

Governance of the RIIIO-3 Network

Innovation Allowance and the Strategic

Innovation Fund: a consultation response

Keith Bell, University of Strathclyde, January 2026

Contents

1	Introduction.....	2
2	Purpose of innovation funding	3
2.1	What is innovation and what would it achieve?.....	3
2.2	Technology Readiness Levels	4
2.3	High-risk, high reward innovation	4
2.4	Innovation project partners and development of capacity to innovate.....	6
3	Intellectual Property Rights (IPR).....	7
3.1	What the draft NIA Governance document says about intellectual property	7
3.2	What the draft SIF Governance document says about intellectual property.....	9
3.3	Discussion: innovation and supporting innovators	11
3.3.1	Key aspects of IP governance and differences between NIA and SIF.....	11
3.3.2	Should third party innovators be entitled to own the IP they generate?.....	12
3.3.3	Reaching agreements between fund-holders and third party innovators.....	14
4	Reporting and knowledge transfer.....	15
5	Incentives on network licensees to use innovation funding and use it well.....	18
6	Differences in eligibility criteria between NIA and SIF.....	21

1 Introduction

This document forms a response to the Ofgem consultation on “Modifications to the RIIO-3 licences and associated documents” opened on December 16 2025 and closing on January 16 2026¹. Specifically, it provides comments on the draft “RIIO-3 NIA Governance Document” published on December 16, 2025 and “SIF Governance Document v2” also published on December 16, 2025².

Attention is drawn to a number of responses the author has made to previous Ofgem consultations either on or including the role and governance of innovation funding, or reports or papers on network innovation. These include:

1. Mahdi Habibi and Keith Bell, *Distribution Network Operators’ Areas of Focus in the RIIO-ED2 Period*, UK Energy Research Centre, October 2025³.
2. Mahdi Habibi, Mark Cassidy and Keith Bell, *Deployment of innovation for completed projects in the regulated energy networks space: report for InnovateUK and Ofgem*, University of Strathclyde, April 1st 2025.
3. A response in March 2024 to a consultation on the RIIO-3 Sector Specific Methodology Consultation.
4. A response in January 2022 to a call for evidence on RIIO-1 and RIIO-2 Innovation Funds.
5. A response in February 22nd 2021 to the consultation on the draft RIIO-2 NIA Governance Document.
6. Detailed comments on the draft NIA governance document published on January 25th 2021⁴.
7. A response by UKERC in October 2020 to the RIIO-ED2 sector specific methodology consultation⁵.
8. A response in April 2019 to the RIIO-2 consultation⁶.
9. A response by UKERC in May 2018 to the RIIO-2 Framework Consultation⁷.
10. Frame, D., Hannon, M., Bell, K., & McArthur, S. (2018). Innovation in regulated electricity distribution networks: A review of the effectiveness of Great Britain's Low Carbon Networks Fund. *Energy Policy*, 118, 121-132.
11. D. Frame, K. Bell and S. McArthur, *A Review and Synthesis of the Outcomes from Low Carbon Networks Fund Projects*, UKERC, August 2016⁸.

Research, development and demonstration to inform innovation in technologies and practices and address risks associated with the energy system’s transition to much lower emissions and resilience against climate change are essential activities that, without specific incentives and

¹ See <https://www.ofgem.gov.uk/consultation/modifications-riio-3-licences-and-associated-documents>

² See the “h” available at <https://www.ofgem.gov.uk/consultation/modifications-riio-3-licences-and-associated-documents>

³ See <https://ukerc.ac.uk/publications/distribution-network-operators-areas-of-focus-in-the-riio-ed2-period/>

⁴ See the consultation responses here: <https://www.ofgem.gov.uk/publications/riio-2-nia-governance-document-0>

⁵ <https://ukerc.ac.uk/publications/ofgem-riio-ed2-consultation-response/>

⁶ <https://ukerc.ac.uk/news/keith-bell-riio-2-consultation/>

⁷ <https://ukerc.ac.uk/publications/ofgem-riio-2-framework-consultation/>

⁸ <https://ukerc.ac.uk/publications/a-review-and-synthesis-of-the-outcomes-from-low-carbon-networks-fund-projects/>

funds, the existing approach to regulation of privately owned network companies would likely fail to encourage. I therefore welcome Ofgem's continued interest in the encouragement of innovation in the energy networks sector and the opportunity to respond to some questions related to innovation funding accessible to energy network companies and the National Energy System Operator (NESO), and how its use is governed.

2 Purpose of innovation funding

2.1 What is innovation and what would it achieve?

One general observation concerning innovation is that it involves uncertainty: it is, by definition, new and, by being new, there cannot be complete confidence about how it will work. An idea that seems good requires some investigation to establish that it really is good, or to develop it further to a point where it might be put to good use. There may be some potential downsides that ought to be understood before adopting it.

If the potential benefits of an innovation are significant and their realisation is some way into the future, it may be reasonable for the risk associated with the uncertainties to be socialised in some way, e.g. through taxpayers or network customers. This suggests two tests for the appropriateness of specific innovation funding for the network licensees:

1. The potential benefits are expected to exceed the cost.
2. The uncertainties are such that some socialisation of risk is appropriate.

Care is needed in respect of who will realise the benefits: energy users, e.g. in respect of a lower cost of using the network, improved reliability of supply or faster network access; other network users such as, again through a lower cost of using the network, or faster or more reliable network access; network owners or operators; or someone else, e.g. third party innovators?

The most obvious potential benefit to network owners or operators is improved return to shareholders. This might seem, on the face of it, to be sufficient incentive to these companies to invest in innovation. However, many innovations take many years to develop and prove with benefits accruing only after that and, often, it takes a number of years of deployment before sufficient benefits are accumulated to outweigh the costs. That will take the whole process beyond the length of a single, or even multiple, price control periods, adding regulatory uncertainty to all the other uncertainties associated with innovation. A risk-averse company, as energy networks companies may usually be expected to be, or a company seen by many investors as a steady, unspectacular, safe bet – again, a description that applies to many network companies – may choose not to take on the risk and not to invest their own money in something innovative. The evidence from before innovation incentives were introduced suggests that, in the absence of such incentives and associated funds, regulated network companies will, indeed, not invest in innovation⁹. However, as I will discuss in section 5, even then the incentives not just to use innovation but use it well, might not be strong enough.

⁹ See, for example, Jamasb, Tooraj, and Michael G. Pollitt. "Why and how to subsidise energy R+ D: Lessons from the collapse and recovery of electricity innovation in the UK." *Energy Policy* 83 (2015): 197-205.

2.2 Technology Readiness Levels

The level of uncertainty and risk associated with innovation is conventionally categorised by reference to ‘Technology Readiness Levels’ (TRLs). However, the standard definition was adopted from the defence and aerospace sector and, as a consequence, has a focus on technology to the neglect of methods or working practices. It does, though, address risk in respect of costs and successful operation. While some definitions refer to readiness ‘for full commercial deployment’, ‘commercial viability’ often seems to require something more. Moreover, in the course of development of an innovation, it is readiness for deployment that counts; it can be used with full confidence but the need for it also needs to be in place¹⁰.

