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The network innovation review: our consultation proposals

Consultation

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Overview:

This consultation document is seeking stakeholders' views on changes we are proposing to the Network Innovation Allowance (NIA) and Network Innovation Competition (NIC). These schemes operate in the gas and electricity network price controls to fund research and trial projects for transitioning to a low carbon economy which bring benefits and value for money for consumers.

We've reviewed the findings from an independent review of an earlier innovation mechanism, and we've also carried out a post-implementation review of the governance arrangements for running the schemes. As a result we are proposing several changes to the schemes. We think there are significant opportunities to make the NIC and NIA even more effective and further increase the value for money to consumers. Our proposals include reducing the future level of funding available for the electricity NIC, options to increase the involvement of third parties in the schemes, requiring a non-returnable contribution towards project costs from network companies, as well as some other changes to reduce the administrative burden of participating and running the gas and electricity innovation schemes.

We are seeking stakeholders' views to this consultation by 6 February 2017.

Context

Ofgem[1] is the Office of Gas and Electricity Markets which regulates the electricity and gas industries in Great Britain. Our principal duty is to protect the interests of existing and future gas and electricity consumers.

One way in which we protect the interests of consumers is by regulating the network companies though price controls. We set price controls to specify the services and level of performance the network companies must provide, and to restrict the amount of money the network companies can recover from consumers through network charges.

The energy system in Great Britain is undergoing rapid and significant change. As a consequence, network-related costs could increase significantly from connecting large volumes of generation, as well as managing the impacts of new generation patterns on network operation. We think it is in consumers' interests that the network companies respond creatively to the challenges posed by these changes. New approaches could deliver more efficient and timely services needed by network customers and lessen the cost impact on consumers. This might be achieved, for example, by developing and adopting new technology, different operational practices and novel commercial arrangements.

Monopoly network companies don't face strong incentives to focus on innovating. To help encourage the companies to play a full role in exploring opportunities we put innovation at forefront of the price control framework RIIO (Revenue = Incentives + Innovation + Outputs). This framework was introduced for gas distribution companies (RIIO GD1) and electricity and transmission companies (RIIO T1) in 2013 and for electricity distribution companies (RIIO ED1) in 2015.

In RIIO there is a time-limited innovation stimulus package to encourage the network companies to adopt a more innovative culture. Two key mechanisms of the package are the Network Innovation Allowance (NIA) and the Network Innovation Competition (NIC). Together the schemes fund the companies to conduct research and run network-related trial projects for transitioning to a low carbon economy, where these offer cost savings and/or wider environmental benefits for customers. The funding provided to companies under the schemes is paid for by consumers.

[1] The terms 'Ofgem', 'the Authority', 'we' and 'us' are used interchangeably in this document.

Associated documents

Reviewing the benefits of the Low Carbon Networks Fund and the governance of the Network Innovation Competition and the Network Innovation Allowance, December 2015 consultation:
https://www.ofgem.gov.uk/sites/default/files/docs/151217_-_two_year_review_open_letter_au.pdf

Network Innovation Competition Governance Documents:
https://www.ofgem.gov.uk/publications-and-updates/version-2-1-network-innovation-competition-governance-documents

Network Innovation Allowance Governance Documents:
https://www.ofgem.gov.uk/publications-and-updates/version-two-network-innovation-allowance-nia-governance-documents

EA Summary of Learning: https://www.ofgem.gov.uk/publications-and-updates/ea-technology-s-summary-low-carbon-network-fund-learning

Poyry and Ricardo Energy evaluation report:
http://sharepoint2010/sgg/Transmission/tca/Transmission_Co_Authoring_Lib/Innovation/Reviews/september%202016%20consultation/Innovation%20Review%20consultation.pdf

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Executive Summary

In the past, monopoly network companies have generally undertaken less innovation than is optimal. One reason for this is that cost savings resulting from innovations are shared with consumers and lead to lower cost allowances in future price controls. At a time when there is significant change in the energy system, the companies need to be innovative to adapt networks to meet future challenges. They also need to get the most out of their existing capacity. Innovation is critical for transitioning to a low carbon economy at lowest cost to consumers.

The RIIO price control framework is designed to encourage the network companies to innovate in the delivery of good value network services. For example, an 8 year price control period means companies can benefit for longer by successfully innovating. The price control also includes time-limited schemes to award funding to the network companies for innovative projects. These are the Network Innovation Competition (NIC) and the Network Innovation Allowance (NIA).

Currently the electricity NIC makes £90 million available annually for projects. This comprises £30 million from the transmission price control (RIIO T1) and £60 million from the electricity distribution (RIIO ED1) price control. However, the contribution from RIIO ED1 was only set for the first two years (ie 2015 and 2016).

To determine the RIIO ED1 funding for its remaining six years (2017-2023) we've evaluated the Low Carbon Network Fund (LCNF). The LCNF was introduced in the previous electricity distribution price control to encourage the companies to be more innovative in delivering low carbon connections and other network services. In addition, we've also carried out a post implementation review of the governance arrangements for the NIC and NIA to ensure these operate effectively.

This consultation sets out our findings from the above reviews. We are now seeking stakeholders' views on our assessment and our proposals, which cover:

1. Delivering greater value for money to consumers from innovation
2. Funding available in the electricity NIC for the remainder of RIIO ED1
3. Enabling third party access to the NIC
4. Operational improvements to the NIC and NIA schemes

Delivering value for money

We think there is reasonable evidence that the price control innovation schemes are providing value for money and helping to create a more innovative culture in network companies. An independent evaluation of the LCNF scheme estimates net benefits of between £800 million and £1.2 billion when projects are rolled out by the trialling companies. The potential net benefits could be up to a six-fold increase when a GB-wide rollout is factored in. Moreover, the evaluation remains positive even when tested using more cautious assumptions such as a lower level of benefits attributable to the scheme and a lower proportion of cost savings passed on to consumers.

Nonetheless, we think there are several opportunities to increase the value for

money for consumers from the schemes. We are proposing:

1. To introduce a licence requirement for the network companies to take a more strategic view and to work together to develop an industry innovation strategy. We think a strategy would help focus innovation activities on key energy challenges, and ensure learning is shared more widely and help avoid duplication.

2. To remove the Successful Delivery Reward (SDR) arrangements from the NIC. This would mean the network companies make a non-refundable 10% contribution towards the project costs. Under the SDR the companies typically get back this amount upon successful completion of the project. We think it is appropriate to remove the SDR as it increases the stake companies have in a project and will encourage them to bring forward better projects.

3. To remove the provision for companies and other parties to recover bid preparation costs (BPC) from the NIC fund. The current provision is an anomaly compared to other research and development funding mechanisms. Removing the BPC will mean that the full funding paid for by consumers is used on projects and not the cost of developing submissions.

Funding available for 2017 to 2023

A total of £90 million has been available in the electricity NIC for the first two years of the RIIO ED1 period. In recent years the companies have submitted bids for £60 million and we've awarded around £40 million annually. We do not think there is a strong case for increasing the level of funding – this is unlikely to have much effect because the funding available has significantly exceeded the value of project bids.

We've considered the case for maintaining the current level of funding i.e. £90 million versus reducing the level of funding slightly to £70 million. On balance, we think that reducing the level of funding slightly to £70 million will help increase the value of the scheme from consumers' perspective. We expect increasing the competition for funds will help to drive up the quality of the project bids. In combination with other changes, such as encouraging third party access, we'd expect to see more collaborative approaches which will help leverage the benefits from the consumer funded innovation schemes.

Increasing third party involvement

Under current legislation third parties can only bid for projects if partnering with a network company. Although third parties cannot bid independently, there is significant third party involvement in the NIC. In addition, the network companies can only spend 25% of its NIA allowances internally (i.e. 75% must be delivered by third parties).

However, there could be issues if the network companies are unwilling to bring forward ideas that could be very disruptive for the sector or undermine current business models.

We think the benefits of the price control innovation schemes could be further enhanced by more involvement of third parties. Greater third party participation will help increase the pool of technology and ideas. Therefore, we are consulting on the following proposal to help increase the involvement of third parties in the NIC.

- Requirement on network companies to issue a call annually for ideas from third parties and to respond to these publicly from 2017. We think this option would help increase transparency and promote engagement with third parties. We note two companies have previously engaged with third parties by using this approach with successful outcomes for some bids.

