation Strategy document, which will shape how we continue to innovate up to RIIO-2 and beyond. Our current Innovation Priorities are key to how we are focusing on the highest impact activities to help deliver the future energy transformation, and we need your help to ensure these remain relevant each year, reflecting the changing nature of the challenges facing the whole energy system.

### Innovation priorities

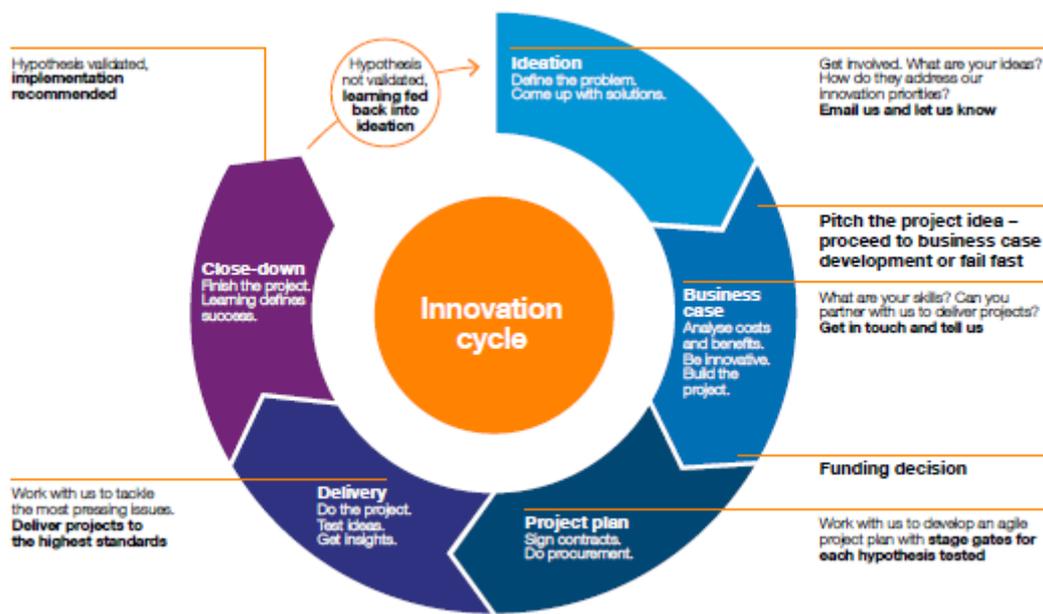
Alongside our RIIO-2 ambition document, we have published an updated, dual fuel SO Innovation Strategy<sup>1</sup>. This document provides detail on our approach to innovation beyond what was included in our RIIO-2 Ambition document by setting out our priorities, as well as explaining how we will work with industry partners to solve the challenges facing Great Britain's future energy system.

Our revised innovation priorities are aligned with our 2030 vision and ambitions, and were formulated in consultation to reflect not only the comments and feedback we have received, but also the changes we have seen over the last year within our industry. The table below shows the revised Innovation priorities for 2019/2020.

| #  | 2019/20 Priorities               |
|----|----------------------------------|
| 1  | System stability                 |
| 2  | Whole Electricity System         |
| 3  | Future Markets                   |
| 4  | Forecasting of supply and demand |
| 5  | Digital transformation           |
| 6  | Whole Energy System              |
| 7  | Whole Gas System                 |
| 8  | Constraint management            |
| 9  | New types of gas                 |
| 10 | System restoration               |

<sup>1</sup> Link to be provided when published

To enable agility and ensure strategic focus, we have developed a robust process to progress ideas into full innovation projects, as shown in the diagram below. At the centre of the Business Case phase is a comprehensive cost-benefit analysis that assesses how a project will deliver value against one or more of our innovation priorities, and weighs this against costs, benefits and unmitigated risks.



**How the SO delivers innovation**

The System Operator leads projects, is a partner on other organisation’s projects, and supports third party activities through contributing our time, expertise, and data to help solve our future challenges through an open innovation approach.

Our primary sources of regulated funding are:

- Network Innovation Allowance (NIA)<sup>2</sup> - An annual allocation dedicated to innovation activities led by the SO. This is funding for earlier-stage research and development, or small-scale demonstration projects
- Network Innovation Competition (NIC)<sup>3</sup> – An annual fund that is available competitively to all Network Licensees. This is funding for larger-scale projects aimed at proof of concept of more mature solutions.

We also support third parties’ bids for grant funding, e.g. Innovate UK or Research Council funding competitions, as well as enhance their bids by choosing to join their project consortiums.

<sup>2</sup> <https://www.ofgem.gov.uk/network-regulation-riio-model/network-innovation/electricity-network-innovation-allowance>

<sup>3</sup> <https://www.ofgem.gov.uk/network-regulation-riio-model/current-network-price-controls-riio-1/network-innovation/electricity-network-innovation-competition>

## Potential changes to innovation funding in RIIO-2

Ofgem's sector-specific consultation asked whether and how a new innovation stimulus could be tailored to the ESO, as well as what ESO-specific issues should be considered in the design of any new package.