Innovations that are close to commercial readiness might be favoured by the network companies and the National Energy System Operator (NESO) that are holders of Network Innovation Allowance (NIA) or are the sole parties entitled to lead projects for which funding has been won under the Strategic Innovation Fund (SIF). This will be especially the case for innovations that promise to reduce total costs faced by these network licensees – the holders of these innovation funds or gatekeepers to them¹¹ – in execution of their licence responsibilities. However, it could be argued that if the main benefits are to the network licensees or NESO, it should be their money that is put at risk in resolving the final uncertainties that stand between that innovation and full commercial readiness, not network users’ money as would be the case when using NIA or SIF. That is, uses of these innovation funds should not be focused solely on high TRL innovations. I therefore agree with what Ofgem proposes for paragraph 3.4 of the RIIO-3 NIA Governance in respect of projects’ TRL:

3.4 Therefore, we expect Licensees to maintain a balanced portfolio of Projects. This means that Licensees should not, for example, focus unduly on:

- *one Method or Solution,*
- *specific equipment, technology or methodology;*
- *Projects at high TRL; or a select group of Project Partners.*

There is no direct equivalent in the draft SIF governance to that reference to TRL. Instead, in eligibility criterion 3, there is reference to use of “RIIO innovation stimulus funding” being permissible for activities that would not happen but for its use. In spite of the limitations of standard TRL definitions, reference to TRLs in the SIF governance would be useful. (For further discussion of differences between NIA and SIF governance, see section 6).

2.3 High-risk, high reward innovation

One thing that the SIF governance encourages is what is described as “moonshots”, i.e. “radically ambitious, high-risk, high reward” ideas. Is network users’ money appropriate for this?

To answer that question, alternative sources of funding should be considered, both private and public. Some private investors are willing to take on such risk, but typically at quite a high price. The main avenue through which public funds in the UK are channelled in support of research, development and innovation is UK Research and Innovation (UKRI), which comprises various

¹⁰ For further discussion, see D. Frame, K. Bell and S. McArthur, *A Review and Synthesis of the Outcomes from Low Carbon Networks Fund Projects*, UKERC, August 2016

¹¹ The network companies and NESO are not the only gatekeepers to the money available under SIF – the competitive process administered by InnovateUK on behalf of Ofgem also needs to be navigated.

research councils and InnovateUK. UKRI say that they “will work with partners to shape a dynamic, diverse and inclusive system of research and innovation in the UK that is an integral part of society, giving everyone the opportunity to participate and to benefit”¹².

The research councils each have their own visions or missions. The Engineering and Physical Sciences Research Council (EPSRC) says that it “invests in world-leading research and skills to advance knowledge and deliver a sustainable, resilient and prosperous UK. We support new ideas and transformative technologies which are the foundations of innovations that improve our economy, environment and society. In partnership and co-investing with industry, we work to deliver both national and global priorities.”¹³

InnovateUK describes itself as “[helping] UK businesses to grow through innovation”. They also say that they “help companies access the expertise and equipment they need, build the partnerships that will help them go faster, and fund the innovation work through grants or loans”¹⁴.

There is nothing that I could easily find in either EPSRC’s or InnovateUK’s descriptions of their visions, missions or priorities that says anything about risk or how either organisation regards its role in sharing risk associated with innovation. However, EPSRC’s reference to “transformative technologies” suggests that it would be a good channel for what Ofgem calls “radically ambitious, high-risk, high reward” ideas. With such high risk, what would be better: socialisation of that risk across a smaller or larger base, or across network users or taxpayers? Experience suggests that radical ideas take a long time to be developed and proven¹⁵. How can funders be given confidence that, with high risk but apparently high reward ideas, if the idea comes off, they will really see the benefits? What form would the benefits take? To take one example, against a background of already high energy bills, is it better that work on “wireless power transmission, such as laser and electromagnetic beam-based technologies” – one of the SIF challenges in ‘round 5’¹⁶ – is funded by taxpayers or network users? Is it likely that a ‘large scale’ demonstration of it – as SIF governance seems to expect – will have been achieved within a maximum of 5 years of starting a SIF project on the subject? Does this particular topic fit the SIF aim of “[enabling] more rapid deployment of proven innovation” than NIA?

In answering those questions and when deciding how to allocate funding, it seems to me that a critical eye needs to be cast over proposals by people who know what they’re talking about with a wariness of sellers of ‘snake oil’¹⁷.

¹² See <https://www.ukri.org/who-we-are/about-uk-research-and-innovation/our-organisation/>

¹³ See <https://www.ukri.org/who-we-are/epsrc/>

¹⁴ <https://www.ukri.org/who-we-are/innovate-uk/>

¹⁵ See, for example, Robert Gross, Richard Hanna, Ajay Gambhir, Philip Heptonstall and Jamie Speirs, “How long does innovation and commercialisation in the energy sectors take? Historical case studies of the timescale from invention to widespread commercialisation in energy supply and end use technology”, *Energy Policy*, Volume 123, 2018.

¹⁶ See <https://www.ofgem.gov.uk/sites/default/files/2025-03/SIF-Round-5-publication-document-24.03.2025-FINAL.pdf>

¹⁷ My experience of review processes conducted by EPSRC and academic journals is that we are in the midst of a serious ‘review crisis’: relative to the number of proposals or submissions, there is an acute shortage of reviewers with the requisite knowledge and experience and enough time.

2.4 Innovation project partners and development of capacity to innovate

Paragraph 3.4 of the NIA governance says that “Licensees should not focus unduly on ... a select group of Project Partners”.

Should use of NIA – or SIF, for that matter - be spread around around either to foster competition between innovators or providers of what might be called R&D services, or to build a breadth of capability across different specialisms or locations? Or should it be used to ensure that there are centres of excellence of international standing that have the ability to conduct the most insightful and impactful research, or to develop products or services that will make the greatest positive difference for energy users and the UK economy? Should NIA or SIF be used to pick (potential) winners or to throw darts¹⁸?

As I discuss in section 5, in my experience, there are relatively few people across the network licensees and NESO who seem to understand the nature of innovation or what is required to develop and prove an innovation. I have met many people inside those companies who have ideas for how services to network users could be improved, or costs reduced, or energy decarbonisation better advanced. However, they are often overloaded with ‘the day job’. Although creativity exists outside of the network companies and NESO, there is often, for understandable reasons, a lack of knowledge of how the electricity or gas sectors are organised and how power systems and gas networks work. Therefore, one key goal of innovation funding should be the development and maintenance of capacity to innovate:

- within a network company or NESO;
- across third parties interesting in developing and deploying innovations for the energy sector.

As is stated in the draft RIIO-3 NIA governance:

2.3 Licensees must have in place efficient and effective processes that promote partnerships with third parties. This should include processes aimed at offering suitable support, information and guidance to innovators new to the energy sector, innovators less familiar with energy system challenges, to small and medium enterprises, and to early-stage innovators.

The last sentence of the above quote may be noted. It seems to support the idea that the development, among potential innovation partners, of capacity to innovate is at least part of the network licensees’ responsibility. As aid to the overall innovation process, it seems appropriate to me that funds from NIA could be used to do that.

To develop and maintain a capacity to innovate involves people learning new things: acquiring, and being helped to acquire, new knowledge and skills. To ensure that that happens, the set of Requirements for use of NIA might be supplemented. Or Requirement 4 – to “develop new learning” – can be understood to include the support of learning for the development and maintenance of capacity to innovate, in terms of both level of understanding and the scale of resources – people and facilities – to do it. Alternatively, notwithstanding paragraph 2.3 of the draft NIA governance, it might be asked whether that is the research councils’ job? Perhaps, but their role with respect to capacity building is, in my view, interpreted and applied much too

¹⁸ If you could pick Luke Littler as the dart-thrower, you would very likely have achieved both.

narrowly, focused only on universities and their capacity to do academic research¹⁹. The energy industry’s capacity to innovate – the regulated network companies, NESO, consultancies, manufacturers, generation or storage developers, retailers and so on – needs to be boosted if there is to be greater success from innovation. Moreover, there are significant advantages to be gained by doing so alongside the education and training of the next generation of energy sector practitioners and leaders coming through from higher education.

