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Decision

RIIO-ED2 Framework Decision

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The next Electricity Distribution price control (RIIO-ED2) will start in April 2023. In August 2019, we issued an Open Letter in which we sought views on the key issues that might affect this price control and on the framework we proposed to apply. This is our decision on the RIIO-ED2 framework.

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Executive summary

RIIO-ED2 framework

The companies that operate the electricity networks in Great Britain have an essential function. Their infrastructure ensures that consumers have access to a secure supply of electricity. We are however experiencing a period when the demands being placed on these networks, and the energy system more widely, are changing.

This year the UK and Scottish Governments passed legislation enshrining in law the target of net zero greenhouse gas emissions by 2050 and 2045 respectively. In July, we published our Strategic Narrative[1], which set out that helping the UK achieve a net zero emissions economy at the lowest possible cost to consumers is one of our three core priorities. In light of both our Strategic Narrative, and targets for net zero, we will be setting out our initial actions to drive forward the decarbonisation of the energy sector early in the new year.

It is reasonably likely that the decarbonisation of our society and economy might require an increasing reliance on electricity to provide us with power for our homes and businesses, and increasingly for our modes of transport and heating needs. A growing proportion of this power will be produced from renewable generation connected to the lower voltage, distribution networks. This will require a smarter and more flexible energy system.

The electricity distribution networks will be at the heart of this energy system. How they are developed and operated is key to ensuring the transition of the energy system is achieved while keeping costs as low as possible. They need to extract the most value out of their existing infrastructure and tap into the potential offered up by new flexible resources that are becoming available. In this way the profile of how energy is generated and used can be shaped to minimise the need for costly new infrastructure.

Over the next year, we will develop a methodology for the next price control (RIIO-ED2) for the fourteen electricity distribution network operators (DNOs) in Great Britain. Through this methodology we will ensure that they develop and operate their networks efficiently and support the energy system transition.

[1] Ofgem Strategic Narrative 2019: https://www.ofgem.gov.uk/publications-and-updates/ofgem-strategic-narrative-2019-23

First though, we have had to decide on certain aspects of the framework that we will use. In August 2019, we issued an Open Letter[2] in which we made a number of proposals for this framework. Our decision on aspects of the RIIO-ED2 framework is summarised in Table 1 below.

Table 1: Summary of framework decisions

Objective	
1	Ensure that DNOs deliver the value for money services that both existing and future consumers need
Length of the price control	
2	Maintain the default length of the price control at five years, as with the other sectors
Giving consumers a stronger voice	
3	Apply the enhanced engagement arrangements for RIIO-ED2
Overarching framework for outputs and incentives	
4	Apply the output and incentive arrangements developed for the other sectors
Maintaining a safe and resilient network	
5	Apply the Network Asset Risk Metric (NARM) for RIIO-ED2, as part of a toolbox approach to justifying and assessing network companies' (proposed) investments and preferences for chosen strategies
6	Introduce arrangements to ensure DNOs are appropriately managing the risks associated with cyber and physical security, and workforce resilience
Delivering an environmentally sustainable network	
7	Ask network companies to focus on decarbonising the networks themselves, reducing the environmental impact of network activity, and supporting the transition to a smarter, more flexible, sustainable low carbon energy system
Enabling whole systems	
8	Refrain from aligning (start and end dates of) the electricity distribution and transmission price controls
9	Ensure Coordinating Adjustment Mechanism design for the electricity distribution sector is sufficiently consistent with the other sectors
10	Ensure whole system scope for electricity distribution is consistent with the other sectors and include whole system elements in the Business Plan Incentive (BPI)
Managing uncertainty	
11	Explore the use of indexation where feasible to remove risk of forecasting error

[2] Open Letter Consultation on the RIIO-ED2 Price Control, August 2019 https://www.ofgem.gov.uk/publications-and-updates/open-letter-consultation-riio-ed2-price-control

12	Offer the same opportunity to DNOs to present us with highly anticipatory projects in their business plans
13	Offer DNOs the opportunity to set out in their business plans how these highly anticipatory investments should be treated
Driving efficiency through innovation and competition	
14	Introduce an innovation funding pot that targets future-facing strategic challenges
15	Retain the opportunity for network companies to receive Network Innovation Allowance (NIA) funding
16	Remove the Innovation Rollout Mechanism (IRM)
17	Work towards introducing models of both early and late competition for RIIO-ED2 which are in consumers' interests
18	Introduce arrangements, potentially by enforcing best practice or competition obligations, which will enable native competition to be more effective
Business plan and Totex incentives	
19	Remove the early settlement (fast-tracking) process for RIIO-ED2
20	Use the Business Plan Incentive to reward DNOs putting forward ambitious plans
21	Set incentive rates via a confidence dependent incentive rate approach
Fair returns and financeability	
22	Retain debt indexation for RIIO-ED2
23	Set the baseline allowed return to equity using the same methodology as applied to the other RIIO sectors
24	Use either CPI or CPIH for inflation measurement in calculating both RAV and allowed returns
Return adjustment mechanisms (RAMs)	
25	Introduce the sculpted sharing factor RAM for RIIO-ED2

Strategic approach to RIIO-ED2

This framework decision is a key milestone in the process of setting the RIIO-ED2 price control. The decisions we have made will provide the architecture that is essential in achieving a successful outcome. Although challenging, in a relative sense this is the most straightforward part of the process. Our framework decisions have built upon the work required to establish the RIIO-2 price controls for the gas distribution and the gas and electricity transmission network companies. Since 2017, we have been considering the arguments and analysis that sit behind these framework decisions, and this process has involved listening closely to the views of all stakeholders, including those from the electricity distribution sector.

In developing the sector methodology however, we will now have to explore a range of complex issues that may be unique to this sector, and indeed to the forthcoming price control period.

In our Open Letter, we asked for views on how we should approach some of the key strategic issues that will impact on RIIO-ED2. While decisions on some of these issues are not being taken at this stage, the views we have received will inform how we approach the development of the sector methodology.

From the responses we have received, it is apparent that the role DNOs can play in enabling targets to be met will depend on how the pathway for achieving decarbonisation is established. For instance, the choice between a centralised approach that takes direction from national government policy decisions, and one that is led through engagement with regional stakeholders, will affect the timing and type of investment decisions. The approach taken might also need to vary depending on the subject matter, ie an approach that considers the likely pathways to support an uptake in electric vehicles may not be appropriate for the decarbonisation of heat.

The effect of company expenditure in RIIO-ED2 to support a target of net zero emissions by 2050 (2045 in Scotland) may be difficult to discern in the RIIO-ED2 period itself. Also the extent to which DNO activities lead to the intended outcome (net zero emissions) may depend on the actions of other parties. These factors are likely to present us with different options on how we determine the outputs that DNOs will be expected to deliver in exchange for their revenues. One approach could be to provide DNOs with funding for anticipatory investment but limit their exposure to the impact that their expenditure has on enabling decarbonisation, eg DNOs would not be penalised or rewarded for how infrastructure is subsequently used. Alternatively, outputs could be designed so that DNOs are more directly incentivised to achieve outcomes that support decarbonisation targets, eg the amount of renewable generation exporting to the network or the time it takes to provide access to the network for a low carbon technology, including for electric vehicle charging points.

The choice we make on the above issues could impact on different parts of the price control. These include how we set outputs and where we apply incentives, the costs and risks that companies and existing and future consumers are exposed to, and the extent to which different options are more or less likely to enable decarbonisation targets to be met.

In developing the sector specific methodology for RIIO-ED2, we have an opportunity to explore these choices and the relative effectiveness of different approaches, taking into account the interests of both existing and future consumers.

In RIIO-ED2, we will strike a tough but fair settlement with the DNOs which enables them to go further in decarbonising the economy while ensuring a reliable supply of energy continues to reach our homes and businesses. In doing so, we will take steps to ensure that costs are kept as low as possible for consumers.