Amongst the areas where we believe changes should be made to best take advantage of the SO's capabilities are:

- **Whole energy system** – the ESO innovation function is made up of staff able to work across both the Gas and Electricity System Operator businesses, and therefore is ideally placed to tackle the energy system transformation across the gas and electricity systems. We would see benefit in being able to pursue dual fuel projects to further accelerate the low carbon agenda.
- **Benefits** – the way we assess benefits is on a system-wide basis. We believe that quality of innovation should be assessed using both financial impacts and non-financial benefits. We advocate agreeing on and articulating a wider definition of benefits that includes not just direct efficiencies on our cost base, or on BSUoS and TNUoS, but also on environmental impacts, improvements in safety and reliability, increased quality of service, and learnings that will generate best practices as well as reduce long-term operational risks associated with the blind exposure to lower Technology Readiness Level (TRL) solutions.
- **Recovery Mechanisms** – We welcome the proposal for having our innovation funding calculated and recovered through a different mechanism to other licensees. We believe that innovation spend should be recovered through either BSUoS or TNUoS.
- **Funding internal/external split** – ESO innovation projects are normally significantly lower cost than Transmission Owner (TO) or Distribution Network Owner (DNO) projects due to the nature of our activities (i.e. no assets), but the fixed costs of innovation (e.g. legal work to set up contracts/ management/ processes/ IT) remain the same, and therefore make up a higher percentage of the overall cost compared with other licensees. Enabling the ESO to spend more of the funding internally – such as 50% - would allow the internal management costs to be fully supported through innovation project budgets each year.

We also have views on the innovation proposals set out in Ofgem's Core Document:

- **Undertaking more innovation as BAU.** We cautiously support this, although to be successful the cost of innovation would need to be fully integrated into business plans; this would require detailed estimation of resourcing required. Appropriate and agreed benefit-tracking would need to be in place to monitor results fairly. Innovation must also be carefully encouraged through the right incentives, to drive the ESO to take appropriate risks in pursuing innovative ways of delivering results. Ofgem's proposal for a wide-ranging cost disallowance mechanism does not provide this supporting environment.

We are concerned that this approach would leave little flexibility for addressing any new challenges that may arise after business plans are agreed, and would reduce the chance of pursuing longer-term benefits, as it would limit our scope to lower risk, higher TRL projects that typically solve immediate challenges. Lower TRL, higher risk projects that are more research-based and looking to solve long-term issues would not be funded, as it is impossible to accurately forecast the outputs and resources required.

- **Innovation Roll-out Mechanism (IRM):** In its current form, we have found IRM difficult to access, even though implementation can often be the most expensive part of the project lifecycle. Implementation funding could be a discrete portion of a licensee's innovation stimulus: set aside only for projects where there are wider system or consumer benefits, or where the licensee will not sufficiently benefit through existing incentives and implementation has not been included in the existing capital plan for IT.
- **Network Innovation Competition (NIC):** We agree with Ofgem's proposal to replace the NIC with a new funding mechanism structured around solving the most significant strategic challenges for the energy system. The challenge will be in reaching agreement on the areas that these projects should focus on. We believe there should be a separate piece of work owned by the Energy Networks Association (ENA), and supported by industry, to propose these focus areas.
- **Network Innovation Allowance (NIA):** We believe there should be continuation of the NIA or a similar mechanism in its place. It is critical that there is a ring-fenced budget to allow for higher risk, lower TRL projects that would not pass internal investment criteria. It is important that we have certainty over NIA funding to ensure continuity of projects beyond the end of T1; otherwise, licensees will undertake only short-term, low risk projects (i.e. successful results are guaranteed) in the run up to end of this price control. Ofgem's proposal for a wide-ranging cost disallowance mechanism would need to exclude any such allowance.

- **Third-party access:** We cautiously support third-party involvement in NIC projects; however, we see some risks in third parties having direct access to NIC funding. An independent arbitrator would be needed to filter proposals that have technical merit aligned to the new focus areas, meet governance requirements and can deliver sufficient consumer benefit. This arbitrator would also need to decide which proposal to select if there is duplication of ideas, while ensuring proposals don't adversely affect licensees' networks and existing planned activities.
- **Proposals prior to the commencement of RIIO-ED2:** We would like to understand Ofgem's proposals for electricity distribution companies in more detail, to ensure that approaches are complementary to those being applied to the ESO and others, avoiding any barrier to wider collaboration and innovative activities.

## Stakeholder engagement

Since the publication of our previous SO innovation Strategy in March 2018 we have been engaging with a wide range of stakeholders to further develop and update what we do. We have sought stakeholder feedback on our approach, the innovation priorities and how we work with industry partners to solve these challenges. To incorporate stakeholder feedback, we have used and plan to utilise a variety of channels, including webinars, ENA Working Groups, bilateral conversations and other collaborative activities, for example:

- Open Innovation Days (where we invite suppliers to work with SO experts to develop new project proposals)
- Low Carbon Network Innovation conferences (the main dissemination event for licensee innovation activity)
- NIC Engagement events (e.g. to engage with stakeholders on the Black Start and Power Potential projects)
- We attend the ENTSO-E (meeting with European Electricity TSOs to discuss best practice, common challenges etc.)
- Other ESO stakeholder events (e.g. Power Responsive, Operational Forum, FES launch)

In preparation for developing our options for RIIO-2 we are currently creating a stakeholder engagement plan, to discuss how we would like our role from 2021-2026 to evolve. This will include options that could be discussed and the potential cost. We will continue to use the existing engagement channels we have identified above while ensuring we target specific stakeholder that these opportunities may miss, to ensure we have a rounded view.