3 Intellectual Property Rights (IPR)

3.1 What the draft NIA Governance document says about intellectual property

In this section, I comment on a number of specific aspects of the NIA Governance document related to IPR. See [Table 1](#).

Table 1: Comments on IPR-related text from the draft NIA Governance document

Text from draft NIA Governance document	Comments
7.1 Projects financed by the NIA may create IPR either for the Funding Licensee or for any Project Partners (whether for one, both or jointly). However, Licensees must ensure the Dissemination of knowledge and protect consumers from excessive payments.	It would be useful if Ofgem would spell out that the requirement for new knowledge generated by a NIA-funded project to be disseminated and made available for use by any network licensee does <i>not</i> mean that the associated foreground IP must be solely owned by the network licensee that has used its NIA to support the project.
7.2 The Licensee is required to enter into contractual arrangements with Project Partners which reflect the arrangements described in this chapter. The purpose of these arrangements is to: <ul style="list-style-type: none"> • Ensure the Dissemination of knowledge generated by each Project; and • Protect consumers against paying excessively for products or approaches (in relation to which they have contributed to the cost of development by providing NIA funding). 	It is reasonable to want to protect consumers “against paying excessively for products or approaches (in relation to which they have contributed to the cost of development by providing NIA funding).” However, this must be balanced against Ofgem’s growth duty ²⁰ . This is further discussed in section 3.3.

¹⁹ It happens that ESPRC’s funds allocated to Centres for Doctoral Training have completely neglected energy networks and the energy system.

²⁰ New Statutory Guidance under Section 110(1) of The Deregulation Act 2015 was introduced by the UK Government in May 2024 under which “Specified regulators should give appropriate consideration to the potential impact of their activities and their decisions on economic growth, for the wider UK economy, alongside or as part of their consideration of their other statutory duties.” The “specified regulators” includes Ofgem – see <https://www.gov.uk/government/publications/growth-duty>. Ofgem’s “Forward Work Programme 2025/26” notes that, “We want to ensure that regulation is backing growth, not blocking it”. It also notes that, in December 2024, “the Department for Energy Security and Net Zero (DESNZ) announced a comprehensive review of Ofgem’s role, remit, powers, and duties” and that this review, *inter alia*, aims to “continue to support growth and innovation in the energy sector”.

Text from draft NIA Governance document	Comments
<p>7.4 Licensees must ensure that their IPR arrangements allow for the Dissemination of knowledge in respect of a Project. This knowledge may be the information, understanding or skills necessary to reproduce or simulate the outcome of a Project. It may also be the knowledge necessary to avoid a negative outcome. (This includes cases where Ofgem has agreed prior to Registration that certain IPR generated by a Project does not need to be shared).</p>	<p>The dissemination of new knowledge generated by NIA (and SIF) funded projects is essential to ensure that that knowledge can be widely used. When read alongside paragraph 7.9 of the draft NIA Governance, it should be clear that that does not mean that foreground IP generated by the project must be solely owned by the network licensee that has used its NIA to support the project.</p> <p>Care needs to be taken to ensure that clear and open dissemination of new knowledge is balanced with the interests of third party innovators in further development of their ideas. This is discussed in section 3.3.</p>
<p>7.9 Each Participant shall own all Foreground IPR that it independently creates as part of the Project. Where Foreground IPR is created jointly, it may be owned in shares that are in proportion to the funding and work done in its creation</p>	<p>This is a very useful clarification that third party innovators are likely to welcome.</p>
<p>7.10 The Licensee is required to consider and enter into contractual arrangements that have the potential to provide best long-term value to all consumers during and following the completion of the Project.</p>	<p>Might any network licensee be tempted to use this requirement to try to break what is required under 7.9? It should be spelled out that paragraph 7.9 still holds. Clear guidance should also be provided by Ofgem to steer the reconciliation of network users' immediate interests with the need to encourage third party innovators, ensuring that new products and services will be available to network licensees and that the wider UK economy can benefit from what those third party innovators do.</p>
<p>7.12 Third-party innovators are a key stakeholder and valuable contributor(s) in the innovation process. To help enable increased third-party involvement (as per paragraphs 5.8-5.12), Funding Parties must work together to develop and maintain illustrative guidance which helps third-party innovators understand the default IPR arrangements which underpin the operation of the NIA.</p>	<p>What is written in paragraph 7.12 is not good enough.</p> <ul style="list-style-type: none"> • My understanding is that the Energy Innovation Centre, funded by the energy network licensees, was tasked some years ago with coming up with standard IP arrangements for network innovation projects. I am not aware of any results from that initiative being published. • It should not be left to the "Funding Parties", i.e. the network licensees and NESO, to develop this guidance. The balance of power in contract negotiations already lies too much with them (perhaps naturally as gatekeepers to the funding). Many third party innovators report a lack of flexibility by

Text from draft NIA Governance document	Comments
	<p>network licensees and procurement and contracting issues as being the single biggest obstacle to development and deployment of third party innovations²¹.</p> <ul style="list-style-type: none"> • “Funding Party” is a misnomer. There is usually very little of a network licensee’s or NESO’s money involved; although they should be taking a leadership role in a project, they are just a funding administrator. That is, they would be better described as fund administrators or Fund Holders.

3.2 What the draft SIF Governance document says about intellectual property

In this section, I comment on a number of specific aspects of what the draft RIIO-T3 SIF Governance document says about intellectual property rights. Note that I do not comment on every aspect.

Table 2: Comments on IPR-related text from the draft SIF Governance document

Text from draft SIF Governance document	Comments
12.1. Ofgem recognise that the Projects financed by the SIF may create IPR either for the Funding Party or for any Project Partners (whether for one, both or jointly), and that these rights could restrict the dissemination of knowledge and also provide a valuable income stream from royalties earned.	This recognition is welcome.
12.2. We have created a default treatment for IPR where the Funding Party or any Project Partners deem any work product or output of the Project to be IPR. We expect that in the majority of cases they will comply with the default IPR conditions. However, we recognise that in some circumstances potential Project Partners may not be prepared to enter into agreements on this basis. We are therefore willing to consider alternative arrangements on a case-by-case basis. The information required to justify these alternative arrangements should be set out in the Application.	This suggests that, in the event of a Funding Party – better described as a Fund Holder ²² – and a Project Partner failing to reach agreement, Ofgem is willing to act as an arbiter. Is that true? If so, how long will it take in each case (agreement of contracts already often takes many months, something inconsistent with Ofgem’s intention for fast work in Discovery and Alpha phases of SIF projects) and how will Ofgem balance the immediate interests of energy consumers with Ofgem’s growth duty and support for innovators?

²¹ DESNZ Roundtable, “Barriers to Deployment in the UK Grid”, March 3rd 2025.

²² See the comment in [Table 1](#).