Allowing direct access to the NIC for third parties would require legislative changes. Direct access for third parties goes beyond the original policy rationale for introducing innovation schemes which was to address disincentives in the price control framework for network companies to innovate. If it were introduced we recognise there could be some practical issues with managing the process and governance of projects, if these involve unregulated entities. Although most stakeholders didn't support direct access when we previously considered this issue in 2011, we'd be interested to hear if views have changed.

Operational improvements

The NIC and NIA governance documents set out the rules, processes and administration of the schemes for gas and electricity. Having reviewed the schemes' implementation to date we are proposing several changes to the governance arrangements. Some proposals are to reduce the burden on network companies and Ofgem. For example, we are proposing to make it less onerous for companies to change NIC projects after funding has been awarded. This will give companies more flexibility in running their projects without us having to approve minor changes. We are also proposing some changes to ensure the effectiveness of the schemes. For example, we have set out some proposals to improve our visibility and understanding of projects that are being funded through the NIA.

Next steps

We are convening an Innovation Working Group on 11 January 2017, at our London offices, so that we can discuss our proposals. We also intend to cover the proposed drafting changes to the governance documents. For further information on this event please email networks.innovation@ofgem.gov.uk.

We welcome responses to the issues and specific questions set out in this document by 6 February 2017. Responses should be sent, preferably by email, to networks.innovation@ofgem.gov.uk or in writing to:

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If you wish to have your response remain confidential, please clearly mark the document to that effect. Unless marked confidential, all responses will be published on our website.

1. Background and scope of our review

Chapter Summary

This chapter provides some background on the provision of innovation funding in the RIIO price control framework and explains the scope of our review.

Introduction

1.1. In regulating energy networks, we promote innovation which brings benefits and value for money for consumers. In December 2015 we consulted stakeholders for views on the governance of some of the RIIO innovation funding mechanisms for electricity and gas, and the level of funding that should be available in the electricity Network Innovation Competition (NIC) for the period 2017 - 2023. A summary of the consultation responses is given in Appendix 1.

1.2. We have considered responses to that consultation, and also the findings from an independent evaluation we commissioned of the Low Carbon Network Fund (LCNF), a previous innovation mechanism in developing our proposals. This consultation is seeking your views on our proposals.

The need for innovation by network companies

1.3. The energy system is undergoing rapid and significant change. Electricity is increasingly generated by small intermittent generators connected to the distribution network. On the gas network 'renewable' sources of gas are being injected into the network. Network-related costs could increase significantly from the current level. We think it is in consumers' interests that the network companies respond creatively to the challenges posed by these changes. New approaches could deliver more efficient and timely services needed by network customers and lessen the cost impact on consumers. This might be achieved, for example, by developing and adopting new technology, different operational practices and novel commercial arrangements.

1.4. Monopoly network companies generally undertake less innovation than is optimal. There are a number of reasons for this lack of innovation, most notably because savings resulting from innovations are shared with consumers and lead to lower cost allowances, for network companies, in future price controls.

1.5. The need for innovation is critical when the energy system is changing as much as it is now, with new sources of generation and types of load connecting to the network. The challenge to networks is to facilitate more customers' requirements for using the network with the assets they have rather than making more capital expenditure where there may be other methods of providing capacity.

We recognised these issues when we undertook a review of the price control framework we use to regulate the network companies.[2]

Innovation within the RIIO framework

1.6. Encouraging the network companies to innovate in providing network services and outputs is a key element of the RIIO model. Several features of the price control framework are intended to bring about more innovation by network companies. These include:

- Eight year price controls which mean network companies can retain the benefits of innovation for longer before their allowances are re-set at the next price control review; and
- The 'totex' approach which equalises the incentives between capital and operational expenditure meaning there are not undue incentives towards investing in capital expenditure.

1.7. In addition to the generic features of the price control framework we also introduced specific innovation funding mechanisms. These mechanisms are intended to act as an initial catalyst to bring about culture change within the businesses that run the gas and electricity networks in GB. Eventually we expect the features in the price control framework to be enough to incentivise innovation by licensees.

1.8. The table below summarises the NIC and NIA schemes.

	The Network Innovation Competition (NIC)	**The Network Innovation Allowance (NIA)**
Purpose of scheme	To fund large flagship development and demonstration projects.	To fund smaller research, development and demonstration projects.
How funding is awarded	Companies submit bids and compete for project funding	Allowance set at start of price control based on quality of company's own innovation strategy
Funding available each year	£90 million for electricity networks £20 million for gas networks	£61 million

1.9. In addition to the schemes above there is also the Innovation Rollout Mechanism (IRM). This is intended to accelerate the rollout of proven innovations into business as usual where the company is not going to benefit from the rollout within the price control period. The IRM is not within the scope of our review or this consultation.

[2] https://www.ofgem.gov.uk/network-regulation-riio-model/background-rpi-x20-review

1.10. The £90 million electricity NIC is comprised of £30 million from the transmission (RIIO T1) price control and £60 million from the electricity distribution (RIIO ED1) price control.[3] However, the £60m contribution from the RIIO ED1 control was only set for the first two years of the regulatory period (ie 2015 and 2016).

1.11. The amount available annually under the gas NIC is £20 million. This has been set until the end of the RIIO T1 and RIIO GD1 price control periods.

Scope of our innovation review and this consultation

1.12. The funding commitment from the RIIO ED1 price control to the electricity NIC was set for only the first two years. As part of our RIIO ED1 strategy we said we'd evaluate the Low Carbon Network Fund (LCNF) – an innovation mechanism introduced in the previous electricity distribution price control - to inform the level of funding for the remainder of RIIO ED1. We now need to determine the level of funding of the electricity NIC for the remainder of RIIO ED1 (2017 to 2023).

1.13. Separately we committed to reviewing the governance documents for the NIC and NIA after they had been in operation for two years. These governance considerations apply to both the electricity and gas NICs and NIAs.

1.14. The scope for the innovation review covered by this consultation is:

- an evaluation of the LCNF and whether consumers are getting value for money from the scheme
- a decision on the funding to make available for the electricity NIC for the remainder of the RIIO ED1 price control, and
- changes to the governance of the NIC and NIA across all of the RIIO price controls to ensure the schemes are running effectively.

[3] There is no fixed split in terms of how it is awarded between transmission and distribution related projects in the competition.

2. Evaluation of the Low Carbon Network Fund

Chapter Summary

This chapter sets out the key findings and recommendations of an independent evaluation of the Low Carbon Network Fund (LCNF) carried out by Poyry and Ricardo Energy.

Introduction

2.1. This chapter sets out:

- Background on the LCNF
- Our rationale for commissioning an independent review of the LCNF
- Scope of the independent evaluation
- A summary of the consultants' findings and recommendations

Background to the LCNF

2.2. The LCNF was introduced as part of last electricity distribution price control DPCR5 (2010 to 2015) to encourage the distribution network owners (DNOs) to be proactive in facilitating the transition to a low carbon economy. A total of £500 million was available for innovation projects on electricity distribution networks. It was anticipated projects would include trials of new technology, systems, commercial and network operating arrangements. To be eligible, projects had to have the potential to deliver financial and carbon benefits to existing and/or future network customers.

2.3. The LCNF provided two tiers of funding for projects:

- Tier One – an allowance to fund smaller research and development projects, which had a maximum duration of three years. The maximum value of projects the DNOs could register in this period was £80 million. Under Tier One 42 projects totalling approximately £30 million were registered.
- Tier Two – involving an annual competition with £64 million available each year to fund larger flagship development and demonstration projects. In total £245 million was awarded to 23 projects.

Why we've commissioned an evaluation of the LCNF

2.1. In our strategy[4] decision for the RIIO ED1 price control review we committed to making available £60 million annually for the electricity NIC from RIIO ED1 in the first two years. This was in addition to the £30 million available each year under the RIIO T1 price control. We said that we would consult on the amount to be available under the NIC for the remainder of the RIIO ED1 price control period and that this would be decided following an evaluation of the NIC predecessor - the LCNF.

2.2. Given the materiality of the funding paid for by consumers under the NIC, we considered it was important to commission an independent review of the scheme. The purpose of the evaluation was to look at the impact the scheme has had on companies' culture towards innovation activities, as well as whether the projects funded under the scheme will deliver value for money for consumers.