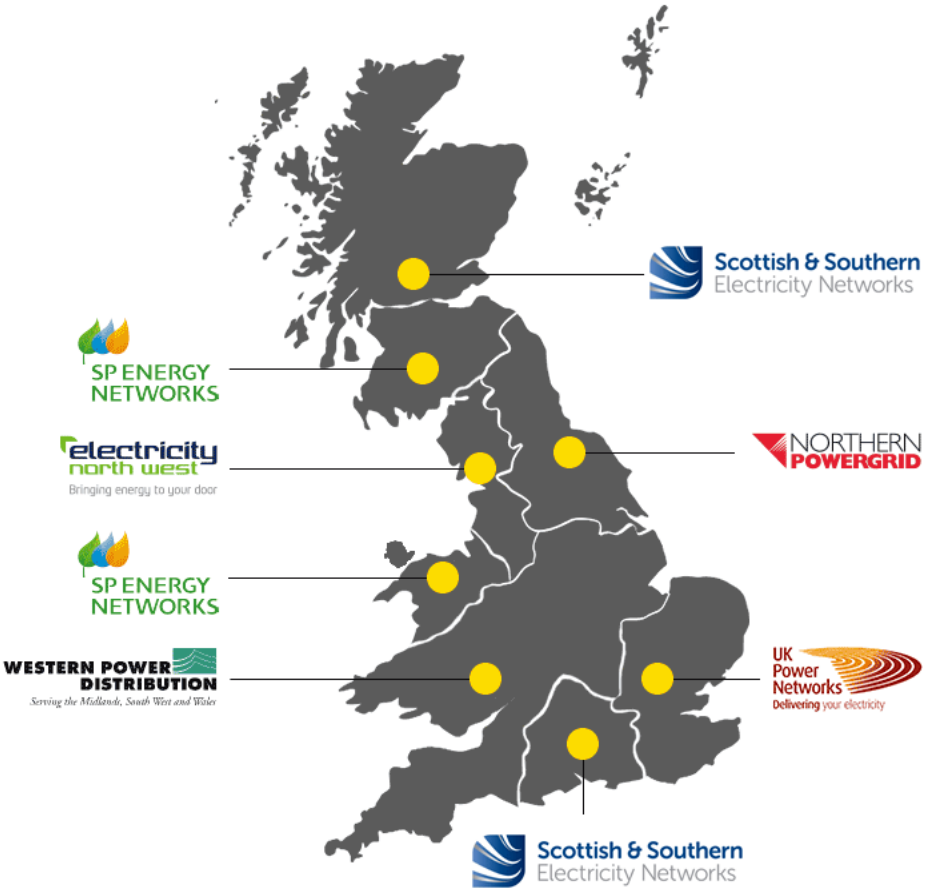
1. Introduction

DNOs and price controls

1.1. A network of cables and wires spans Great Britain transporting energy from its place of generation to our homes and businesses. Private companies own and operate these networks, and consumers pay for them through their energy bills.

1.2. The electricity distribution network carries electricity from the high voltage transmission network to industrial, commercial, and domestic users, as well as distributing an increasing quantity of power from generation sources that are connected directly to the distribution networks. There are fourteen electricity distribution network operators (DNOs) operating in Great Britain, managed by six companies. These are shown in Figure 1 below.

Figure 1: Map showing Distribution Network Operators (DNOs)



The RIIO framework

1.3. DNOs operate in regions where they largely have a monopoly on network services. That is why we cap the revenues they can recover. Our role is to ensure that both existing and future consumers pay a fair price for the cost of running these networks and get the services they require. We do this through a price control process.

1.4. We use the RIIO framework as our approach to running the price control. RIIO involves setting **R**evenues using **I**ncentives to deliver **I**nnovation and **O**utputs that consumers value.

1.5. The first round of RIIO price controls (for companies operating electricity and gas transmission, the electricity system operator and for gas distribution networks) runs from 2013-2021. In 2015, we set the first RIIO price control for electricity distribution and this will run until March 2023. In total, network companies across all of these sectors will recover combined revenues of around £96bn over the RIIO-1 period.

1.6. Since 2017, we have been developing the framework and methodologies that we will apply to the RIIO-2 price controls for the sectors with price controls ending in 2021. We have been clear throughout that the decisions that we have been making in this process are specific to the sectors under review, and would not automatically be applied to electricity distribution. Nevertheless, these decisions are relevant to our approach for RIIO-ED2.

The Open Letter

1.7. In August 2019, we issued an Open Letter on our approach to RIIO-ED2. In this letter, we proposed positions on key aspects of the sector framework. In large part, we arrived at these positions using the arguments and evidence we had considered in developing the framework for the RIIO-2 price controls for gas distribution and gas and electricity transmission. We invited stakeholders for their views on this, including whether there were any factors specific to electricity distribution that should be taken into consideration.

1.8. In our Open Letter we also discussed some of the key strategic issues that could impact upon the RIIO-ED2 price control. We sought views on how to set price controls that:

- support decarbonisation
- enable strategic investment

- reflect the functions of distribution system operation
- drive innovation and competition
- are appropriate for a smart, flexible energy system
- reflect the needs of a big data environment.

1.9. We are not making a decision on any of these topics at this time. The responses that we have received will help inform the development of the sector methodology.

1.10. We received 57 responses to our Open Letter. These are available on our website alongside this decision.

Interlinkages with other workstreams

1.11. RIIO-ED2 is part of a wider programme of work that will enable the energy system to become more decentralised, decarbonised and digitalised, while ensuring that the interests of consumers are protected throughout this transition.

1.12. There will be a number of interactions between other projects within this programme and RIIO-ED2. There are four projects in particular where we believe that the implications are significant. These are:

- DNOs and new contestable services[3]
- Key enablers for DSOs
- Access and forward looking charges
- Flexibility markets

1.13. These could impact on RIIO-ED2 in a number of different ways and in Table 2 below we highlight those aspects of the price control that could be most affected. Please use the links in the 'Associated Documents' section of the website page for more information on these projects.

1.14. We are coordinating our work across these workstreams so that decisions and recommendations are made to a timescale that aligns with the development of the RIIO-

[3] Unlike most of the functions of the DNO (that reflect their monopoly status) these are activities that could be undertaken by a number of different parties. The cost of these activities could be established by these parties competing against each other to bid for the work.

ED2 sector methodology and the preparation of DNO business plans. For instance, we plan to consult on our draft decision on access and forward looking charges in the second half of 2020 with a final decision in early 2021.

Table 2: Interactions between RIIO-ED2 and energy system transition projects

DNOs and new contestable services

Driver for the project	What is the focus of the work?	What does this mean for RIIO-ED2?
A more decentralised, decarbonised and digitalised energy system may see new services and processes emerge. Multiple parties, including the DNO, can be involved in the provision of those services.	We are developing our policy position on DNOs' participation in the provision of contestable services. We are already progressing decisions on these services, including the treatment of CLASS* which we will consult on in January 2020.	If DNOs are permitted to undertake certain activities we will need to consider whether these should be funded and if so, how performance should be measured through RIIO-ED2. We will also need to consider if any specific organisational arrangements are needed and whether these should be funded.

***Customer Load Active System Services:** this enables reactive power flow and demand change with smart voltage control at substations. It can reduce peak demand to defer distribution reinforcement and provide the ESO with balancing services.

Key enablers for DSO

Driver for the project	What is the focus of the work?	What does this mean for RIIO-ED2?
The delivery of smart, flexible energy networks will be facilitated by enhancements across technology, data, and engineering competencies.	We will identify the regulatory actions designed to ensure that DSO functions can be technically delivered in the interests of energy consumers. We have started by consulting on the reform of the DNO licence condition for a Long Term Development Statement* and we intend to have	Through this process we will have to consider whether funding is required to enable further key enabler reforms, and whether DNO performance should be incentivised.

Driver for the project	What is the focus of the work?	What does this mean for RIIO-ED2?
	completed this specific reform, and similar enabling reforms, by the start of RIIO-ED2.	

***Long Term Development Statement**: the purpose of the Long Term Development Statement is to provide information on the distribution system that may be of use to developers wishing to connect to, or make use of, the distribution system.

Access and forward looking charges

Driver for the project	What is the focus of the work?	What does this mean for RIIO-ED2?
These charges provide signals about how users can impose costs and confer benefits on the network in future, to encourage them to use existing capacity efficiently and reduce the need for new network investment.	Reforms to the charging arrangements may lead to changes in how network costs are recovered from network users, including a potential change to the connection charging boundary at distribution level.	Reforms to charging arrangements may affect the triggers for network investment or the amount of investment required. Any change to the connection charging boundary would affect the allowed revenue that DNOs recover through the RIIO-ED2 price control, rather than directly from connecting customers. We expect to consult on our proposals in the second half of 2020 with a final decision expected in early 2021. This will ensure adequate time for any impact to be fully reflected in the DNO business plans for RIIO-ED2 submitted later in 2021.