Table 3: Comments on IPR principles and objectives-related text from the draft SIF Governance document

Text from draft SIF Governance document	Comments
12.5. Accordingly, Projects should support the protection of Project Partner IPR where that protection is integral to future commercialisation. However, this protection must not inhibit the dissemination of learning that is relevant to the implementation of innovations across other Licensees' networks. To this end, learning shared through the SIF may exclude specific details that would compromise a Project Partner's commercial position, provided that the broader knowledge required to replicate outcomes, or avoid negative ones, remains accessible to other Licensees.	<p>The clarification that "Projects should support the protection of Project Partner IPR where that protection is integral to future commercialisation" while not inhibiting "the dissemination of learning that is relevant to the implementation of innovations across other Licensees' networks" is welcome.</p> <p>One implication of that is that sole ownership of foreground IPR by a network licensee should not be the default position. This should be clarified both for SIF projects and NIA projects.</p> <p>I am unclear what "avoid negative [outcomes]" means. Inform a decision to not pursue an idea that is unlikely to yield useful benefit relative to its costs? (Projects can produce evidence that an idea might be like that).</p>

Table 4: Comments on text from the draft SIF Governance document related to Scope, ownership and transfer of ownership of IPR

Text from draft SIF Governance document	Comments
12.8. Each Project Participant in the Project shall retain all rights in and to its Background IPR.	
12.9. Each Project Participant shall own all Foreground IPR that it independently creates as part of the Project, or where IPR is created jointly then it shall be owned in shares that are in proportion to the work done in its creation.	This is a welcome clarification of the default IPR position.

Table 5: Comments on text from the draft SIF Governance document related to licensing of IPR

Text from draft SIF Governance document	Comments
12.15. Relevant Foreground IPR is Foreground IPR that other Licensees will need to utilise in order to implement the Method(s) being developed or demonstrated in a Project. This must be identified in the Project reporting in sufficient detail to enable others to identify whether they wish to use that IPR. It is not expected that the confidential details of IPR would be disclosed in the Project reporting - only sufficient information to enable others to identify whether the IPR is of use to them. Where Background IPR is required to use the Relevant Foreground IPR, this must also be clearly stated.	"It is not expected that the confidential details of IPR would be disclosed in the Project reporting - only sufficient information to enable others to identify whether the IPR is of use to them." This is a useful clarification.

12.16. Foreground IPR within Commercial Products is not deemed Relevant Foreground IPR. However, these Commercial Products must be made available to other Licensees to purchase in line with the approach the Funding Party outlines in its Application.	This is a useful clarification.
---	---------------------------------

Table 6: Comments on text from the draft NIA Governance document related to IPR-based royalties

Text from draft SIF Governance document	Comments
12.29. Any royalties earned by a Licensee through Foreground IPR (whether Relevant Foreground IPR or not), are shared with consumers in proportion to the funds that consumers have contributed to the Project. Where a Licensee has transferred its rights, title or interest in or to any Foreground IPR in return for an income, this income is treated in the same way.	This is a useful clarification of what happens when a Licensee has “skin in the game”.

3.3 Discussion: innovation and supporting innovators

3.3.1 Key aspects of IP governance and differences between NIA and SIF

The ownership of the foreground intellectual property generated in the course of projects funded out of network licensees’ NIA, the SIF and their forerunners, and its treatment in contracts between network licensees and third party researchers and innovators, has been an ongoing problem. In part, this seems to have been recognised by Ofgem through the extensive text on IPR in the draft SIF Governance document. However, there seems to have been a marked failure by Ofgem to see the same issues as being relevant to NIA. It should go without saying that they are: in respect of the overall purpose of the funding being to drive forward innovation, the intention to encourage third-party innovators to contribute to network-related innovation and in the use of network users’ money to fund that work, there is no difference between NIA and SIF. As noted in the draft RIIO-3 NIA Governance, “Third-party innovators are a key stakeholder and valuable contributor(s) in the innovation process.” Sufficient investment in these third party innovators – in particular, technology companies and universities – is essential for their capacity to develop useful innovations to be maintained and expanded, potentially to grow to become significant employers and GDP generators as well as sources of ideas for the energy sector.

My experience, and that of many innovators, is that a number of network licensees or NESO make assertions about innovation funding Governance that are simply not borne out by what is written. Most particularly, the claim is often made that the requirement for results of projects funded out network licensees’ NIA or the SIF to be disseminated and made available to all other network licensees means that the licensee through which the funding has been channelled (note: only a very small proportion of the project funding is the licensee’s own money) must have sole ownership of the foreground IP. This is nonsense.

The new draft Governance documents for both NIA and SIF go some way to addressing that, noting:

- in paragraph 7.9 of the draft NIA Governance that “Each Participant shall own all Foreground IPR that it independently creates as part of the Project. Where Foreground IPR is created jointly, it may be owned in shares that are in proportion to the funding and work done in its creation”;
- in paragraph 12.9 of the draft SIF Governance that “Each Project Participant shall own all Foreground IPR that it independently creates as part of the Project, or where IPR is created jointly then it shall be owned in shares that are in proportion to the work done in its creation.”

These provisions are entirely appropriate. Otherwise, there are significant differences in the treatment of IPR between the draft NIA and SIF governance arrangements with much more detail in the latter. It is not clear to me why. In general, NIA governance text on IPR should be aligned with that in SIF governance.

3.3.2 Should third party innovators be entitled to own the IP they generate?

NESO seems recently to have adopted an approach to contracting with third party innovation partners and treatment of IPR that is, in effect, a copy and paste from how I understand it to have been done by Rolls Royce. However, NESO and Rolls Royce are two very different companies operating in very different contexts:

- NESO is publicly owned; Rolls Royce is privately owned;
- NESO does not sell products or services; Rolls Royce does;
- NESO does not operate in a competitive environment; Rolls Royce does.
- Rolls Royce’s success or failure in the competitive markets in which it operates depends, to a large extent, on having access to IP that its competitors do not; NESO is supposed to make IP accessed using Ofgem-sanctioned innovation funding available to other network licensees.
- Rolls Royce has experience in commercialising IP; NESO does not.

In my experience, NESO wants to have sole ownership of foreground IP developed by a third party in projects funded out of their NIA. (I don’t know if they are taking the same approach for SIF). In effect, they want to use network users’ money to buy the IPR outright in spite of terms being offered by the third party that would facilitate full compliance with NIA governance while allowing the third party to retain at least a share of ownership in the foreground IPR. Is NESO’s approach in the best long-term interests of energy users and the UK economy?

In the case of a university that is the third party, often the foreground IP is unlikely to be exploitable by the university as a commercial product or service. The university’s intention will be to fully publish the findings of the project, adding new knowledge available to everyone working in the field. It might therefore be argued that there is no reason for the university to own any share of the IPR. However, the same argument could be made the other way round: there is no reason for the conduit of the funding to have sole ownership. Instead, simple honesty in recognising where the IP originated would suggest that the fund-holder owns IP only to the extent that they have generated it.

As a regulated entity depending on network users’ money to fund the NIA or SIF, and because almost every network user is a taxpayer, what is really the difference between network users’ interests in respect of NIA and SIF and taxpayers’ in respect of the funds administered by UKRI? The Research Councils do not insist on having sole ownership of IP generated in projects they fund, and nor (as far as I’m aware), does InnovateUK (though perhaps it should ensure that it

owns a share when it funds commercial entities, in order that taxpayers can benefit from taking a share of the risk faced by those entities). The research councils' and InnovateUK's lack of insistence on their own ownership of IP can be seen in light of their missions which, as was discussed in section 2.3, includes "[helping] UK businesses to grow through innovation" and "[supporting] new ideas and transformative technologies which are the foundations of innovations that improve our economy".