Scope of the independent evaluation

2.1. We commissioned consultants, Poyry and Ricardo Energy to carry out an independent evaluation of the LCNF. The aim of the evaluation is to understand the extent to which the LCNF has helped to develop innovation in the industry, whether the projects have helped to accelerate the development of a low carbon energy sector and delivered value for money.

2.2. In addition, we asked the consultants to identify if there were any gaps, and whether we should make any changes to the governance arrangements of the NIC and NIA – successors to the LCNF.

Key findings from evaluation

2.3. The consultants carried out a qualitative and quantitative assessment of the LCNF. The qualitative evaluation looked at whether there had been any cultural change by the DNOs to become more innovative, whether projects were suitable for and being integrated into the business for deployment, and what third-party/stakeholder engagement had been undertaken by the DNOs. In their quantitative evaluation, the consultants estimated the financial and carbon benefits delivered by LCNF projects – both now and in the future – to consider whether this justifies the financial commitment. A copy of the consultants' report is available on our website alongside this consultation document.

[4] https://www.ofgem.gov.uk/publications-and-updates/strategy-decision-riio-ed1-overview

Qualitative findings

2.4. The consultants' qualitative assessment was based on questionnaire responses from a broad range of stakeholders about their experience of the LCNF projects.[5] The main qualitative findings are:

- The LCNF has succeeded in encouraging the DNOs to innovate and has helped moved the level of innovation within DNOs from a 'low' base to a 'moderate' level.[6] However, while the DNOs are including innovation as core business, this is still a work in progress.

- All LCNF projects have made some technical and/or commercial contribution to the acceleration of the development of the low carbon energy sector. Projects associated with connecting distributed generation without the need for network reinforcement have a high potential value and are most likely to be readily incorporated into the current business. This benefits generators by saving time and money; and energy consumers through lower network charges.

- Knowledge dissemination was good across the Tier 2 projects that have been completed. However, dissemination has been weaker across Tier 1 projects. The consultants also find that there is little evidence of knowledge coordination across the DNOs to combine and use learning from projects, and to inform the direction of future projects.

- DNOs are integrating LCNF innovation initiatives into the business. However, the assessment found that only 37% of initiatives trialled under the LCNF were immediately applicable to business as usual. Another 41% would be applicable if circumstances changed – such as increased take up of electric vehicles or a wider use of heat pumps. Finally, 22% of initiatives would require further development before being used within the day to day businesses of network companies.

- A wide range of partners, stakeholders and customers have been involved with the LCNF projects and there is has been effective collaboration and/or engagement between DNOs and third parties as a result.

Quantitative findings

2.5. The quantitative assessment aims to evaluate whether the benefits of the LCNF justify the costs of the scheme. The consultants' estimates are based on data and forecasts provided by the DNOs for individual projects. This covers

[5] Stakeholders included DNOs, project partners, industry participants, and selected academics.
[6] **Low level:** where companies have little or no interest in innovation and no overall programme. **Moderate level:** where companies have some interest in innovation and a small number of projects but no overall programme. See Annex F of the report for more information on these definitions.

administration and project costs, current benefits from projects, as well as future financial and CO2 benefits that accrue between 2016 and 2031.[7]

2.6. The DNOs identified a variety of financial benefits from the LCNF projects. These are: reduced connection costs, reduced network management costs, reduced electricity losses, security of supply improvements, provision of ancillary services and demand-side response, deferral of network reinforcement, and improved asset management and network reliability.

2.7. The estimated benefits of the LCNF include all current and future benefits associated with each of the LCNF projects, except for the reduction in carbon emissions. These are estimated separately.

2.8. Given the uncertainty associated with measuring the potential benefits of innovation, the consultants monetised the potential benefits only where these could be verified as credible and justified.

2.9. The consultants calculate the benefits of the LCNF as the sum of all benefits from each of the LCNF projects. This is first estimated on the basis that the innovation initiative is limited to the trialling DNO's own network, ie not rolled out more widely. The discounted net benefit of the LCNF – including current as well as future benefits – ranges between £800 million to £1.2 billion.[8]

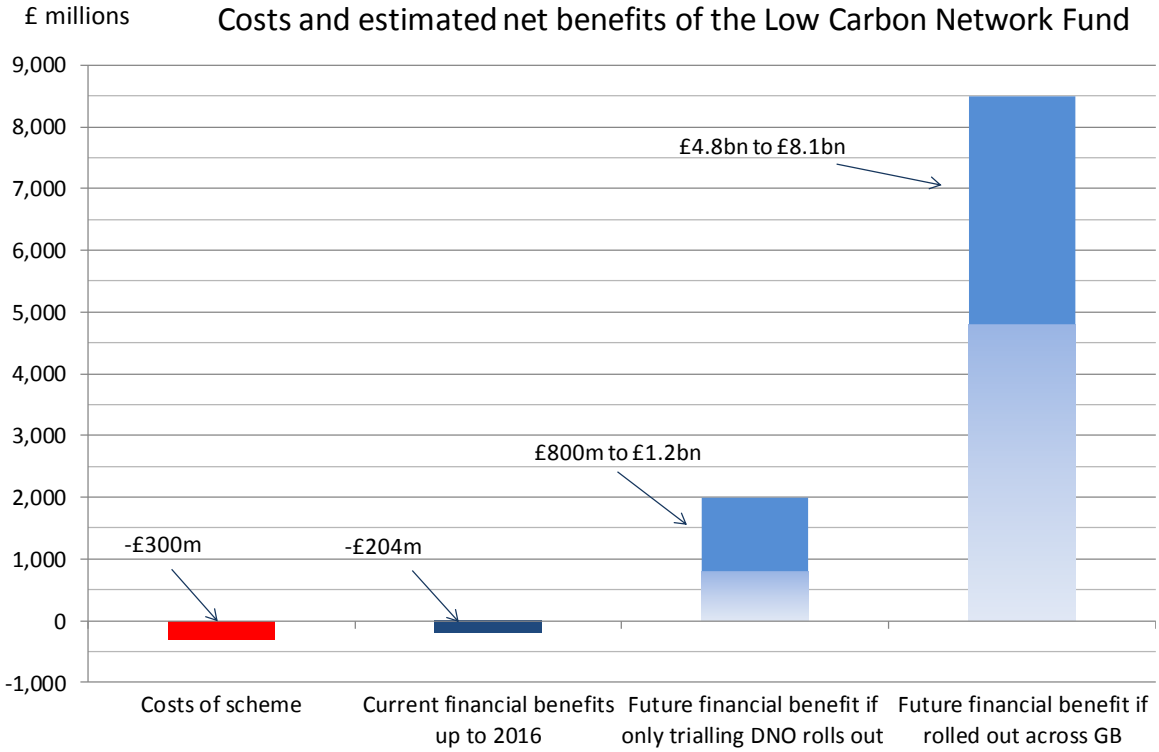
2.10. Allowing for benefits to accrue to other DNOs in addition to the DNO that trialled the project – through knowledge dissemination – the estimate of the GB-scaled discounted net benefit ranges between £4.8 billion and £8.1 billion.[9]

2.11. In this consultation we've presented the discounted estimate of the future potential benefit. The discounted estimate also takes into account what might reasonably be expected to have happened in the absence of the LCNF ie a counterfactual level of innovation activity. For the counterfactual it's been assumed that 20% of the gross estimated benefits would have occurred in the absence of the LCNF eg in response to Ofgem/Government pressure to accelerate distributed generation connections.[10]

2.12. In the evaluation report the consultants present the gross benefit estimates which are not discounted nor are they adjusted for the counterfactual level of innovation. We think using the discounted values that are adjusted for the counterfactual (as described in paragraph 2.11) is a better indication of the expected value of the future potential benefits from the LCNF projects.

[7] The end of the RIIO ED2 price control period.
[8] The value of future net benefits was discounted using a discount rate of 3.5% - this is the recommended HM Treasury rate for discounting and is set out in the HM Treasury Green Book.
[9] Where one innovation precluded the use of another initiative then the benefit of rolling out a single method was included within the GB-scaled calculation.
[10] Additional sensitivity analysis around the 20% level was carried out when estimating the net benefits.

2.13. The figure below shows the cost, the current benefits and potential future benefits of the LCNF. While current benefits have not exceeded the costs of the scheme, the potential future benefits significantly exceed the cost to consumers of the scheme.