Flexibility markets

Driver for the project	What is the focus of the work?	What does this mean for RIIO-ED2?
Flexibility markets have the potential to offer more efficient solutions to energy system and network issues than traditional reinforcement. They encompass all of the carbon, energy and network services that could provide value streams for flexibility solutions. The development of flexibility markets are needed to enable the transition to a smart and flexible energy system.	We are focussed on establishing an environment in advance of the start of RIIO-ED2 in which flexibility services are able to be effectively utilised. This includes ensuring flexibility markets develop at distribution level, in coordination with other markets, with the costs and benefits of contracting for flexibility transparently compared with other alternatives, including traditional network reinforcement and technical advancements. The Open Networks project* is supporting this work, enabling coordination and shared learnings to accelerate progress.	How DNOs evaluate flexibility will impact upon their investment proposals and in our assessment of their efficiency.

***Open Networks Project**: this is the programme of work being led by the Energy Networks Association to deliver the policies set out in the Ofgem and BEIS Smart Systems and Flexibility Plan, the Government's Industrial Strategy and the Clean Growth Plan.

1.15. In addition to the above, we will shortly publish the results of our investigation into the power outage that affected certain parts of the UK in August 2019. Recommendations arising from this investigation may have implications for the activities and investment DNOs undertake in RIIO-ED2.

1.16. We will also continue to monitor potential changes arising from the outcome of the Engineering Standards Review, which is being undertaken by an independent expert panel

commissioned jointly by BEIS and Ofgem in July 2019.[4] This includes any potential impacts on network investment, the level of security built into these networks, the reliability of these networks, the quality of energy supplied, opportunities for connecting to and using these networks, and how distributed energy resources and smart technology could supplement the need for traditional network reinforcement.

Forecasting scenarios

1.17. The forecasts of growth in demand and supply that DNOs use to establish the need for future network capacity play a crucial role in the price control. We use them to assess whether planned expenditure looks reasonable, and flexibility providers use them to identify where constraints may arise on the networks to which they can offer a solution. Having consistency in these forecasts is also important as it allows us to benchmark companies against each other which helps to root out inefficient costs. While the energy system is in transition it is hard to predict exactly how demand and supply levels will change in the future and so we expect companies to plan against a range of different scenarios.

1.18. At a national level the Electricity System Operator produces Future Energy Scenarios (FES) that are used by industry to explore a range of forecast scenarios. Increasingly though, these need to be further interpreted to understand how demand and supply may change on the lower voltage networks in different regions of the country. As a result, DNOs are beginning to develop their own distribution-level FES (DFES). As we develop our methodology for RIIO-ED2 we will place increasing scrutiny on the DFES, to ensure these are being developed and used in a consistent manner and that the scenarios that they generate are credible. We will also require DNOs to begin work early on a core baseline scenario that we can use for benchmarking purposes.

RIIO-ED2 timetable

1.19. The Open Letter started the process for setting RIIO-ED2. Having made the decisions outlined above on the overarching framework for the price control, our focus will now shift to the development of the methodology we will use for the price control. This will inform the business plans we expect to receive from DNOs in 2021.

[4] https://www.gov.uk/government/publications/electrical-engineering-standards-independent-review

1.20. Table 3 contains an update to our high-level timeline for developing the RIIO-ED2 price control. The timetable may be subject to change as we progress through the price control process.

Table 3: Indicative timeline for RIIO-ED2

Date	Milestone
August 2019	Open Letter and Framework Consultation
Quarter 4 2019	Framework Decision
Quarter 2-3 2020	Sector Specific Methodology Consultation
Quarter 4 2020	Sector Specific Methodology Decision and Business Plan Data Templates issued
Quarter 2 2021	Business Plan initial submission to Ofgem and RIIO-ED2 Challenge Group
Quarter 4 2021	Business Plan final submission to Ofgem and RIIO-ED2 Challenge Group
Quarter 1 2022	Open Hearings
Quarter 2 2022	Initial Determinations
Quarter 4 2022	Final Determinations Statutory consultation on RIIO-ED2 licence
February 2023	Decision on RIIO-ED2 Licence
1 April 2023	Start of RIIO-ED2

Structure of this document

1.21. Chapter 2 of this document sets out our **framework decision**, the reasons for our decisions and a summary of the views of respondents. In Chapter 3 we discuss topics that will inform our **strategic approach to RIIO-ED2** in which we share a flavour of the views that we received on the key strategic issues that might impact the price control. In Chapter 4 we explain our **approach to working groups** that we will run to develop the sector methodology. In Chapter 5 we describe our **approach to impact assessment** of our methodology decisions and subsequent determinations. In Chapter 6, we explain the **design principles** that we have derived from the decisions taken to date for the RIIO-2 framework and methodologies in different sectors.

Your feedback

1.22. Consultation is at the heart of good policy development. We are keen to receive your comments about this decision document. We'd also like to get your answers to these questions:

1. Do you have any comments about the overall quality of this document?
2. Do you have any comments about its tone and content?
3. Was it easy to read and understand? Or could it have been better written?
4. Are its conclusions balanced?
5. Did it make reasoned recommendations?
6. Any further comments?

Please send any general feedback comments to RIIO2@ofgem.gov.uk.

2. Framework Decision

Section summary

We have made a number of decisions on the key elements of the RIIO-ED2 framework. These involve aspects such as our objectives for the price control, the length of the control period and the role for customer engagement groups. These decisions also encompass our approach to ensuring DNOs are focussed on delivering outputs that consumers value, the role for innovation and competition, and how we will set key parameters to ensure consumers pay a fair price for these network services.

Objectives

2.1. In our Open Letter, we proposed that our overarching objective for RIIO-ED2 would be to ensure that DNOs deliver the value for money services that both existing and future consumers need.

2.2. This will involve the delivery of the following outcomes while keeping bills as low as possible:

- Meet the needs of consumers and network users: Network companies must deliver a high-quality and reliable service to all network users and consumers, including those who are in vulnerable situations.
- Maintain a safe and resilient network: Network companies must deliver a safe and resilient network that is efficient and responsive to change.
- Deliver an environmentally sustainable network: Network companies must enable the transition to a smart, flexible, low cost, and low carbon energy system for all consumers and network users.

DNO and stakeholder views

2.3. DNOs and stakeholders were broadly supportive of our proposed objectives and were encouraged by the prominence we had given to ensuring the price controls enabled decarbonisation.

2.4. Some stakeholders highlighted the need for a shift in emphasis on certain aspects of the proposed objectives. Some DNOs expressed a concern that we may be overly focussed on keeping costs low at the expense of other objectives. Several other stakeholders, particularly those from local authorities/district councils, wanted us to more explicitly

prioritise decarbonisation and ensure that DNOs provided infrastructure to meet the future capacity required to support regional economic and energy strategies. A supplier wanted us to frame the objectives to make it clear that we would favour competitive markets where possible.

Our decision

2.5. The objectives for RIIO-ED2 will be as proposed in the Open Letter.

Rationale for our decision

2.6. We are encouraged by the broad support our proposed objectives received. We note suggestions that we should prioritise certain objectives over others, however we do not consider this to be appropriate or necessary. We recognise that, in order to deliver our overarching objective, we will need to balance the different outcomes described in paragraph 2.2. For instance, enabling the transition to a low carbon energy system may lead to bills being higher than would otherwise be the case. However, we want to ensure that the costs associated with these activities are incurred efficiently, and this may require us to use competition (where appropriate) to ensure this outcome. In our final determination, we will be deciding on the balance that we consider best protects the interests of consumers.

Length of the price control

2.7. In our Open Letter, we proposed to maintain the default length of the price control at five years, in line with our decision in the other energy sectors.

DNO and stakeholder views

2.8. Virtually all respondents who offered a view on our proposal agreed that a five-year price control was an appropriate response to managing the uncertainties that could impact on electricity distribution in the near future.