Universities depend, in very large part, on public funding. To help reduce that dependency, governments over many years have expected universities to develop commercial spin-outs from their research and development activities. The opportunity to develop such spin-outs depends on retention of IPR. Meanwhile, university research groups' new knowledge builds on a substantial base of background IP, much of which is brought to projects supported through NIA and SIF. Lack of ownership of that IP would constrain a university's ability to offer its use freely into new innovation, including (and not limited to) that which is network-related.

If a university is expected to give up its foreground IPR in a specific project, it would be reasonable to expect it to charge significantly more for its work in that project. That fee can be recovered through network users' bills. Would it be in the interests of network users that that fee is bigger than it needed to be?

The 'Vision and Mission' for the Strategic Innovation Fund includes "Helping business: We enable diverse collaboration to drive change and support the best ideas to grow and scale, encouraging finance and investment to foster innovation." I totally agree with that. Why should NIA not have a similar goal? Insistence by a regulated holder of innovation funding – the network licensees or NESO – on sole ownership of foreground IP generated in NIA or SIF funded projects will jeopardise that Mission.

A further point that should be considered is what happens if the idea that is being explored within a NIA or SIF funded project proves sufficiently attractive for it to be taken forward and implemented or deployed. It has been argued to me by at least one fund-holder representative that, if they don't have sole ownership of the foreground IP, they might not be able to drive best value to network users when procuring the innovation for 'business as usual' roll-out.

In one case of which I'm aware, they wanted to extract commercial value for their own business. This possibility seems to have been anticipated by Ofgem with the requirement in the draft SIF Governance document in paragraph 12.29 that "Any royalties earned by a Licensee through Foreground IPR (whether Relevant Foreground IPR or not), are shared with consumers in proportion to the funds that consumers have contributed to the Project." A similar provision should be spelled out for NIA. However, this might appear to legitimise a fund-holder having sole ownership even of IP, justified in terms of earning of royalties that could be passed on to consumers, i.e. funders of NIA. One assumes that such royalties would be earned in competitive markets. Whether regulated entities with little experience of working in a fully competitive environment would be the best parties to do that is open to question. Nevertheless, in respect of both NIA and SIF and who owns IP, account should be taken of the effect of a network licensee or NESO holding all the foreground IP on incentives to third party innovators to make their own investments in innovations potentially of significant value to energy networks and their users.

In another case, the fund-holder wanted to be sole owner of the foreground IP in order to be able, in effect, to give the IP away to any party that might wish to tender for its deployment. They

argued that procurement law as it affects public bodies and regulated entities made this necessary. I'm not familiar with relevant laws in different parts of Britain so cannot comment on that directly. However, again, one can easily imagine the impact of such an approach on third party innovators and what encouragement it would give them to partner up with a network licensee or NESO in the development of an innovation. If they feel the costs of giving up IP outweigh the benefits of accessing NIA or SIF funding, they will simply step back. With innovation funding and venture capital already being scarce, there is the risk that a promising innovation will never reach commercial maturity. Indeed, one wonders how some energy system innovations that have reached deployment would have fared had they faced a demand from, for example, NESO, that NESO should have sole ownership of foreground IP.

Reactive Technologies is one third party innovator that has benefitted from NIA funding – it has had what I understand to have been a significant impact on the development of an idea for estimation of system inertia. I am assuming that Reactive Technologies owns their core IP. Judging by what has been published about the core methodology – very little that I have been able to find – they are guarding their IP quite carefully. This is entirely understandable. As it turns out, a large number of Reactive Technologies XMU devices have been deployed in Britain and NESO is, I understand, depending quite heavily on them for visibility of the dynamic behaviour of the power system in England and Wales. How much NESO is paying and can expect to continue to pay for access to XMU data is not something that I know²³.

As a final observation in this section, a comparison might be made between network licensees' or NESO's engagement with third party innovators and broadcasters' engagement with independent production companies, i.e. creators of IP. As I understand it, the BBC licenses content from these independent producers and is happy to nurture a community of such producers. In contrast, Netflix insists on owning all the IP²⁴. Do we want the regulated network companies and NESO to be more like the BBC or more like Netflix?

3.3.3 Reaching agreements between fund-holders and third party innovators

There is a domineering attitude by some network licensees or NESO and an imbalance of power in contract negotiations: the network licensee or NESO holds the money; the third party innovator needs money in order to progress their innovation. Very often, the individuals leading the negotiations on behalf of the fund-holder have no interest in the innovation itself and no sense of urgency in getting work on it started. The third party innovator, on the other hand, is often a small or medium sized enterprise with little wriggle room in terms of funding or human resources, or a small university research group with similarly limited wriggle room and a small number of researchers who would be relied on to do the core work but who are on short-term contracts (as is, unfortunately, typical in universities). To get the signing of a contract aligned

²³ My understanding is that XMUs do more than what phasor measurement units (PMUs, an established technology) are capable of. As well as part of an inertia estimation service, NESO has been using XMU data to inform itself on system behaviours such as regional rate of change of frequency and sub-synchronous oscillations. Usually, PMUs would be used for that, as they are for the system in Scotland. Although the XMUs perhaps negate the need for PMUs in England and Wales, quite why NGET has not installed them and made the data available to NESO is something that might be worthy of investigation.

²⁴ See the discussion on The Media Show, BBC Radio 4, December 31, 2025, <https://www.bbc.co.uk/sounds/play/m002nv99>

with the availability of key personnel is therefore crucial, something seemingly not understood by some of the fund-holders' representatives, evident through their lack of flexibility.

Negotiation of contracts needs to be done in a timely and flexible manner with due regard to the specific circumstances of a particular project and, if the evidence is generated that the innovation is worth taking forward, what that would mean not just for the fund-holder and network users but also the third party innovator's sustainability and the wider 'innovation ecosystem'. Disproportionate burdens in terms of, for example, personnel checks or data management need to be avoided. Whoever is involved in the negotiation from the fund-holder side needs to be properly accountable for enabling the project to happen and the innovation to be developed.

4 Reporting and knowledge transfer

I very much welcome the following condition included in the draft NIA governance document.

6.4 Project Progress Information should provide sufficient information for third parties to understand what has been learned from the Project and should be sufficient to allow other Licensees to replicate the Project and minimise the likelihood of unnecessary duplication of the Project using their NIA in future. If the RIIO-3 NIA Project generates IPR that Ofgem has agreed prior to Registration does not need to be shared, the Project Progress Information must provide sufficient information for other Licensees to determine whether the IPR would be of value.

To me, one notable, general feature of SIF-funded projects is the paucity of information that is published on what they have learned. Even if some details are withheld due to confidentiality of some IP (see the discussion in sections 3.2 and 3.3), one would expect to see a lot more than seems to be typical, and for it be easily accessible via the ENA's Smarter Networks Portal.

It is not clear to me why participants in SIF projects are not required, in a manner similar to that for NIA projects, to

provide sufficient information for third parties to understand what has been learned from the Project [which] should be sufficient to allow other Licensees to replicate the Project and minimise the likelihood of unnecessary duplication of the Project using [network innovation funding] in future. If the Project generates IPR that Ofgem has agreed does not need to be shared, the Project Progress Information must provide sufficient information for other Licensees to determine whether the IPR would be of value.