2.14. The above estimates indicate that a GB-wide adoption by DNOs of the LCNF innovation initiatives could potentially deliver significant savings. The DNOs and those using the network will benefit from innovation because it lessens the cost of connecting to and operating the electricity distribution networks.

2.15. The consultants have estimated that approximately 40% of the savings realised through the LCNF will initially flow to network companies, and eventually flow to consumers as a consequence of the price control framework. Later in this section we explore what happens if we adopt an assumption that a smaller proportion of the benefits flow to consumers.

2.16. The LCNF was intended to encourage DNOs to play their part in facilitating the transition to a low carbon economy. The evaluation suggests the LCNF could also deliver significant carbon benefits, in addition to the financial benefits. The consultants estimate reductions in CO2 emissions of between 107 million and 215 million tonnes if initiatives are adopted GB-wide, equating to between £600m and

£1.2bn.[11] As a point of comparison, total CO2 emissions from UK energy supply were provisionally estimated to be 136 million tonnes in 2015.[12]

Uncertainty around the estimated benefits

2.17. The consultants highlight that there is inherent uncertainty in the estimated benefits of the LCNF innovation projects, as these are testing innovative concepts and novel ideas which are uncertain.

2.18. The estimates are based on the DNOs' forecasts of benefits. While these have been sense checked by the consultants they haven't been evaluated in detail. Moreover, the total benefits are estimated across the entire supply chain and not all of these might accrue to consumers, ie some innovations might just increase profits for generators or DNOs.

Sensitivity analysis

2.19. We note the consultants' estimated financial benefits have been calculated for the whole system rather than just to consumers. To test whether the potential benefits of the LCNF justify the costs from the perspective of consumers, we've applied some more conservative assumptions to estimate of the potential future consumer benefit. For example, we've assumed that 50% of the benefits would have arisen anyway even in the absence of the LCNF rather than the 20% assumed by the consultants. Our other assumptions are listed in the table below.

Issue	Conservative assumptions
Proportion of benefits that would have arisen without our intervention.	50%
Proportion of benefits that DNOs would pass to consumers in ED1	40% (based on the proportion of savings shared with consumers under the price control)
Proportion of benefits that we would identify in setting RIIO ED2.	50%
Proportion of benefits accruing to other parties (eg generators) that would be passed through to consumers.	50%
Proportion of projects rolled out to other DNOs of those identified as being suitable for GB-wide roll out.	50%

[11] Assuming a CO2 price of £5.91/tCO2.
[12] Taken from Provisional estimates of UK Greenhouse Gas emissions for 2015, including quarterly emissions for 4th quarter 2015 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/511684/20160331_2015_Provisional_Emissions_Statistics.pdf

2.20. When these more conservative assumptions are applied, the discounted financial benefits under this scenario are around £1 billion (roughly three times the cost of the schemes), excluding any CO2 benefits. This is still a significant net positive outcome for consumers from the LCNF. This equates to a net benefit to consumers of around £700m. At worst, say if there were no roll out GB-wide, consumers would still roughly break even. However, we think little or no roll out is unlikely to be the case.

Recommendations from the evaluation

2.21. On the back of evaluating the LCNF, the consultants also made some recommendations to improve the effectiveness of the NIC and NIA and increase the value for money delivered by these schemes. The table below lists the consultants' recommendations and further information on how we are responding to these.

Recommendation	**Our Response**
1. Ofgem should continue to fund DNO innovation to ensure the culture of innovation continues to develop. Consideration should be given as to how support for DNO innovation can best accommodate the future requirements of the whole energy system.	In chapter four of this document we set out our proposals regarding the future contribution from the electricity distribution price control to the electricity NIC.
2. The DNOs should jointly develop and publish an 'innovation roadmap'. This should be developed in conjunction with EPSRC, DBEI, Innovate UK and other relevant industry initiatives to ensure funded innovation is optimised to deliver maximum benefit for customers and tax payers.	In chapter three we set out our proposal to require all network companies to work together to develop an industry innovation strategy for the electricity and gas networks/entire energy system.
3. There should be greater focus on the sharing of project knowledge and learning – particularly across and between the DNOs – in order to maximise the benefits and value of LCNF initiatives and innovation.	Learning dissemination is a key aim of the NIC. The scheme governance documents set out the minimum requirements we expect companies to undertake. In chapter five we set out our proposals to require network companies to share the data they gather when implementing the NIC and NIA projects.
4. Ofgem should capture information as part of its ongoing price control monitoring so that it can have more robust estimates for any future evaluations.	In chapter five we are proposing to require network companies to report on: • Plans for rolling out novel methods in to business as usual; • The costs of rolling out proven innovations, and • The reasons why they do not plan to make use of a new method that has been developed.
5. Reporting requirements associated with any future innovation funding should be reviewed to facilitate the future assessment of quantitative	

Recommendation	Our Response
benefits.	
6. Introduce an ongoing requirement for DNOs to report progress associated with business-as-usual implementation of LCNF project outcomes and learnings.	
7. More focus should be placed on the learning which results from unsuccessful projects, or parts of projects.	Part of the reason we provide innovation funding, is a recognition that by their nature the relevant activities are risky. Where projects fail because of an incorrect hypothesis, network companies should share this learning just as they should when a hypothesis has been proven correct.
8. LCNF participants should be required to co-ordinate with relevant Government departments, and other institutions, to explore opportunities to share and exchange project learnings, and experience, with other sectors and with other countries and jurisdictions.	Through the requirement to develop an innovation strategy we will require network companies to engage with Government and other interested bodies. With regard to sharing learning internationally, we welcome this, however, GB customers have funded the development of knowledge and intellectual property therefore they should benefit from any use internationally.

3. Proposals for delivering greater value for money

Chapter Summary

In this chapter we set out our proposals for governance changes to the gas and electricity NIC that are aimed to deliver greater value for money to existing and future consumers from the innovation they pay for.

Question box

Question 1: What are your views on our proposals to introduce a requirement for the network companies to jointly develop an industry-wide innovation strategy?

- **If you agree, should companies retain their own strategies, and in addition should there be a single system strategy, or one for gas and another for electricity?**
- **How often should the strategy be updated?**

Question 2: What are your views on our proposals to help facilitate increased involvement of third parties in the NIC via the network companies?

Question 3: What are you views on providing direct access for third parties to the NIC?

Question 4: What are your views on our proposals to remove the Successful Delivery Reward and the provision to recover Bid Preparation Costs?

Introduction

3.1. The evaluation of the LCNF in chapter 2 shows that there are significant benefits arising from network innovation initiatives and that consumers are expected to receive significant value for money. The evaluation provides a reasonable justification for including the NIC and NIA schemes as part of the RIIO price controls. However, we believe it is in consumers' interests that we capitalise on the opportunities to make the schemes more effective and potentially further increase the pay back for consumers.

3.2. We are consulting on several proposals to increase the value for money that consumers will receive from the NIC. These build on the recommendations in the consultants' evaluation, as well as stakeholders' responses to our initial December 2015 consultation on the innovation review.

3.3. In this chapter we set out options that we propose to apply to both the gas and electricity NIC. These are:

- A new requirement on the network companies to take a more strategic view of innovation and jointly develop an industry innovation strategy;
- Options to facilitate increased third party involvement and potential direct access to the NICs;
- Removing the successful delivery reward; and,
- Removing the provision to recover bid preparation costs from the NIC.

Industry to develop a strategy for innovation

3.4. A key recommendation of the evaluation report is that the industry should develop a strategy for innovation across GB. The consultants highlight that there currently isn't a clear strategy or approach to innovation across the industry. We agree it is important for the industry to develop a joined up approach – to ensure innovation is focussed on priority areas offering significant potential benefit, learning is shared, and any unnecessary duplication is avoided.

Requirement on network companies to develop a network innovation strategy

3.5. We propose requiring the RIIO network companies to develop either one or two innovation strategies - depending on whether a strategy is developed for network innovation across the entire energy system or whether separate strategies are developed in tandem for the gas networks and electricity networks. We propose incorporating this requirement into the standard licence conditions of the network companies. Our proposed aims, approach and output of an innovation strategy are outlined in the following table.