2.9. Two DNOs (WPD and SPEN) were of the view that a longer price control (RIIO-1 was eight years) created a better environment for securing investment, leveraging the supply chain and improving service quality.

2.10. Several stakeholders qualified their endorsement for a five-year control period, by emphasising that it should not be used as an excuse to defer necessary decisions on

investment required to meet decarbonisation targets. There were also views that the regardless of its length, the price control needed to be sufficiently flexible to respond to changes in the wider environment.

2.11. One supplier identified that an even shorter price control (two years) might be appropriate for Distribution System Operator (DSO) activities, reflecting the approach we are taking for the Electricity System Operator (ESO) price control. Otherwise, there was little support for having variable price control lengths for different activities.

Our decision

2.12. We will set the default length of the RIIO-ED2 price control at five years, as proposed in the Open Letter.

Rationale for our decision

2.13. In our Open Letter, we noted the potential benefits that an eight-year price control offers. However, we continue to consider that these benefits are outweighed by the increased risk from changes in the wider environment resulting in a price control framework that is no longer appropriate. We consider that five years still provides DNOs with the ability to develop their networks for the longer term and to be innovative in their approach.

2.14. We intend to address the need for an adaptable price control through the use of uncertainty mechanisms, while noting that these should not be deployed in a manner that adds undue complexity or distorts efficient decision making.

2.15. At this time, we are not convinced of the need to set variable price control lengths for different aspects of the price control. We will however give this further consideration should a compelling argument be made during the development of the sector methodology.

Giving consumers a stronger voice

2.16. In our Open Letter, we proposed to apply the same enhanced engagement arrangements for RIIO-ED2 that we had introduced for the gas distribution and gas and electricity transmission network RIIO-2 price controls. These would require DNOs to set up a Customer Engagement Group (CEG), and that Ofgem will set up a central RIIO-2 Challenge Group (CG), both of which are to be independently chaired. These arrangements would also involve Ofgem holding open, public hearings ahead of our final determinations. Our timetable for RIIO-ED2 indicated one variation compared to the arrangements for the

other sectors; this was a requirement to make only one submission of a draft business plan (to the CG) instead of two submissions required in the gas distribution and gas and electricity transmission sectors.

DNO and stakeholder views

2.17. There was strong support from DNOs and a wide range of stakeholders for the enhanced engagement process. Many DNOs have made us aware that they have already taken steps to establish their CEG. One DNO (SPEN) questioned the need for the CG, believing that we should instead make more use of the chairs of each CEG. Citizens Advice were keen for the engagement arrangements to roll into the price control itself.

2.18. Comments from different stakeholder groups, such as local authorities and environmental bodies, emphasised their interest in having a formalised role in the engagement process. More generally, a number of stakeholders encouraged us to conduct a review of the effectiveness of the arrangements in the other sectors, and apply any lessons learnt for RIIO-ED2.

2.19. There was a general consensus that having only one submission of a draft business plan was appropriate given the indicative timetable set out. This would allow more time for draft business plans to be prepared following confirmation of the sector methodology for RIIO-ED2 by Ofgem and allowing more time for meaningful challenge and review ahead of final submission in late 2022.

Our decision

2.20. We will apply the enhanced engagement arrangements to RIIO-ED2, as proposed in the Open Letter.

Rationale for our decision

2.21. We note and are encouraged by the support stakeholders have shown for the enhanced engagement process.

2.22. Where there are opportunities to do so, we will seek to use engagement through the Chairs of each CEG as an input to our evidence gathering. We consider there is a distinct need for there to be both independently chaired CEGs established by the companies and an independent CG that we set up. The role of the CEGs is to provide views on the companies' business plans from the perspective of local stakeholders. The CG's role is to offer a view

on the plans from the perspective of end consumers. Reflecting this, the areas of focus of each group may be different, although we recognise that in some instances they will overlap. However, we think that, where this is the case, this still provides us with a useful insight into a range of stakeholder views on company proposals.

2.23. We intend to learn from the experience of running this process in other sectors and to adapt the approach where appropriate in RIIO-ED2. This is reflected in our change to the timetable requiring only a single submission of each company's draft business plan. We note however that we may not be able to fully gauge the effect that the engagement process has had in other sectors until we are fairly well advanced into the process of setting the price control for DNOs.

2.24. We acknowledge the comments from stakeholders on the membership of the groups and the approach to engagement in the price control itself. We do not intend to be prescriptive on the composition of each CEG as these should reflect the diversity of regional stakeholders, and this is more effectively determined by the independent Chair of each group. We will establish the role for engagement within the price control as we develop the methodology for the sector.

What consumers want and value from networks: Overarching framework for outputs and incentives

2.25. In our Open Letter, we proposed to apply the same overarching framework for outputs and incentives for RIIO-ED2 that we had introduced for the gas distribution and gas and electricity transmission network RIIO-2 price controls. We proposed to consolidate the six RIIO-1 output areas (reliability and availability, environment, connections, customer service, safety, and social obligations) into three overarching output categories, these being: meet the needs of consumers and network users, maintain a safe and resilient network, and deliver an environmentally sustainable network.

2.26. We proposed that outputs will be specified as a set of consumer-facing outcomes, which can be distinguished as licence obligations (LOs), price control deliverables (PCDs), and output delivery incentives (ODIs), in line with the framework adopted in the other RIIO-2 sectors.

2.27. We also noted that relative and dynamic incentive targets could be applied where they will drive value for consumers.

DNO and stakeholder views

2.28. The majority of DNOs and stakeholders agreed that the consolidated output categories were appropriate, deeming them to be broad enough to capture the spectrum of DNO activities and incorporate any emerging activities. While in agreement, two DNOs (WPD and UKPN) cautioned that the approach could result in less clarity. The Energy Networks Association (ENA) considered that an emphasis on keeping bills as low as possible could risk driving behaviour that may be inconsistent with meeting decarbonisation targets and suggested there should be an acknowledgement that there may be an upward pressure on bills from the low carbon transition. Two environmental groups disagreed with the approach, advocating for the original six categories, including an environmental category, to be maintained. UKPN suggested that there should be new output categories associated with facilitating the transition to net zero.

2.29. There was broad support for our approach to using LOs, PCDs and ODIs as a framework for delivering consumer-facing outcomes. It was noted their use must be gauged carefully. WPD called for further clarification on the types of deliverables to be covered by PCDs, suggesting that linking PCDs to all activities would limit licensees' flexibility to manage their network 'in the round'.

2.30. The majority of DNOs consider relative incentive targets to be inappropriate and will harm collaborative working. This reiterates comments made by DNOs in their responses to these proposals when they were discussed in other sectors.

2.31. We welcomed thoughts on how we should continue to protect the interests of vulnerable consumers in RIIO-ED2. We received a broad range of views and suggestions that emphasised the continued importance of the role that DNOs could perform going forward. It was raised by consumer groups (National Energy Action and Citizens Advice Scotland) that the price control will need to deliver greater benefits for vulnerable consumers as these consumers are at risk of being left behind by the energy transition and decarbonisation is likely to exert significant pressure on their bills. We will use the working groups to consider this issue in greater detail.

Our decision

2.32. We will apply the overarching framework for outputs and incentives as proposed in the Open Letter. As the sector methodology is developed, we will seek to ensure that the framework and its application is optimal for use in RIIO-ED2.

Rationale for our decision

2.33. We note the broad support for the proposed framework to applying outputs and incentives arrangements. We believe the overarching outputs and incentives framework will drive value for consumers and enable us to ensure the price control rewards companies for genuine performance improvements.

2.34. We consider that the consolidated output categories will clearly articulate the outcomes we expect network operators to deliver through their price control settlements. We note the concerns of some respondents that this approach would reduce clarity and in particular their preference to retain an explicit 'environment' output category. However we consider these categories strike a balance between capturing the key outcomes DNOs need to deliver without being overly restrictive on what the scope of activities could be. We see no reason why the consolidated output of delivering an environmentally sustainable network cannot encompass the activities (and more) that were previously captured in the RIIO-ED1 'environment' output. In our Sector Specific Methodology Consultation in 2020 we will propose further detail on how the RIIO-ED2 framework will address environmental considerations.