The reporting and tracking of what the network licensees are doing and achieving with innovation funding should be improved in order that network licensees can show that they are making good use of the available funds and that bill payers can feel confident in the benefits of the money they are providing. A portfolio of innovation projects can be expected to lead to positive outcomes, but the routes to get there are often complex with innovation projects and implementation building on, potentially, a number of earlier projects. However, an understanding of this depends on much better data than are available now. In particular, there should be:

- simple labelling of project motivations and activity types;
- clear mapping to past projects that are being built upon;

- reporting of both quantitative and qualitative expected benefits not just at the start of an innovation project but also at the end; and
- a clear description of next steps, including whether or not deployment of the innovation is planned and when and where it is planned to be rolled out. It should also include any deployment dependencies and, if the innovation is not to be deployed, reasons why not.

The success of an innovation project – as distinct from the innovations it is exploring or developing – should be judged on the basis of the quality of evidence it generates regarding the innovations. Solid evidence should be published in support of key assertions about an innovation, such as whether a reduction in distribution network voltages would lead to reductions in use of electrical energy and under what circumstances that can be expected.

Evidence should include, wherever possible, quantification of the likely costs and benefits of deploying the innovation. It should be noted, however, that it might not be possible to know the costs of ‘business as usual’ adoption with confidence, and that quantification of benefits is rarely straightforward:

- Before the start of a project, there is a dependency on modelling and/or a number of assumptions.
- At the end of a project, there should be evidence generated from suitably designed trials or experiments with comparisons to control cases. However, the benefits of any implementation will depend on where and when the innovation is rolled out.
- Once an innovation has been adopted, the counterfactual of system planning or operation or business practices without the innovation is rarely assessed.
- A particular project may be concerned with the gathering of basic understanding, essential to deciding whether opportunities or risks associated with certain products, services or practices merit further exploration and development, and to enable a quantified estimate of the potential benefits.

Tracking of the extent of interest in different types of innovation, motivations for innovation and reasons why an innovation is not subsequently adopted would be most easily done by use of a standard set of categories. A report I produced with some colleagues for InnovateUK and Ofgem in April 2025 proposed a number of such categories, used in a survey of the status of over 100 innovation projects funded by network innovation allowances or SIF²⁵.

Motivation for innovation, i.e. the ‘why’ of an innovation project or the kind of benefits expected:

1. *Enables improved asset management or safety.*
2. *Reduces network investment needs or provides cheaper investment alternatives.*
3. *Improves reliability & reduces service interruption impacts.*
4. *Reduces costs of network operation.*
5. *Enables access to cheaper energy or increases a customer’s flexibility in using the network.*
6. *Reduces uncertainty associated with new technologies being used by network users.*
7. *Enables reduction of network losses.*
8. *Enables reduction of greenhouse gas emissions from or embodied in network assets.*

²⁵ See Mahdi Habibi, Mark Cassidy and Keith Bell, *Deployment of innovation for completed projects in the regulated energy networks space: report for InnovateUK and Ofgem*, University of Strathclyde, April 1st 2025.

9. *Enables reduction of greenhouse gas emissions arising from the production or end use of energy.*
10. *Speeds up a customer connection.*
11. *Improves staff training or provides 'upskilling'.*
12. *Improves customer support & stakeholder information.*
13. *Identifies necessary reforms in market frameworks or regulatory alignment.*
14. *Reduces local environmental or visual impact compared to established approaches.*
15. *Improves resilience against climate change.*
16. *Other*

Type of innovation, i.e. the 'what' of an innovation project:

1. *Measurement, monitoring, protection, control or communication asset.*
2. *'Primary' network asset, i.e. operating at system voltage or pressure.*
3. *Software-based system or methodology for system-level decision support, monitoring or control.*
4. *Information gathering, data handling or risk assessment.*
5. *Integrated measurement, communication, decision and control system, i.e. 'automation'.*
6. *Market framework.*
7. *Energy storage system.*
8. *Software-based system or methodology for asset management.*
9. *Operation or maintenance procedure*
10. *Customer engagement process.*
11. *Customer information system.*
12. *Investment or operational strategy.*
13. *Regulation, standard or code change.*
14. *Other.*

Barriers to taking an innovation further development and/or adoption or deployment:

1. *Further development of the innovation is needed.*
2. *A change to regulatory or market arrangements is needed for it to be deployable by my company.*
3. *A 'production version' of the innovation needs to be developed.*
4. *The costs of deployment outweigh the societal benefits or benefits to network users.*
5. *A change to engineering standards is needed for it to be deployable.*
6. *This innovation superseded by other developments.*
7. *The costs of deployment outweigh the benefits to my company.*
8. *The need for it has not yet arisen.*
9. *A training programme needs to happen first.*
10. *The project concerned improvement of knowledge to inform future action rather than an innovation as such.*
11. *There is insufficient public acceptance for it.*
12. *The main developer is no longer in a position to take this innovation forward.*
13. *Change in government policy makes the innovation no longer viable.*
14. *My company's regulated income is insufficient to pay for deployment.*
15. *The innovation's main champion(s) is no longer available to support it.*
16. *Other*

Note that any single project might have more than one motivation, type of innovation or barrier to further development.

5 Incentives on network licensees to use innovation funding and use it well

As was discussed in section 2, the main intention in allowing network users' money to fund innovation-related activities led by network licensees has been to deliver, in aggregate for a portfolio of such activities, benefits to those users. However, it takes time, effort and expertise to set up and run a portfolio and ensure positive outcomes, plus some of the licensees' own money (a modest amount relative to the total funding). What incentives are there on the network licensees (including NESO) to do that?

There have been price control periods in which significant parts of network licensees' income were set in proportion to measured values of key performance indicators (KPIs). That would have set very clear commercial drivers for support of innovation that might, over the medium to long term, deliver improvements in those KPIs. If the performance-related incentives and innovation funding were set at the right levels, both the network licensees and network users could, over time, expect to see overall net benefits. However, there is uncertainty about the overall effectiveness of payments to a network owner or system operator related to measured outputs. For example:

- Customer interruptions (CIs) and customer minutes lost (CMLs) for electricity distribution network users have reduced significantly over the years, likely to be due, in large part, to the incentives related to them. However, it could be argued there is little useful scope for further improvements in relation simply to total CIs or CMLs²⁶.
- There used to be an incentive on the (then privately owned) transmission system operator in relation to the total cost of balancing services: if it was less than a given target, the system operator kept part of the savings; if it was more, the system operator had to pay part of the deficit. However, this was abandoned. My understanding is that this was because Ofgem felt unable to set an appropriate target level, wary of their dependency on advice from a system operator that stood to benefit from a target set to a certain value, and of 'information imbalance'²⁷.

The level of power losses on the distribution network has often been cited as something that DNOs could be incentivised to reduce. However, if incorrectly framed, it might lead to perverse outcomes: a preference for use of a fossil-fuelled generator that is local to demand instead of a renewable source that is further away; or replacement of a network asset before the normal end of its life with a lower loss equivalent, albeit at the cost of the embedded emissions associated with the new asset and its purchase and commissioning price.

²⁶ There might be useful scope for an incentive related to the tail of the distribution of durations of events in which networks users lack access to electricity. Such an incentive – or a direct licence requirement articulated in a relevant standard – could help to ensure that network users are never left without electricity for more than a certain number of hours, achieved by DNOs providing temporary, local sources of electricity and/or taking steps to accelerate restoration of a network connection.

²⁷ For as long as the Balancing Service Incentive Scheme (BSIS) existed, the system operator 'won' far more often than it 'lost'.