Aims	• Identify priority areas with scope/potential for innovation and have a co-ordinated approach to tackle these areas • Have a joined up approach to innovation across GB • Demonstrate that innovation builds on previous projects and does not unnecessarily duplicate them • Learn from international innovation projects
Approach	• Consider the innovation learning to date and how the strategy builds on the learning so far • Identify innovation projects internationally that can inform the strategy • Consult with relevant stakeholders on a draft innovation strategy
Output	Publish a report every two years setting out: • Innovation themes and challenges that would benefit most from innovative ideas • Approach to co-ordinating innovation projects amongst network companies and other parties

3.6. We are interested in stakeholders' views on whether it would be better to develop a system-wide network innovation strategy or to have separate gas and electricity network strategies. We also are seeking stakeholders' views on whether there are other issues the strategy should cover.

3.7. We think the network companies should cooperate to jointly develop a strategy. In addition, we propose requiring network companies to consult with relevant bodies with an expertise in energy and energy innovation, eg the Engineering and Physical Sciences Research Council (EPSRC), the Department of Business Energy and Industrial Strategy (BEIS), and Innovate UK. We would like to know whether there are other organisations stakeholders think network companies should engage with.

3.8. Strategies are generally a plan of action for the mid to long term. However, given the period of rapid change in energy sector the focus of network innovation may have a shorter time horizon than this. Therefore, we propose that network companies review and update an industry strategy every two years.

Interaction with companies' individual innovation strategies

3.9. For the current RIIO price controls we required the network companies to develop and submit individual innovation strategies. These company-specific innovation strategies explain the high level problems and challenges the company expects to face. They also explain how they intend to focus their innovation activities during the price control period including a list of high level deliverables, eg delivering learning in particular areas. These were used to assess the level of NIA companies should receive.

3.10. We placed a requirement on the DNOs to maintain their innovation strategies so that they have an up to date strategy governing their use of innovation funding. We recognise that the challenges faced across the different sectors and in the licence areas in GB might vary in scale and likelihood. We are interested in stakeholders' views on whether the companies should continue to be required to have their own strategies in addition to an industry wide strategy.

Increasing third party involvement

3.11. Third parties cannot bid directly for NIC funding due to a restriction under the existing legislation. Instead, third parties (non-network companies) must partner with a network company to be able to bid for projects. This means that they must find a network company willing to work with them to develop and submit a project.

3.12. Some projects have come forward under the competitions that have been led by third parties. However, third parties have said that it is difficult to do this through the competition.

3.13. Despite the lack of direct access there is significant third party involvement in the NIC. Also, under the NIA (currently ~£60m per year) the network companies can only spend 25% of the allowances internally, ie 75% of the funding must be spent with third parties.

3.14. Third party involvement in the NIC is valuable as non-network companies bring different skills, new technologies and ideas, helping to increase the variety and quality of potential bids. Third parties are also more likely to propose radical innovations as they face less contextual constraints, eg more likely than DNOs to develop options that challenge the network companies' current business models. We think increasing third party involvement in the NIC is desirable from a consumer perspective as it could improve the outcome of the NIC overall.

Require network companies to issue a call for ideas every year

3.15. For the 2016 NIC, Western Power Distribution issued a call for ideas from third parties. It subsequently submitted two of the projects that came forward. National Grid has also run its own call for third party innovation proposals.

3.16. We have two proposals to increase the involvement of third parties in the NIC which build on the approach taken by some companies already. These are:

- Require network companies to issue a call for ideas annually from third parties and to respond to these publicly. We expect the increased transparency and profile of the issue to improve the calibre of projects that are brought forward and promote engagement with third-parties.
- Raise the number of projects that network companies can put forward as full submissions from two to four, where additional projects are led by third parties and result from the call for ideas. This would allow network companies to continue to bring forward their own projects alongside third party bid proposals.

3.17. We are interested in stakeholders' views on whether the companies should hold a single collective call or whether they should run their own individual calls. In any case, we propose companies must respond to all proposals publicly and to explain why any are not progressed.

3.18. If this proposal is taken forward we anticipate the network companies running the first call for ideas in late 2017 with projects being submitted to the NIC initial screening stage in 2018.

Potential direct access for third parties to the NIC

3.19. When we were developing the NIC, we consulted in 2011 on allowing third parties direct access to the NIC. [13] At that time there was very limited appetite for this. However, in the intervening period, some external commentators, eg the Energy & Climate Change Committee, and other stakeholders including technology developers, have suggested that third parties should be allowed direct access to the NIC.

3.20. The rationale for innovation funding mechanisms such as the NIC was to address the inherent disincentives in the price control framework to the network companies to innovate. Allowing third party direct access to the consumer-funded innovation mechanism would clearly go beyond this original intention. We are not sure whether government would be more suited to engaging third parties on innovation initiatives.

3.21. As noted above, existing legislation prohibits third parties participating in the NIC without a network company partner. While changes to primary legislation could be made to allow direct access for third parties – we currently do not have sufficient evidence to show that a change in the current arrangements is either desirable to third parties or could reasonably be expected to enhance the benefits of the NIC for consumers. Some potential issues include:

- How to get innovation into business as usual without a network company participant in a project.
- It is also not clear that non-network companies would be willing to accept some form of innovation licence.

3.22. We are interested in hearing whether stakeholders' views on allowing direct access for third parties have changed since we last consulted on this issue in 2011. We also welcome stakeholders' views on whether they think other bodies, eg Innovate UK or the Government are more suited to providing and administering innovation funding to third parties rather than Ofgem.

3.23. We will consider responses to this consultation and then decide whether to support legislative change that would be required to enable direct access.

Other things we are doing to support innovators

3.24. Later this month, Ofgem will launch a new Innovation Link service to promote beneficial innovation in the energy sector and inform how we regulate in the future. [14] It will be a point of contact for energy innovators to bring new ideas to

[13] https://www.ofgem.gov.uk/ofgem-publications/56942/ope-letter-consultation-non-network-company-access-innovation-stimulus.pdf

[14] Parties with an innovative or significantly different business proposition for the energy

receive fast, frank feedback on the regulatory implications. The Link will also bring forward proposals in due course on providing a 'regulatory sandbox' for innovative approaches and products to be trialled within the existing regulatory framework.

Removal of successful delivery reward

3.25. Under the current NIC arrangements, companies make a notional 10% contribution to the cost of projects. The companies can apply to have this contribution returned through a successful delivery reward (SDR) when the project is completed. The SDR was originally intended to incentivise efficient delivery and good project management by network companies.

3.26. We are proposing to remove the SDR for any future projects funded through the gas and electricity NIC, ie projects awarded funding from 2017. We are also proposing to make the companies' 10% contribution to project costs non-refundable.

3.27. We think it is a good time to transition more responsibility to the companies for successful project management as the independent evaluation has found that network companies are developing a stronger innovation culture.

3.28. We also think making the 10% contribution non-refundable is justified by the findings of the LCNF evaluation report that show a significant proportion of the benefits from innovation projects flows to network companies. The companies are benefitting and therefore should make a real contribution to the costs of implementing innovation projects. This will increase the stake companies have in a project and will encourage them to bring forward better projects, which will ultimately benefit consumers.

3.29. Overall we consider the proposal to remove the SDR and make a 10% contribution to project costs non-refundable would increase the value for money that consumers get from the NIC.

Removal of provision to recover bid preparation costs

3.30. All parties participating in the NIC can recover the cost of developing bid submissions from customers. Network companies covered by a RIIO price control recover these costs through the NIA. Other network companies such as offshore transmission owners can request these costs as part of their submissions. For other parties these funds are provided from the annual NIC pot. Parties can currently

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sector can contact the Link at innovationlink@ofgem.gov.uk

recover either £175k or 5% of the funding requested that year, whichever is smaller.

3.31. We propose to remove the provision that allows parties to recover bid preparation costs from the NIC or the NIA from 2018/19.

3.32. The recovery of these costs in the NIC is an anomaly compared to other funding mechanisms that the network companies can access for research and development funds (eg, Innovate UK, Horizon 2020, Research Council funding). Removing this funding would bring the NIC into line with other funding mechanisms that network companies can use. The concept of "expenses follow success" is well proven in tendering activities across multiple industries not just research and development grant bids.

3.33. Our proposal to remove the provision to recover bid preparation costs means that the NIC pot would be used in its entirety to fund actual projects and not the cost of developing submissions. Similar to our proposal to remove the SDR, we think this will help deliver value for money to consumers for the innovation activities they pay for.