2.35. We consider that distinguishing between LOs, PCDs and ODIs, will enhance transparency and accountability for output delivery. We note the concern over how we may apply PCDs. Not all projects or deliverables will need a PCD and we will take a proportionate approach to their application.

2.36. While we note the DNOs' concerns over relative incentives, we believe they remain an important tool to enable us to drive value for consumers. We recognise they may not be appropriate in all cases and therefore the introduction of dynamic/relative incentives will be on a case-by-case basis. The approach to applying such incentives, and weighing up their advantages and disadvantages, will be considered further as we develop our Sector Methodology.

Maintaining a safe and resilient network

2.37. In our Open Letter, we proposed to apply the Network Asset Risk Metric (NARM) for RIIO-ED2, as part of a toolbox approach to justifying and assessing network companies' (proposed) investments and preferences for their chosen strategies. This was in addition to our proposal to introduce arrangements to ensure DNOs are appropriately managing the risks associated with cyber resilience, physical security, and workforce resilience.

DNO and stakeholder views

2.38. There was broad support for the use of NARM as part of the approach to maintaining a safe and resilient network. Many DNOs and wider stakeholders were supportive of NARM while noting concerns with specific elements and/or the funding arrangements that will be needed to address the challenges of climate change, cyber and physical security, and workforce resilience.

2.39. A number of respondents noted that decarbonisation will bring additional risks that may not be captured by the current mechanisms, and that the alternative solutions that arise to deal with these risks will need careful consideration. Ultimately, respondents agreed that the responsibility for maintaining a safe and resilient network sits with the DNOs, and that their business plans need to recognise this.

Our decision

2.40. We will apply the position proposed in the Open Letter.

Rationale for our decision

2.41. We note the broad support for the proposed arrangements to ensuring DNOs deliver safe and resilient networks.

2.42. We acknowledge that NARM alone cannot be used to assess and justify DNOs' investment decisions and strategies in maintaining a safe and resilient network. However, when used as part of a toolbox approach (which should include, among other things, engineering judgement and cost benefit analysis (CBAs)) that is flexible in its application, we believe it is the most suitable way to track the benefits that are delivered. NARM builds on the progress that has already been made in developing Network Asset Secondary Deliverables (NASD) in RIIO-ED1, and we believe that continuing this progress into RIIO-ED2 will ensure it remains fit for purpose.

2.43. We note that a number of respondents highlighted concerns with elements of NARM and/or other measures that may be used to help deliver a safe and resilient network. We recognise that, in addressing risks associated with network resilience, our approach and/or framework will need to be able to account for new and changing risks; we believe that a toolbox approach gives that flexibility.

2.44. One of these tools may be an Asset Data Quality Incentive, which would be designed to drive consistency and improved data quality for all licensees.

2.45. We also believe that a toolbox approach to assessing how DNOs are maintaining safe and resilient networks enables other activities to be captured, including whether DNOs are appropriately managing the risks associated with workforce resilience and cyber and physical security. We want to make sure that DNOs are addressing all risks to network resilience, not just those that are associated with NARM.

Delivering an environmentally sustainable network

2.46. In the Open Letter, we explained that as the transition to a low carbon energy system accelerates, we expect DNOs to both facilitate this transition as well as developing and operating their own networks in a smarter, more flexible and more sustainable way. DNOs' responsibilities in this area are not limited to the facilitation of others' activities and therefore, as in the transmission and gas distribution sectors, we proposed that DNOs should focus on decarbonising their own network, reducing the environmental impact of network activity, and supporting the transition to a smarter, more flexible, sustainable low carbon energy system.

DNO and stakeholder views

2.47. There was broad support for our proposals, with many stakeholders highlighting the need for DNOs to take a more proactive role in facilitating the transition to a low carbon energy system.

2.48. A number of respondents suggested ways in which DNOs could reduce the impact of their activities on the environment as well as the activities they could undertake to decarbonise the networks. Suggestions included the use of outputs and incentives to tackle losses and reduce waste, eliminate hazardous materials, reduce air and noise pollution and improve visual amenity. Many stakeholders also highlighted the potential of energy efficiency measures to optimise and extend asset lives. To ensure DNOs take a proactive role in facilitating the transition to a low carbon energy system, many stakeholders highlighted the need for enhanced CBAs, which take account of the true cost of carbon and the societal value of the options under consideration. They identified that this, as well as greater standardisation of data and reporting will be central to ensuring decarbonisation is at the heart of DNOs' decision-making in RIIO-ED2.

Our decision

2.49. We will apply the position proposed in the Open Letter.

Rationale for our decision

2.50. We note the broad support for the proposed arrangements to ensuring DNOs deliver an environmentally sustainable network.

2.51. We also note stakeholders' detailed suggestions for how the activities of DNOs could be funded, the outputs and incentives they should be exposed to as well as how their performance should ultimately be measured. We will consider these suggestions as part of our development of policy options in our RIIO-ED2 working groups.

Enabling whole system solutions

2.52. In our Open Letter, we proposed not to align the start or finish dates of the electricity distribution and transmission price controls.

2.53. We considered that a whole system approach could be enabled without aligning the price controls for each sector. A clear scope and ambition for whole system outcomes, consistent with the other sectors, should deliver benefits through more effective planning, coordination, and collaboration. Where more targeted support may be needed, such as through the Coordinating Adjustment Mechanism[5] (CAM) we proposed that the design should be consistent with the other sectors.

2.54. We also proposed that there would be benefits in including whole systems requirements to any Business Plan Incentive that we may introduce for RIIO-ED2.

DNO and stakeholder views

2.55. We asked how RIIO-ED2 might best capture the benefit of whole systems solutions, and how those could be measured. Most DNOs agreed that a standard approach to whole system costs and benefits would be needed, and offered different views on how to achieve

[5] The Coordinated Adjustment Mechanism (CAM) is a process by which licensees may apply to re-open their price controls to transfer the responsibility and revenues for an output, or project, to the party best placed to deliver them cost effectively.

this. Some thought a standard CBA model should be developed that included societal benefits, such as disruption costs, reduced transport costs, decarbonisation benefits etc., and would more closely mirror the work we understand is being done by some Local Authorities. All DNOs considered that more guidance would be needed on what type of societal costs and benefits might be included.

2.56. Non-DNO responses also sought more clarity on how costs and benefits would be assessed. Some considered that participation in the delivery of solutions that benefit the whole system should be mandatory, with penalties for DNOs that do not engage. Industry stakeholders generally supported an explicit justification for whole system projects through an Ofgem-approved CBA.

2.57. We asked if the approach to whole system solutions should be different in RIIO-ED2 from the other sectors. DNOs and stakeholders who responded all agreed that – in the context of whole systems – RIIO-ED2 should be consistent with the other sectors, but noted that there were areas where electricity distribution faced more rapid change, such as connecting distributed energy resources to the grid, net zero goals, or a developing flexibility market. DNOs agreed that it was unnecessary to align the transmission and distribution price controls, with one DNO noting that a lack of alignment may produce a benefit for consumers in this context, by maximising engagement opportunities for networks at different points in the different price control cycles.

2.58. We proposed that the CAM design should be consistent with the other sectors. One DNO – Northern Powergrid - was concerned about possible misuse of the mechanism, but other DNOs agreed that common processes or mechanisms were needed to ensure whole system outputs, revenues and costs were able to be transferred between companies. Most DNOs considered that the CAM is potentially a good tool, but were cautious about its possible interaction with the Totex Incentive Mechanism (TIM) and with other sectors' incentives. Industry responses mainly agreed on the need for a mechanism that ensured the right parties were remunerated for the work, with a number of them suggesting that a DNO acting (more cost-effectively) on behalf of another should also gain some share of the savings.

2.59. No stakeholders expressed views on the inclusion of whole system elements in any potential Business Plan Incentive.

Our decision

2.60. As proposed in the Open Letter, we will not align the start and end dates of the electricity distribution and transmission price controls. We will develop the CAM in line with the other sectors. We will ensure that the scope of whole system activities is consistent with the other sectors, and we will be including consideration of each DNO's approach to enabling whole system solutions in the Business Plan Incentive.