In any network licensee or system operator incentive scheme, care needs to be taken not only around the level of the incentive but also whether it is giving a penalty or reward for something that is actually largely within that party's control. For example, reduction of total carbon emissions associated with electricity production is affected by how quickly the network licensees provide network connections to low carbon generation and the extent to which network limits constrain operation of different resources. However, emissions are fundamentally affected by decisions taken by owners and operators of generation and the condition of the markets in which they operate.

All of that is simply to say that incentivisation of 'right' behaviours by network licensees and NESO is not straightforward. If there are no direct commercial benefits arising from innovation, should they take the trouble to use their innovation allowances, engage in SIF processes, and do those things well?

At the moment, it seems to me that one significant reason for network licensees and NESO to engage in innovation are to improve their reputation, and to win larger future sums of innovation funding. In the past, at least some network licensees seem to have used innovation funding to do things that should really have 'business as usual', e.g. using technology that was well-proven in other countries but new to them. The net effect for the licensee might have been that the asset's net cost to them was less than otherwise would have been the case, though it could also be argued that the use of an unfamiliar technology represented a risk; it might then be argued that the cost of its purchase and installation on the network was therefore appropriate for an innovation fund.

Ofgem seems to have some concerns about similar practices – of labelling established technology as innovative – happening today. See SIF eligibility criterion 9: "Projects must clearly demonstrate how they build upon existing or previous innovation initiatives and articulate how they provide additional value or advancement. ... This could also include international demonstrations, which are yet to be adopted in GB."

One thing that should also be a concern is the suggestion I recently heard that one network licensee would only use its NIA to support projects deliver immediate business benefits. I interpreted this to mean that NIA would be used only if a project could deliver a positive net present value to the network licensee within a year or two. Provided the NIA Governance conditions are followed, that would appear not to be breaking any rules though it does go against the spirit of NIA, which is to support initiatives that include risk but have the potential to deliver net benefits for network users and would take some years for net benefits to be realised. (See discussion in section 2.1).

I meet many highly motivated people in the network licensees and NESO with a passion for doing the right thing for network users and a keenness to drive change to serve network users better. However, there often seems to be either lack of resource dedicated to leading innovation projects or a lack of appropriate resource, i.e. people with knowledge of what driving an innovation depends on – appropriate articulation of key uncertainties, the specification of trials or demonstrations to generate evidence on potential solutions to problems, the reporting of evidence, the reaching of conclusions for next steps and so on – and of what the innovation concerns: what the need is, what options are available, what the key risks are and what 'good' looks like. Not every individual will have all that knowledge. A team needs to be assembled to lead the development and testing of an innovation or to review the impact of an innovation that has already been deployed. In practice, that leadership is often split with a divide between, on

the one hand, innovation departments charged with management of innovation projects and funding, and, on the other, parts of the company that would make use of innovations. Many – though not all – of the former seem to lack knowledge of energy systems or the conduct of research. The latter are depended on – and should, as a minimum be consulted on – for identification of opportunities for innovation or the need for research to build knowledge on risks or opportunities. However, although they might be involved at the start of a project, they often seem to lack the time to stay engaged with it, helping to steer it and maximise the chances of developing knowledge that can subsequently be put to use.

In spite of the efforts of a large number of thoughtful and creative network licensee and NESO employees, what is evident from past consultations as a long-term aim of Ofgem – the establishment of a ‘culture of innovation’ in the network licensees – seems a long way off. What could Ofgem do to move it along?

Unfortunately, right now, I don’t have any great ideas. One thing that should be done, however, is to improve the reporting and tracking of what the network licensees are doing and achieving, and that depends on much better data than are available now. As I suggested in section 4, that should include: simple labelling of project motivations and activity types; clear mapping to past projects that are being built upon; reporting of both quantitative and qualitative expected benefits not just at the start of an innovation project but also at the end; and a clear description of next steps, including whether or not deployment of the innovation is planned and when and where it is planned to be rolled out. It should also include any deployment dependencies and, if the innovation is not to be deployed, why not. Data gained from such reporting are likely to be extremely useful to Ofgem in informing new regulatory measures to improve innovation performance, and to other stakeholders in giving confidence that innovation funding is justified and is being well-used.

6 Differences in eligibility criteria between NIA and SIF

Although SIF and NIA are framed by Ofgem as separate innovation funding schemes with different administrative arrangements and different objectives (with SIF intended to support “higher-risk, higher-reward – transformative Net Zero Projects”), as is shown in [Table 7](#), there are many features of the SIF and NIA eligibility criteria that appear to have similar motivations or to aim at similar outcomes. The same set of network licensees is expected to lead both SIF and NIA projects, and expected to engage with many of the same third parties. It is likely to aid everyone’s interpretation and application of both SIF and NIA eligibility criteria if similar language is used in both when similar outcomes are intended.

Table 7: Commentary on difference between SIF and NIA eligibility criteria

SIF	NIA	Comments
1: Projects must address the Innovation Challenges set by Ofgem. This should include how the Project address overall ambitions of delivery of clean green energy systems to support climate ambitions.	1 – facilitate energy system transition and/or benefit consumers in vulnerable situations	<p>The “delivery of clean green energy systems” and facilitation of the “energy system transition” could be understood to be similar objectives. Where SIF and NIA objectives differ is</p> <ul style="list-style-type: none"> a) The SIF challenges typically emphasise certain, specific aspects of the delivery of clean green energy systems; b) The SIF Challenges generally do not emphasise the needs of consumers in vulnerable situations. <p>The SIF eligibility criteria highlight the needs of vulnerable consumers under criterion 2.</p>
2: Projects must have clearly identified potential to deliver a net benefit to gas or electricity consumers (whomever is paying for the innovation) and/or a whole system benefits. Whole system benefits refer to positive impacts across the broader energy system, including supply, demand, generation, system operation, and across energy vectors (eg gas,	2 – potential to deliver a net benefit to consumers 3.9 A Project must have the potential to deliver a Solution that provides a net benefit to consumers of the Licensee, as the context requires. This could include delivering a Solution at a lower cost than the most efficient Method currently in use on the Licensee’s network (or energy system in the case of	<p>These SIF and NIA criteria could be seen as broadly equivalent. There seems to be no particular reason why the examples given should be different.</p>

SIF	NIA	Comments
<p>electricity, heat). Whole system benefits could also include energy system cost efficiency, such as more effective markets, more efficient use of infrastructure. This does not constrain such Projects from delivering a benefit to consumers of other sectors (who are not paying for the innovation), allowing them to participate in and benefit from the energy transition.</p> <p>3.5. Benefits could include any consumer benefits (domestic, commercial, industrial) and/or consumers in vulnerable situations, for example, those resulting from the removal of barriers which prevent their participation in the market and from the promotion of their access to smart systems and their participation in the energy transition.</p>	<p>NESO), or wider benefits, such as social, environmental or wider energy supply resilience.</p>	
<p>3: Projects must involve network innovation. This means, for example, Projects must include activities ordinarily associated with the operation of the network or system operation, have the potential to keep the costs of networks (now or in the future) low and/or improve the services and products provided by Licensees for consumers in line with our Net Zero ambitions.</p> <p>3.7. Where Ofgem has the remit to fund such activities, Projects may involve non-network activities such as generation, storage, supply, demand and behind the</p>	<p>3 – involve Research, Development or Demonstration</p> <p>3.11 A Project must involve the Research, Development or Demonstration of at least one of the following:</p> <ul style="list-style-type: none"> • A specific piece of new equipment (including monitoring, control and communications systems and software); • A specific piece of new technology (including analysis and modelling systems or software), in relation to which the Method is unproven; • A new methodology (including the identification of specific new procedures 	<p>These two criteria seem to have similar motives but are not quite equivalent:</p> <ol style="list-style-type: none"> 1. NIA requires “Research, Development or Demonstration”. SIF requires innovation but, although it is noted under SIF criterion 5 that “testing of an innovation” or “installation” may be involved, SIF criterion 8 requires a “robust methodology” and SIF criterion 9 requires that “that insights and outcomes are accessible”, the SIF criteria make no reference to any need for the generation of robust evidence, something that is fundamental to reducing uncertainty around any innovation such that decisions on whether or not to take it forward