Combined potential impact of our proposals

3.34. We expect consumers will benefit overall as a result of the proposals set out in this chapter. An increase in the involvement of third parties and a coordinated approach to innovation across the network companies will provide a fillip to proposals that are brought forward in future. At the same time, we recognise there is a risk that a 10% non-refundable contribution to project costs and removing the recovery of bid preparation costs, might result in some network companies making fewer bids. However, we think the net impact will result in better quality and more strategically targeted bids – which we expect partly as a result of companies putting more of their own money at risk. Overall this should help ensure consumers get good value for money from the NIC going forward.

Timing of proposed changes

3.35. The table below summarises the timeframes in which we anticipate the proposals outlined in this chapter would take effect. However, this is subject to consultation responses.

Proposal	When it would come into effect	Extra notes
Industry innovation strategy	New Standard Licence Condition in 2017.	Network companies would work to develop a strategy over 2017.
Call for third party led projects	This would have effect when the new version of the governance document is introduced in 2017.	Network companies to hold a call for ideas in 2017. Any successful third party led projects will be submitted to the NIC in 2018.

Proposal	When it would come into effect	Extra notes
Removing the successful delivery reward	Projects awarded funding from 2017 would not be eligible to seek a successful delivery reward.	
Removing the provision to recover bid preparation costs (BPC)	Network companies would be able to recover bid costs in 2017/18 but they wouldn't recover these from 2018/19.	

4. Proposal for future funding level of the electricity NIC

Chapter Summary

This chapter outlines our considerations for setting the level of funding available under the electricity NIC, and our proposal to reduce the contribution from the electricity distribution price control from £60 million to £40 million per year over 2017 – 2023.

Question box

Question 1: What are your views on the rationale for reducing the level of electricity NIC funding pot?

Question 2: What are your views on the proposed funding level of the electricity NIC?

Introduction

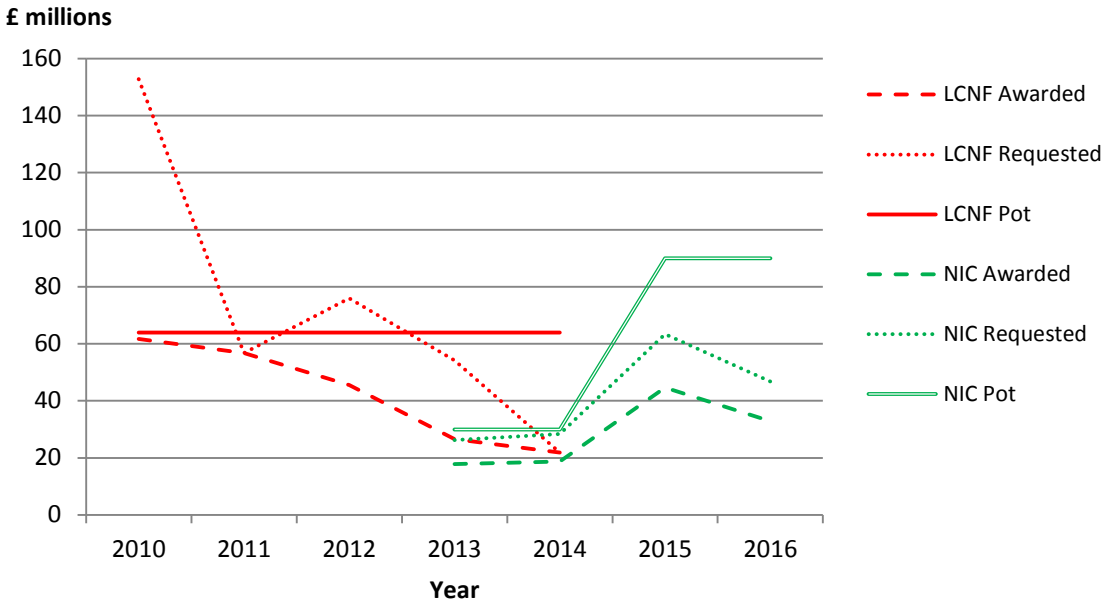
4.1. A total of £90 million has been available in the electricity NIC for the first two years of the RIIO ED1 period. This comprises £30m from the RIIO T1 price control and £60m from the RIIO ED1 price control. However, the funding commitment from the RIIO ED1 price control to the electricity NIC was set for only the first two years.

4.2. This chapter sets out the relevant factors we have considered in proposing the funding of the electricity NIC for the remainder of RIIO ED1 (2017 - 2023).

How much funding should we make available?

4.1. The independent evaluation of the LCNF and our sensitivity analysis provides a strong case for maintaining funding in a significant form for the remainder of the RIIO ED1 period. This is because we think that it is likely to continue to drive beneficial innovations by the network companies that would not happen otherwise. There are good signs that innovations are making their way in to, day to day use within the network companies and delivering financial and carbon benefits. The expected future consumer benefit of these initiatives is expected to comfortably exceed the costs that consumers are currently paying. Therefore we think maintaining the electricity NIC is justifiable because it offers value for money to existing and future consumers.

4.2. Historically the LCNF competition and the NIC have tended to be undersubscribed. For example, this year there is a pot of £90 million of which only £54 million has been bid for. The graph below shows the level of funding that has been available, requested and awarded in the LCNF and NIC.



4.3. Based on their evaluation of the LCNF, the consultants recommended that we maintain NIC funding for now. Consultation responses to our December 2015 consultation also noted that while network companies had developed capability and more focus on innovation, removing funding now might undo the positive change that has taken place.

4.4. Notwithstanding the level of potential benefits from innovation estimated in the evaluation of the LCNF, we do not think there is a strong case to increase the funding pot from current levels as it would likely have little impact given historical levels of take up. In addition, it's always been the overall policy intention that the price control mechanisms should eventually drive innovation without the need for specific innovation funding. Increasing funding now would therefore be inconsistent with our desire when creating RIIO, for the innovation schemes to be time-limited.

4.5. Accordingly we think the choice is between maintaining the current level of funding at £90 million or reducing it slightly. Overall, we favour reducing the overall funding pot from £90 million to £70 million. This is because:

- A reduction in the pot is likely to help create healthy competition for funds, particularly in combination with our proposals related to increasing third parties involvement. We think that a £70 million pot provides enough headroom for additional third-party led projects to be submitted. The increased competition for funds that would result is likely to lead to better quality projects being proposed and funded. In turn this is likely to increase the benefits and value for money for consumers overall.

- We don't think reducing the overall funding level to £70 million would result to any detriment to customers. This is because we've seen relatively significant levels of undersubscription in recent years.

- We think reducing the level of funding is consistent with our policy intent that the innovation funding is time-limited. Now that network companies are developing an innovation culture it is a good time to transfer more responsibility to them. Reducing the pot, and the amount consumers have to pay, is consistent with policy intention to increase the stake companies have in their individual projects (which would be achieved through our proposal that companies make a non-returnable 10% contribution to project costs). With more 'skin in the game' we think incentives on companies for project success are better aligned with those of consumers.

Contribution from RIIO ED1 over 2017 - 2023

4.6. Under the transmission price control, RIIO T1, we committed to a contribution of £30 million to the electricity NIC for 2013 - 2021. Our proposal to reduce the total electricity NIC pot from £90 million to £70 million would mean that the contribution from RIIO ED1 would reduce from £60 million to £40 million for the period 2017 - 2023.

4.7. Notwithstanding our proposal to set the electricity NIC pot at £70 million we reserve the right to review the total amount available when we re-consider the contribution in the next transmission price control review for RIIO T2.

5. Other proposals for governance arrangements

Chapter Summary

In this chapter we set out our proposals for some additional changes to aspects of the governance arrangements for the NIC and NIA.

Question box

Question 1: Do you agree with our proposals to clarify the circumstances we do and do not expect change requests are submitted to us?
- **If you agree, do you think our proposed draft explanation of material changes is clear?**
- **If you think alternative drafting would achieve this more effectively please provide this drafting.**

Question 2: Do you have any feedback on our proposal to publish a plain English guide to our default intellectual property (IP) requirements?

Question 3: Do you have any views on our proposals to improve the visibility of the NIA projects? What are your suggestions for a proportionate way to get assurance that the NIA is being used by network companies in an appropriate way?