Rationale for our decision

2.61. We consider that the TIM should in the main incentivise companies to seek out the most efficient activities. However, where those activities may lie on another network, or be in the control of a third party, there may be a need for additional mechanisms to enable the transfer of responsibility for the work, along with any associated funding and output-linked incentives. For this reason, we will develop the CAM further, so that when opportunities arise to reallocate activities, costs, and benefits across networks during the course of a price control, there is a common process across all sectors for that to happen.

2.62. We will include whole system elements in any potential design of a Business Plan Incentive. DNOs should already coordinate with other electricity networks[6], but electricity licensees are not the only sectors that are affected by activities undertaken on a DNO's network. We consider it necessary to include a whole system element in the Business Plan Incentive to encourage a behavioural change across all sectors, enabling them to identify and implement more efficient solutions by interacting across the whole energy system.

Managing uncertainty

2.63. In the Open Letter, we recognised that setting price control allowances up front over long periods of time brings an inherent degree of uncertainty. This uncertainty is likely to increase with the energy system transition, changing behaviours, and the emergence of new technologies. We set out our initial views on appropriate ways to deal with uncertainty in RIIO-ED2. We proposed:

[6] Ofgem is currently considering potential licence changes for the remainder of the RIIO-ED1 period that will consolidate our expectations of whole *electricity* system behaviours amongst electricity licensees.

- to use indexation where feasible. We said that this this may include adjustments for labour and construction cost inflation, where evidence suggests this is different from general consumer price inflation
- in relation to highly-anticipatory investment, to follow a similar approach to the one set out in the RIIO-2 Sector Specific Methodology Decision (May 2019), by inviting networks to propose highly anticipatory projects in their business plans. We said we would provide more detail on how 'highly anticipatory projects' should be defined through the process of developing the Sector Methodology
- to offer DNOs the opportunity to set out in their business plan how these highly anticipatory investments should be treated, for instance, by proposing appropriate risk-sharing arrangements.

DNO and stakeholder views

2.64. DNOs said that, where possible, ex ante funding with associated outputs and incentives are the most effective way to drive outcomes. SSEN, SPEN, ENWL and WPD said that mechanisms that were used in RIIO-ED1 are now well-established and fit for purpose in RIIO-ED2. DNOs generally recognised that the use of Price Control Deliverables may be appropriate.

2.65. UKPN and Northern Powergrid cautioned that if we over rely on uncertainty mechanisms, as a response to a lack of clarity on the impact that achieving net zero carbon emissions might have on the networks, this could be a step in the wrong direction. Northern Powergrid said that uncertainty mechanisms have significant downsides, eg they can distort the incentives companies face and where the costs are directly within DNO control, or substitutable with costs outside the reopener, their inclusion can undermine the totex approach to regulation. Northern Powergrid also stated its view that uncertainty mechanisms create additional administrative burdens during the price control period.

2.66. In relation to the use of indexation in reducing forecasting risk, DNOs' views were mixed. Some DNOs were generally supportive or accepting of our position, but commented that this approach should only be used where an appropriate index has been identified and its use justified. Two DNOs commented that Ofgem should consider the relationship between real price effects (RPEs) and productivity growth and the extent to which these may offset each other. SSEN said that it was not in favour of RPE indexation and that a fixed allowance was more appropriate. Citizens Advice, Centrica, RWE and BEAMA were generally supportive of our proposal to index certain costs.

2.67. Some DNOs said that they would welcome clarity around how highly anticipatory investment is defined and how DNOs should assess whether such investment is needed. Several DNOs commented that stakeholder views and Local Authority plans should be taken into account in reaching decisions on highly anticipatory investment.

2.68. Northern Powergrid said that it viewed the existing regulatory framework as appropriate for anticipatory investments that are justified. It said that there is already a sharing of risk in relation to reinforcement expenditure, because companies face a totex efficiency assessment at the price control review and are also exposed to the totex efficiency incentive within the price control period.

2.69. Centrica highlighted that encouraging highly anticipatory investment could involve asymmetric risks to the detriment of consumers. Citizens Advice, while saying that it would be valuable for DNOs to include highly anticipatory investments in their business plans, also noted the risks of asset stranding and commented that reopeners may be a 'less risky alternative'.

2.70. DNOs expressed concerns that treating strategic investment differently from other expenditure may have unintended consequences. SSEN said that risk and funding requirements should be considered on a case-by-case basis, as network characteristics and requirements may differ by location. Options and Cost Benefit Analysis should be presented in Business Plans and be supported by stakeholders.

Our decision

2.71. We will apply the position proposed in the Open Letter.

Rationale for our decision

2.72. In our view, it is appropriate for companies to be able to propose investments that are highly anticipatory, where sufficiently evidenced and supported by stakeholders, as part of their business plans. We will work with the DNOs and stakeholders to establish a framework for considering this type of investment and will consider the potential role of an inter-institutional group as a part of this.

2.73. In relation to the use of indexation, we said in the RIIO-2 Framework Decision for gas distribution and gas and electricity transmission that, in setting price controls, we want to ensure that incentives on outputs and costs only reward companies for genuine

performance improvements.[7] In our view, the indexation of cost allowances where feasible and appropriate will help us to achieve this.

Driving efficiency through innovation and competition

2.74. In the Open Letter, we stated that innovation and competition should play a more important role in RIIO-ED2.

Innovation

2.75. In the Open Letter, we stated that innovation should be at the heart of what network companies do and we want to ensure that the RIIO-ED2 price control encourages DNOs to undertake more innovation as part of their business as usual (BAU) activities. The TIM, business plan incentive and challenge from the enhanced engagement process would encourage companies to do this.

2.76. We also proposed to remove the Innovation Rollout Mechanism (IRM) re-opener from RIIO-ED2, replace the Network Innovation Competition with a new innovation funding pot that targets future-facing strategic challenges, and retain the opportunity for network companies to receive Network Innovation Allowance (NIA) funding.

DNO and stakeholder views

2.77. Responses from many DNOs and wider industry stakeholders (including innovators involved in current projects) emphasised that innovation has been a success story from RIIO-1, but cautioned that proposed RIIO-ED2 changes could hinder this progress. In particular, these responses noted the need for a strong TIM to encourage companies to do more BAU innovation.

2.78. Additionally, some responses from DNOs and innovators currently involved in projects and renewable/environmental interest groups emphasised the need for innovation funding to focus on DSO-related activities. Some responses from DNOs and innovators also cautioned that narrowing the scope of the innovation stimulus support to the energy

[7] RIIO-2 Framework Decision, paragraph 5.33 https://www.ofgem.gov.uk/system/files/docs/2018/07/riio-2_july_decision_document_final_300718.pdf paragraph

system transition and consumer vulnerability could limit the consumer benefit derived from innovation projects.

2.79. The majority of respondents were supportive of the specific proposals to introduce a new innovation funding pot to focus on future-facing strategic challenges, retain the opportunity for companies to receive NIA funding, and remove the IRM re-opener. Additionally, several responses, in particular those from consumer groups, were particularly supportive of proposals to increasingly target innovation funds at projects which addressed consumer vulnerability.

2.80. However, there were some responses which disagreed to varying extents with the provision of innovation funding to network companies. For example, one supplier (RWE) was strongly opposed to the provision of innovation stimulus funds to DNOs, while another supplier (Centrica) suggested there should be an increased emphasis on BAU innovation and roll out of innovation, but agreed with the proposed reforms. One DNO (UKPN) also disagreed with the need for additional NIA funding as they believed a strong TIM should itself incentivise BAU innovation and its removal would help to simplify the price control.

Our decision

2.81. On innovation, we will remove the IRM re-opener, introduce a new innovation funding pot that targets future-facing strategic challenges and retain the opportunity for network companies to receive NIA funding, as proposed in the Open Letter.

Rationale for our decision

2.82. We continue to believe that an innovation stimulus is needed as without additional funding network companies would not otherwise embark upon longer-term, energy system transition, whole system, or vulnerability-related innovation, which deliver benefits beyond those accrued by the individual company. This also builds upon CEPA's conclusions that the type of innovation needed to meet the scale of the energy system transition may not be delivered without additional funding on top of companies' allowed revenues.[8]

[8] Review of the RIIO framework and RIIO-1 performance, CEPA, March 2018; https://www.ofgem.gov.uk/system/files/docs/2018/03/cepa_review_of_the_riio_framework_and_riio-1_performance.pdf

2.83. Although we note that some respondents believe the proposed RIIO-ED2 framework will dilute support for innovation, we consider that network companies should now be doing innovation which delivers benefits to them during the course of a price control as part of their BAU activities, rather than rely solely on innovation stimulus funds. Most respondents agreed with us on this point.