SIF	NIA	Comments
<p>meter activities (for example in-home consumer products / services) if (i) they have the potential to deliver net benefits to network consumers, (ii) would not happen but for the provision of RIIIO innovation stimulus funding and, (iii) in the case of third-party innovators, depend on network access. In these cases, we expect Projects to involve funding contributions from other sources (such as funding from other public bodies or private sector) as benefits will accrue not only to network consumers, but more widely across the supply chain.</p>	<p>or techniques used to identify, select, process, and analyse information);</p> <ul style="list-style-type: none"> • A specific novel arrangement or application of existing gas transportation, electricity transmission or electricity distribution equipment, technology or methodology; • A specific novel operational practice directly related to the operation of the GB Gas Transportation System, electricity transmission or electricity distribution; or • A specific novel commercial arrangement. 	<p>or deploy it can be taken with confidence. The generation of evidence to reduce uncertainty is one of the key aims of Research, Development or Demonstration.</p> <ol style="list-style-type: none"> 2. SIF explicitly permits “non-network activities” (under certain conditions) whereas NIA does not forbid them. However, the SIF criterion also requires that <ol style="list-style-type: none"> a. “Projects must include activities ordinarily associated with the operation of the network or system operation, have the potential to keep the costs of networks ... low and/or improve the services and products provided by Licensees for consumers.” b. funding contributions should be made from other “non-network” sources, and makes the assumption that benefits will accrue “across the supply chain”. To the extent that “non-network” parties would accrue benefits, it seems reasonable that those parties, specifically, should invest in development of the innovation. This could be spelled out more clearly. 3. The NIA criterion cites a “Method” as being unproven in relation to a technology. The draft NIA governance document defines a “Method” as being a way of investigating or solving a “Problem”, i.e. an “issue that needs to be resolved or better understood”. Is the way of

SIF	NIA	Comments
		<p>investigating or solving an issue unproven, or is the technology unproven?</p> <p>4. What counts as a “methodology”, cited by the NIA criterion, could – usefully – be interpreted quite widely.</p>
<p>4: Projects must support or, at a minimum, be consistent with the development and growth of competitive markets. The intention for this Eligibility Criterion is to support overall economic growth and address elements such as market failure, as the growth of competitive markets is intended to yield greater downstream benefits for consumers. Where appropriate and necessary, the level of complexity of contractual arrangements between Licensees and third parties shall be reasonable in the circumstances. For example, where there is no contractual precedent because an activity is very novel, or the cost of the third-party activity is low as compared to overall Project value, or Projects trial new market arrangements, a proportionate approach may be taken.</p>		<p>The NIA eligibility criteria make no mention of “competitive markets”.</p> <p>It is unclear to this reader what the SIF criterion is really getting at when it says that “a proportionate approach may be taken”. Support for economic growth and contracting with providers of novel products or services when those products or services are being deployed is discussed in section 3.3 above.</p>
<p>5: Projects must be innovative, novel, and/or risky. Projects must generate new learning and entail a degree of risk, so that they would not otherwise be taken forward as business-as-usual activities or funded through other mechanisms within the price control. For example, it is permissible for</p>	<p>5 – be innovative</p> <p>3.15 A Project must be innovative (i.e. not a business as usual activity) and have an unproven business case entailing a degree of risk warranting a limited Research, Development or Demonstration Project to demonstrate its effectiveness. This could</p>	<p>These criteria appear to be similar except in that the NIA version makes explicit reference to “Research, Development or Demonstration” whereas the SIF criterion cites the generation of new learning. In respect of what counts as innovative, both criteria should be read alongside, for SIF, criterion 9 and, for NIA, criterion 6.</p>

SIF	NIA	Comments
elements of an innovation Project to involve less risk to enable the testing of an innovation, for example a Beta Phase may involve installation of some mature technologies to enable the wider objective of the trial. This should be factored into the level of funding sought.	include Projects which are untested at scale, or in relation to which there are risks, which might prevent the widespread deployment of the equipment, technology or methodology.	
8: Projects must be well thought through and have a robust methodology so that they are capable of progressing in a timely manner. As decision-maker in relation to the SIF Funding, Ofgem must be reasonably confident that Projects are deliverable with, for example, robust Project plans, cost breakdowns, and risk assessment. Where applicable, Projects should show risk mitigation measures, for example, the inclusion of Ofgem Stage Gates.		It should be made clear that the priority in respect of a “robust methodology” for the reduction of uncertainty associated with a novel product, service or practice is the generation of new knowledge and of evidence to give confidence in that new knowledge. That is, investigations, tests, trials or demonstrations should be designed with the aim of generating robust evidence.
9: Projects must clearly demonstrate how they build upon existing or previous innovation initiatives and articulate how they provide additional value or advancement. These initiatives should include sector-wide programmes and can also include Projects beyond NIA or previous SIF Phases. This could also include international demonstrations, which are yet to be adopted in GB.	6 – not lead to unnecessary duplication 3.17 A Project must not lead to unnecessary duplication of any other Project, including but not limited to IFI, LCNF, NIA, NIC or SIF projects already registered, being carried out or completed. 3.18 Process requirement 6: To demonstrate that the Project meets eligibility requirement 6, the Licensee must demonstrate in its PEA that no unnecessary duplication will occur as a result of the Project, and evidence how the Project builds on existing or previous initiatives in their own portfolio, in other countries,	See comment for SIF criterion 5 and NIA criterion 5.

SIF	NIA	Comments
	<p>sectors or Licensee areas. If applicable, the Licensee must justify why they are undertaking a Project similar to other network innovation Projects ongoing or undertaken previously.</p> <p>3.19 Unnecessary duplication is likely to occur if the Project is not expected to lead to new learning, for example where a Project involving a piece of equipment, technology or methodology has been undertaken in one location and is then repeated in another location. However, for the avoidance of doubt, the following are unlikely to be considered unnecessary duplication:</p> <ul style="list-style-type: none"> • Projects that address the same Problem, but use a different Method; and • Projects that use the same technology, equipment or methodology but will, upon Project completion, have reached different TRLs. 	
<p>11: Projects must demonstrate a clear approach to open data, knowledge sharing, and dissemination of learnings.</p> <p>This means ensuring that insights and outcomes are accessible to relevant stakeholders and contribute to broader sector impact.</p>	<p>4 – develop new learning</p> <p>3.13 A Project must develop new learning that can be applied by other Licensees.</p>	<p>NIA requires both addition to knowledge and sharing of that knowledge in such a way it can be applied by network licensees.</p> <p>SIF requires sharing of learnings – whether new or not – and knowledge with all “relevant stakeholders” and a contribution to “broader sector impact.”</p>