Question 4: Do you have any comments on any of our other proposals?

Introduction

5.1. The NIC and NIA governance documents set out the rules, processes and administration of the NIC and NIA for both gas and electricity.

5.2. In chapter three we explained some of the more substantive changes we are proposing to make to the NIC to drive greater value for money from the scheme for consumers. The proposals set out in this chapter are lower level changes that aim to improve the governance of the gas and electricity NIC and NIA. Amongst other things, these should help reduce the administrative burden of running and participating in the NIC and NIA, provide more assurance that innovation funding is adding value, and provide useful information to inform our consideration of the form of future innovation stimulus in the next round of price controls.

5.3. Unless stated otherwise, and subject to the outcome of this consultation, we intend to implement our proposals in time for the 2017 competition. We will consult before then end of the year on the governance and licence drafting to give effect to our proposals.

Reducing the burden of processing change requests for NIC projects

5.4. Under the current governance rules, a company must request Ofgem to approve material changes to the Project Direction (which, together with the company's full submission, specifies how a project will be managed and delivered), if it has been awarded funding. However, the governance arrangements do not define what is meant by a material change. Consequently this often leads to network companies making requests for changes for relatively small changes, such as using external contractors to deliver an aspect of a project that was originally intended to be delivered by resource within the network companies' workforces or vice versa.

5.5. Therefore, we are proposing some changes to make it less onerous for companies to change aspects of NIC projects after funding has been awarded. The aim of these proposals is to give licensees more flexibility in running ongoing and future projects without us having to approve changes. It also moves innovation towards business as usual as licensees take more responsibility for progressing innovation projects without oversight from Ofgem.

Proposal for ongoing NIC projects

5.6. To address this issue for ongoing projects we propose to define a material change to a project in the governance rules as:

> "A change which the licensee reasonably believes would have led the Expert Panel to change its recommendation and the Authority to change its original decision that the project should be funded – eg if the learning outcomes from the project were to be different the Authority could reasonably have made a different decision. For the avoidance of doubt – the following are examples of changes that we do not consider to be material.
>
> - Moving budget from one line to another to deliver the same output, or
> - Delaying the project by less than 365 days."

5.7. We welcome stakeholders' feedback on the above proposed drafting or alternatives to give best effect to the desired intent.

Proposal for future NIC projects

5.8. To circumvent this issue for new projects funded under the NIC in future we are proposing a new approach. We propose that the network companies identify specific project outputs and link individual elements of the funding request to these outputs rather than the means of delivering a project. At the same time we propose companies must record and justify any material changes but we will not require companies to request permission from us to make them. In addition, we propose

that the network companies are also required to commission an external auditor when the project is concluded to review whether the outputs have been delivered.

5.9. Where outputs have not been delivered we would claw back the funding associated with the specific output. In recognition of the fact that we are funding innovation projects and outputs will not always be delivered, we would not claw back funds where the hypothesis being tested has turned out to be false. However, in the event that delivery isn't achieved we would consider whether to return funding that had been awarded to companies. This situation might arise because a project is (correctly) terminated at an intermediate stage due to a trial not being successful meaning that the later outputs were not delivered. It could also arise due to a failure in the network company's management of the project.

Improving the interpretation of the default intellectual property arrangements

5.10. As part of the scheme governance arrangements we developed default intellectual property (IP) arrangements because:

- innovation projects could generate IP that could be of value to customers, and
- IP rights could act as a barrier to knowledge transfer across the industry.

5.11. The default IP arrangements are intended to address these challenges by requiring all learning from innovation projects are shared with GB network companies. In addition, under the NIC, royalty income generated via NIC projects must be returned to customers.

5.12. The default IP arrangements are fairly flexible to allow arrangements to be agreed on a project by project basis. The onus is on the network companies to justify to the Authority that the agreements they enter into deliver value for money to customers.

5.13. We're aware that some stakeholders have concerns about different interpretations of the default IP arrangements across the network companies.

5.14. We recognise that the current default IP arrangements can be applied in different ways. To provide further clarity and assist network companies and other stakeholders we intend to publish a plain English guide to the default IP arrangements. We will publish this early next year. In the guide we will include examples of the types of non-default arrangement we have approved in the past and types we would not be willing to approve.

Removal of the contingency funding mechanism

5.15. As part of submitting bids to the NIC, network companies can reserve the right to request additional funds during the implementation of a project. However, they can only request these additional funds when cost overruns occur, and the amount that can be requested is limited to five per cent of the original funding request.

5.16. We propose to remove the contingency funding mechanism. This mechanism has never been used by network companies and we think removing this provision is consistent with other changes being proposed to get the networks to take on more responsibility for innovation as being a business as usual activity.

Further assurance on project eligibility under NIA

5.17. Since the introduction of NIA, the network companies have registered more than 400 projects. However, we've some concerns about the eligibility of a small number of projects being registered under this scheme. In a few instances it's not clear to us why some activities aren't being carried out by network companies as part of their business as usual rather than as a NIA project. We plan to discuss this with some of the network companies next year and where appropriate ensure that funding is returned to consumers.

5.18. In the next section we propose some specific changes to improve the visibility of the projects the network companies consider eligible for funding under NIA.

Lower level changes we propose to the governance of NIC and NIA

5.19. In the following table we propose several other lower level changes to the governance arrangements of the NIC and NIA. These include reducing the burden of implementing NIC projects by reducing the reporting requirements. We also explain how we propose to make it easier to access data gathered in the course of NIC and NIA projects.

Issue	Proposed change	Rationale
We recognise that some aspects of the NIC and NIA have been overly burdensome on network companies and participants, the following proposed changes are intended to reduce the regulatory and administrative burden of participation in the NIC and NIA.		
NIC alternate bank account	Remove requirement for Ofgem to approve use of alternative bank account arrangements – but retain other requirements.	So long as all criteria within Governance Document are fulfilled there is no need for Ofgem to be involved. This would reduce the resource requirements of the network companies and of Ofgem.
Merge the ongoing NIC and NIA projects reports	Require an annual NIC report covering all of a company's NIC projects and allow for this to be within the same document as companies' annual summary of NIA activity.	Allowing companies to combine all the learning from their innovation projects in a year within a single document would reduce the burden on network companies as well as making the learning from projects more accessible for interested parties who would only need to review a single document to understand exactly what a company has done in a given period.
Remove the need in the NIC and NIA for customer engagement and data protection plans	No longer require approval of Customer Engagement and Data Protection Plans. Maintain requirements not to interfere with Smart Meter rollout and not to conduct sales activities as part of trials.	We don't think our approval of Customer Engagement Plans adds value – they merely state what data network companies plan to collect from participants in trials and how they plan to engage with different parties. The Data Protection Act places necessary obligations on companies and we are not experts in customer engagement.
Cross sector projects in the NIC	Joint assessment of projects requiring funding from the gas and electricity NICs – single submission to both competitions and joint meetings of the gas and electricity Expert Panels to consider cross sector projects.	This would reduce the resource requirements on network companies by requiring them to complete a single full submission document which would be applicable to both competitions. In addition, holding joint meetings of the Expert Panels to consider cross sector projects would reduce the resource intensity for network companies and Ofgem.
The following proposed changes are intended to ensure the data from projects is accessible to interested parties and that innovation makes its way in to the business as usual (BAU) activities of network companies		
Sharing of NIC and NIA learning	Require network companies to have systems in place to be able to share data collected from trials (anonymised where necessary).	Data gathered through innovation projects could have value beyond the initial project it was gathered for. Consumers have funded the gathering of this data, therefore they should be able to get the maximum value from their investment.
Rollout of NIC and NIA projects into BAU	Require better reporting, through the Regulatory Instructions and Guidance by network companies on BAU potential and plans for each project undertaken by themselves and other network	Encourage greater take up of other network companies' projects that could deliver GB-wide benefits. Put us in a stronger position when setting the next round of RIIO 2 price controls.

Issue	Proposed change	Rationale
	companies. Also capture future expected benefits when rolled out. As part of this work we will ask network companies to explain what ideas that have been developed will be taken forward or not and why. We will also ask them to explain the scale of any proposed rollouts and the forecast benefits.	
The following changes are intended to ensure better compliance with the NIA governance document.		
NIA governance compliance	Require companies to justify why a project is eligible and ensure senior level sign off of project registration documents.	Currently the companies just have to tick the relevant box to say why they consider it eligible. Due to concerns identified over some projects, we propose that relevant network companies should justify more explicitly why projects are eligible and innovative (as they do for the competitions).