2.84. Additionally, the TIM should incentivise companies to roll out previously proven innovation during the course of RIIO-2, without the need for an additional IRM re-opener. The IRM re-opener has also had little use in RIIO-1, lacks flexibility and there will be reduced need for this additional re-opener during the shorter five-year RIIO-ED2 price control period.

2.85. As incentives within the price control should drive companies to innovate where this reduces their cost of operation, the innovation stimulus funds should be targeted at projects related to the energy system transition or addressing consumer vulnerability as we believe companies may not otherwise innovate on these themes. The need for network innovation to increasingly focus on key strategic challenges related to the future of power, heat and transport is also emphasised by the net zero carbon emission targets.

Competition

2.86. We believe that efficiency can also be driven by the effective use of competition, where it reveals lower costs of delivery or better ideas to meet system needs. Competition can take three main forms: early, late, and native. Native competition (ie those competitions run by network companies within the price control framework under the TIM) already takes place under the current price control arrangements.

2.87. Early competition, where a competition is run ahead of the project design process to reveal the best idea to meet a system need, may reveal flexibility-led solutions that do not require new network infrastructure to be built. Late competition, where a tender process is run after the conclusion of the design phases of a project, aims to derive value for consumers through efficient and innovative approaches to construction, tendering or financing.

2.88. For competition, we proposed that we will work towards introducing models of both early and late competition for projects in RIIO-ED2 that meet certain criteria. We also proposed to introduce arrangements to ensure that there is effective native competition.

DNO and stakeholder views

2.89. DNOs were not in favour of establishing explicit models of early and late competition for RIIO-ED2. DNOs broadly focussed on the high level of competition they already facilitated and the consumer benefit this delivered. With regard to criteria for identifying projects for competition, some DNOs felt there needed to be rigorous CBAs carried out to establish the potential benefit of running a competition prior to it being instigated.

2.90. For native competition, two DNOs believed their procurement approach already reflected Ofgem's proposed best practice principles. Other DNOs believed there was no need for additional regulatory intervention on this matter, and that a strong sharing factor with the TIM would produce the best results. One DNO felt strongly that the introduction of best practices principles was regulatory micro-management.

2.91. Other respondents (non-DNOs) were generally more positive about our proposals for early and late competition models, drawing attention to the potential benefits to consumers from increased use of competition, and suggesting principles to that end. For example, ensuring symmetry of information between DNOs and third parties, extending competition to currently non-contestable activities, and ensuring competitions are run by suitably independent bodies. Non-DNO respondents who commented on the topic were generally more supportive toward additional measures to ensure native competition was carried out in line with best practice.

Our decision

2.92. On competition, we will continue to work towards introducing early and late competition models. We will also develop arrangements to ensure native competition is undertaken in an efficient manner.

Rationale for our decision

2.93. We note that a broad range of stakeholders acknowledged the potential benefits for consumers from the use of enhanced competition in RIIO-ED2, and we consider it to be in consumers' interests to continue to develop early and late competition models for projects that meet certain criteria. No decisions have yet been made as to which specific models might be developed or implemented nor on which criteria might apply.

2.94. We note the majority of respondents support our proposed arrangements to enable native competition to be undertaken effectively, particularly through the use of best

practice principles. This should result in improved tendering for flexibility solutions and more transparent and consistent valuation and decision-making. While we acknowledge the role and impact of the existing rules and regulations around utility procurement, such as the Utilities Contracts Regulations 2016[9], we consider that it is in consumers' interests to embed additional values and best practices that are relevant to the network companies in a transforming energy system.

Business plan and Totex incentives

2.95. In the Open Letter, we set out our position to:

- Remove the early settlement process for RIIO-ED2.
- Set incentive rates via a confidence dependent incentive rate approach.
- Use the Business Plan Incentive (BPI).

DNO and stakeholder views

Early settlement

2.96. All but one DNO supported the proposal not to use the early settlement process in RIIO-ED2. WPD commented that it was unclear how an alternative approach to encouraging high-quality business plans in RIIO-ED2 would enable Ofgem to treat its assessment of business plans proportionately. Two suppliers - Centrica and EON - responded to the questions in this area. Both said that they were in favour of the removal of early settlement.

Setting totex incentive rates

2.97. DNOs were not in favour of using the confidence dependent incentive rate (CDIR) in RIIO-ED2, in which the level of the incentive rate would increase the more confidence we had in our ability to set baseline allowances. Some DNOs commented that the CDIR would have the effect of penalising companies that took more innovative or uncertain approaches, which may be the opposite of what Ofgem should be encouraging. Renewable UK also raised this point.

[9] Utilities Contracts Regulations 2016 S.I. 2016/274.

2.98. Centrica said that it considered the retention of the Information Quality Incentive (IQI) that was used in setting RIIO-ED1 as a 'safer bet' than the combination of the CDIR and BPI and therefore preferred this approach. EON was in favour of using the CDIR, to help ensure that benefits derived from underspending against allowances are a result of "higher efficiencies and not poor forecasts".

2.99. Citizens Advice said that, though it was supportive of a move away from the IQI approach, it had some concerns around how Ofgem will carry out its assessment of 'confidence' and whether this might be too subjective a process. It suggested that Ofgem should work towards ensuring that the CDIR retains some of the benefits associated with the objectivity of the IQI approach. Citizens Advice suggested that Ofgem's review of Business Plans in the gas distribution and gas and electricity transmission sectors could provide evidence to support an appropriate range of totex efficiency incentive rates.

Business Plan Incentive

2.100. Most DNOs did not explicitly state whether or not they were in favour of using the Business Plan Incentive (BPI) in RIIO-ED2, however all DNOs commented that, if the BPI is to be used in RIIO-ED2, then, considering the level of detail available on the incentive for the gas distribution and gas and electricity transmission price controls, much more clarity is needed on how the incentive would operate in the Electricity Distribution sector.

2.101. Other industry parties which responded to the consultation were generally in favour or neutral towards the use of the BPI and CDIR in RIIO-ED2. S&C Electric Company commented that, if Ofgem were to use the range of totex efficiency incentive rates that has indicatively been proposed for use in the gas distribution and gas and electricity transmission sectors, rates towards the lower end of the range may not be strong enough to drive innovation and the efficient development of networks. Grid Edge commented that there may be value in seeing how the implementation of the BPI and CDIR works in practice in the other sectors before refining the arrangements for use in RIIO-ED2.

2.102. On the potential incentive strength of BPI, Citizens Advice said that offering a range of +/- 2% of allowed totex appeared to have been sufficiently strong to push companies in the gas distribution and gas and electricity transmission sectors to work towards producing high-quality business plans.

Our decision

2.103. As we proposed in our Open Letter, we will:

- Remove the early settlement process for RIIO-ED2.
- Set incentive rates via a confidence-dependent incentive rate approach (CDIR).
- Use the Business Plan Incentive (BPI).

Rationale for our decision

2.104. In deciding on the appropriate arrangements for RIIO-ED2, our view is that there are no compelling reasons to reach a different conclusion in the Electricity Distribution sector than the one we reached in the other RIIO sectors.

Early settlement

2.105. In the Open Letter, we said that concentrated ownership structures and lack of comparability between companies weakened the competitive dynamic that is necessary to make fast tracking effective. We also said that early settlement requires a compression of the timetable potentially making it incompatible with enhanced engagement.

2.106. We acknowledge that ownership within the Electricity Distribution sector is less concentrated and comparability between companies may be greater than is the case in the other sectors. We also acknowledge that, in its report *Review Of The RIIO Framework And RIIO-1 Performance,*[10] CEPA estimated that the fast-track incentive was likely to have resulted in a net benefit to consumers in RIIO-ED1.

2.107. Irrespective of this, our concerns around the extent to which early settlement of the price control would be compatible with a full enhanced engagement programme remain. Making provision for such early settlement would, in our view, limit the extent to which improvements in the quality of business plans could be driven by the enhanced engagement programme, thereby limiting the extent to which local stakeholder needs are reflected in the final business plans.