6. Next steps

In this document, we have set out our proposals for the NIC and NIA, including the contribution to the electricity NIC from the electricity distribution price control over 2017 - 2023. We are seeking stakeholders' views on these proposals to assist us in deciding the way forward.

We welcome responses to the issues we have raised or closely other related issues by 6 February 2018. Responses should be sent preferably by email, to networks.innovation@ofgem.gov.uk or in writing to

Neil Copeland
Ofgem
Third Floor
107 West Regent Street
Glasgow
G2 2BA

If you wish to have your response remain confidential, please clearly mark the document to that effect. Unless marked confidential, all responses will be published on our website in the usual way.

In early December we plan to consult on the draft legal text for implementing our proposals – including changes giving effect to our decision on the funding return mechanism. [15] If stakeholders support our policy proposals, this should reduce the amount of time required to implement changes to the governance arrangements and any licence changes.

We plan to hold an Innovation Working Group on 11 January 2017, at our London offices, to discuss our proposals and rationale. We also intend to discuss the proposed draft legal text. Please email networks.innovation@ofgem.gov.uk, if you would like to attend this session or require further information.

We expect to publish our final decision in spring next year. As noted in this consultation, some of our changes will take effect next year but others will not take effect until the 2018 NICs.

[15] https://www.ofgem.gov.uk/publications-and-updates/proposed-modification-funding-return-mechanism-network-innovation-competition-and-low-carbon-networks-fund-licence-conditions

Appendices

Index

Appendix 1 – Summary of responses to our December 2015 consultation

A1.1 In December 2015 we published a consultation letter[16] to begin our innovation reviews. We received twenty nine responses, four of which were confidential. We have published the non-confidential responses on our consultation page. A short summary is included below.

Question 1: Should we change the NIC and NIA criteria? If so, how and why?

A1.2 Thirteen respondents voiced support for the current mechanism and said that it generally worked well, with exceptions or potential modifications, to enhance the working of the criteria. Five did not provide comments to this question. Suggested modifications included lengthening of timescales or introducing flexibility to encourage lower TRL projects which need more time and widening benefits beyond the carbon plan, which is seen as a barrier to projects innovating around customer service or operating efficiency and could be a hindrance to companies addressing the full market "trilemma[17]".

Question 2: Should we give more of an indication of where we consider innovation is required or is that inappropriate?

A1.3 There was a clear split between respondents on whether there should be any direction offered by Ofgem on areas for innovation.

- Those in favour of a direction being indicated by Ofgem, felt it would be a catalyst for change.
- Those who were neutral, pointed to the need for more robust communication channels and data to inform strategic decisions industry wide.
- Those against this idea, felt that network companies were best placed to decide the most important directions for innovation; that the Expert Panel provided a sufficient steer or that any fixed direction could stifle innovation.

Question 3: Should the focus of the NIC and NIA be broader and cover the broader energy system?

A1.4 Eight respondents felt the current regime was fit for purpose. One commented that it already provided scope for wider systems related projects and another, that such wider-scope projects already funded, had "undershot" on their goals. It was felt that it would be difficult to incentivise companies to work under a broader scope if no benefits would be directly realised by them, and that a wider scope could distract from the benefits that can be realised by customers through the current scope.

[16] https://www.ofgem.gov.uk/publications-and-updates/reviewing-benefits-low-carbon-networks-fund-and-governance-network-innovation-competition-and-network-innovation-allowance

[17] The energy trilemma is expressed as the challenge of reducing energy costs and maintaining security of supply whilst lowering carbon emissions.

A1.5 Fifteen respondents were in favour of broadening the scope on some level, ie for third party access; to reduce current "artificial barriers". However, many conceded that the regulatory challenges to realise a wider scope, would be significant.

Question 4: Can we improve the process for deciding on which projects to approve and if so how?

A1.6 Nine respondents considered the process on the whole seemed to be working, though some suggested areas for improvement. Generally it was considered that whilst the process was bureaucratic, some parties welcomed the rigour and some cited that notification of submission dates and other expectations were timely.

A1.7 Thirteen respondents provided various suggestions for improvement to the current process. These included: improvements to the overall process: it was felt to be a very intensive process with short turnaround times—this was seen as a deterrent to small and medium sized enterprises trying to get involved. Too much emphasis on academic rigour, governance, rigid deliverables and timescales was seen as an issue. It meant projects might be project management heavy, rather than being designed to produce replicable outcomes and learning for the real world.

Question 5: How can we improve participation in the NIC?

A1.8 Nineteen respondents raised comments under this question. Most commented that the IP arrangements were a barrier to participation. However, the concerns raised largely focussed on the NIA rather than the NIC.

A1.9 However, some noted that the NIC guidance had changed over time, hardening the approach towards IP, which previously may have been more favourable. It called for it to be reverted back. It was felt that to make DNOs solely responsible for foreground IP, prevents partners from extracting any future revenue from this IP - both on a GB and worldwide scale. One respondent noted a reluctance in the innovation community to participate in RIIO innovation projects because of issues with IP.

A1.10 One respondent suggested an investment pay-back before the IP can be commercialised. An industry group suggested IP should be reviewed in relation to both the practical issues of recording/ holding IP rights and with being the best party to exploit it. At present there are significant costs for network companies associated with this and IP should not default directly to the network operator.

Question 6: Please comment on your experiences if you have worked with licensees when implementing NIC and NIA projects or when transferring innovation into business as usual.

A1.11 Generally, experiences were positive for those who had worked on NIC and NIA projects. Specifically, those who had been partners on projects, cited good working relationships being forged with network companies.

A1.12 However, some commented on the slow progress of deployment, ie heavier focus on project delivery, rather than consciousness or funds available to purchase and implement the resultant technology, slow pace of BAU and need to improve collaboration and knowledge dissemination (the latter is specifically frustrating when learning is not taken as sufficient for adoption by other companies, which delays any roll out potential).

Question 7: Are there any other issues we and the independent evaluator should consider as part of the review?

A1.13 Respondents raised a number of issues, including:

- the perceived but marked reduction in ambition of innovation projects
- There are only two application windows for the Innovation Rollout Mechanism in each price control period - suggest more flexibility through more windows and a reduction in the materiality threshold - would allow more innovations to be deployed on the network.
- There is a need for planning to establish how projects which may not finish before the end of the price control window are to be transitioned into the new regime.
- The current scheme is innovative but risks being limited if it cannot resolve how to encourage outsiders and out of the box thinking.
- Important to consider the potential savings for DNOs in the future - review should consider benefits over the full lifetime of the assets developed.

Question 8: To what extent do you consider that the LCN Fund has succeeded?

A1.14 Fourteen respondents stated that the LCNF had been a success or had wrought benefits (eg lower bills to consumers). Two pointed out that the LCNF was a success due to it building on the IFI which itself was seen as a successful foundation. Several noted the significant impact the LCNF had had in generating learning, but one caveats this with the lack of proper synthesis of learning to encourage BAU and delay in proper dissemination of knowledge.

A1.15 Some respondents noted that it might be too early to tell given that deployment of the technologies was not complete. Respondents noted that our review should be mindful of the different energy landscape that the LCNF operated in.

Question 9: To what extent do we need to continue incentivising innovation by DNOs?

A1.16 All those who responded to this question, came out in favour of continuing to incentivise innovation.

Question 10: Are there any other issues we need to consider as part of the LCN Fund benefits review?

A1.17 Most of the comments raised under this question were felt to be more relevant to the review of the NIC and NIA, and have been incorporated in summaries of questions 1-6, above.

Appendix 2 - Feedback Questionnaire

Ofgem considers that consultation is at the heart of good policy development. We are keen to consider any comments or complaints about the manner in which this consultation has been conducted. In any case we would be keen to get your answers to the following questions:

1. Do you have any comments about the overall process, which was adopted for this consultation?
2. Do you have any comments about the overall tone and content of the report?
3. Was the report easy to read and understand, could it have been better written?
4. To what extent did the report's conclusions provide a balanced view?
5. To what extent did the report make reasoned recommendations for improvement?
6. Please add any further comments?

Please send your comments to:

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