2.108. We also note that a significant majority of respondents who commented on this point were in favour of removing early settlement from RIIO-ED2.

[10] Review of the RIIO framework and RIIO-1 performance, March 2018: https://www.ofgem.gov.uk/system/files/docs/2018/03/cepa_review_of_the_riio_framework_and_riio-1_performance.pdf

Setting totex efficiency incentive rates

2.109. We stated in the Open Letter that the majority of DNOs had previously expressed opposition to Ofgem taking account of its level of confidence in setting cost allowances in setting the totex incentive rate, with several DNOs expressing a preference to retain a methodology either the same, or similar to the Information Quality Incentive (IQI) approach used in RIIO-ED1.

2.110. Our concerns around the effectiveness of the IQI have previously been set out. In the RIIO-2 Sector Specific Methodology Decision (May 2019)[11], we decided to remove the IQI in the gas distribution and gas and electricity transmission sectors.

2.111. We said that the fundamental assumptions that are essential to make the IQI in its RIIO-1 form effective do not apply in the gas distribution and gas and electricity transmission sectors. We said that the most important of these was that our view of cost was not independent of the company view and that, where this is the case, (in whole, or in part) then the measure of whether a plan is ambitious or not, or whether any subsequent underspend against an allowance is reflective of a genuine efficiency is less reliable. Additionally, we said that the IQI was a complex and often misunderstood incentive mechanism.[12] We have not been presented with further evidence why this reasoning would not also apply to the operation of the IQI in the Electricity Distribution sector.

2.112. In the RIIO-2 Sector Specific Methodology Decision (May 2019) we set out the reasons why we believed it appropriate to set the totex incentive rate with reference to our level of confidence in our ability to independently set cost allowances. In particular, we said that if we have lower-confidence in our ability to set costs independently, then subsequent variations in actual expenditure against budgets may only be partly attributable to improvements or deterioration in efficiency. Errors in setting allowances, along with inflated cost submissions may also be factors. We believe that the greater the proportion of such lower-confidence baseline costs contained in a company's Business Plans, the lower the proportion of cost overruns or savings the company should be exposed to.

[11] RIIO-2 Sector Specific Methodology Consultation, 18 December 2019: https://www.ofgem.gov.uk/system/files/docs/2019/05/riio-2_sector_specific_methodology_decision_-_core_30.5.19.pdf

[12] See Sector Specific Methodology Decision (May 2019) paragraphs 11.29 to 11.34

2.113. We believe that this is an appropriate way to treat uncertain costs that is fair to both companies and consumers. The inverse is true in relation to high-confidence baseline costs, where Ofgem is more likely to be able to set cost allowances nearer to the outturn level of cost. Equally, if companies are able to underspend against allowances in these areas, it is more likely that such underspends will arise from improved efficiency, rather than inaccuracies in the setting of allowances at the price control.

2.114. In our view, this reasoning can also be applied to the Electricity Distribution sector and this is why we intend to use the CDIR approach in RIIO-ED2.

Business Plan Incentive

2.115. Having decided not to use the IQI and early settlement in RIIO-ED2, an alternative approach is needed in order to incentivise the preparation of high-quality business plans. In our view, the BPI is suitable for this purpose.

2.116. We will consider whether refinements could be made to the BPI and CDIR based on our experiences as we implement these arrangements in the gas distribution and gas and electricity transmission sectors. We will provide an update on our approach in the RIIO-ED2 Sector Specific Methodology Consultation.

Fair returns and financeability

2.117. In the Open Letter, we set out our position to:

- Retain debt indexation for RIIO-2.
- Set the baseline allowed return on equity using the same methodology as the other sectors.
- Use either CPI or CPIH for inflation measurement in calculating both RAV and allowed returns.

DNO and stakeholder views

Debt indexation

2.118. DNOs did not, with the exception of ENWL, strongly object to the retention of full indexation for RIIO-ED2. SPEN noted that during previous price controls it supported debt indexation but highlighted its updated view that "we believe it would be in consumers'

interests to replace the current indexation approach used in ED1 with a pass-through allowance in ED2".

2.119. ENWL argue that debt allowances need "to be based on Ofgem's financeability duty to ensure that each licensee is financeable". ENWL disagreed that allowances should be based on sector averages because this would give rise to "winners or losers". In contrast, Northern Powergrid argue that the full indexation approach should be applied on a sector specific basis and calibrated to match the expected sector cost. To support this, Northern Powergrid referred to differences in RAV growth between the sectors, noting its disagreement with National Grid[13]. UKPN argued that full debt indexation has many positive features particularly its simplicity and transparency.

2.120. In terms of setting the quantum of the allowance, as distinct from the method, most DNOs argue that debt costs raised before the trailing average period should be reflected and that some debt costs are not captured in the published indices.

2.121. Citizens Advice repeated its support of the full debt indexation mechanism on the grounds of transparency, trackability & forecast error, and argued that the current approach for RIIO-ED1 should be allowed to run its course.

2.122. Centrica stated its belief that the best value for consumers would be delivered using partial indexation, where a fixed allowance is set for embedded debt, in contrast with full indexation. Centrica however recognised the challenges of testing embedded debt costs for efficiency and stated it was "cautiously comfortable with the proposal to retain full indexation… subject to the treatment of company-specific adjustments." Centrica also encouraged the use of consumer benefit tests and cost efficiency tests if any DNO seeks a company specific adjustment, while referring to Ofwat's approach on these.

Allowed return on equity finance

2.123. DNOs mostly repeated previous submissions, as summarised in the RIIO-2 Sector Specific Methodology Decision (SSMD, May 2019), that equity returns need to be higher than the working assumptions. DNOs argue that estimates of equity beta and the Total

[13] National Grid had argued in their earlier consultation response that each sector should be given the same index calibration for cost of debt allowances because they did not consider the sectors had inherent differences that might justify different calibrations.

Market Return are too low, but did not provide substantive or notably different evidence from that considered in the SSMD, although Northern Powergrid's further views on depreciation represent one exception.[14] In summary, DNOs argue that energy networks are not low risk and that equity returns need to be higher than the working assumptions in the SSMD. By extension, DNOs argue that companies will struggle to raise finance, particularly equity finance, if allowed returns are too low. Northern Powergrid argue that the cost of equity is increasing not decreasing, due to forecast increases in RAV values for electricity distribution, which Northern Powergrid argue increases risk for investors and stresses debt credit metrics.

2.124. Citizens Advice and Centrica both welcomed the approach to setting allowances for equity finance. Citizens Advice welcomed our focus on the cost of capital for RIIO-2, and noted the challenge for Ofgem to achieve fair returns whilst ensuring DNOs are working to a clear and realistic road map to enable net zero carbon emissions. Centrica welcomed the proposal to apply the same methodology for RIIO-ED2 that is being applied for the other sectors, and welcomed the methodology for calculating the cost of capital, which Centrica argues better reflects the low-risk nature of network investment.

Using CPI or CPIH for inflation measurement

2.125. DNOs did not oppose a move away from RPI, subject to one or more of the following provisions: that the change is NPV neutral; that financing costs are considered; and that it is not used to mask financeability problems. Northern Powergrid stated a preference for CPI given stronger institutional protections compared with CPIH. SPEN noted that few independent forecasts are made of CPIH and subsequently withheld its support for CPIH pending demonstration of NPV neutrality.

2.126. Neither Citizens Advice nor Centrica raised concerns with the move away from RPI. Citizens Advice stated its view that the move should be conducted completely and at one

[14] Northern Powergrid argue that significant additional flexibility is required for depreciation and suggest that Ofgem should depreciate a baseline tranche of totex over approximately the current average (which they estimate for Northern Powergrid would be 24-29 years). They argue that this would help maintain DNO financeability and preserve low prices for future consumers. They suggest that all expenditure above this baseline tranche should be depreciated at 45 years (so that any peaks in expenditure to meet net zero can be spread over the lifetime of those assets without causing undue spikes in near term charges).

point in time at the start of the RIIO-ED2 price control, rather than a staggered or blended approach.

Our decision

2.127. As we proposed in our Open Letter, we will:

- Retain full debt indexation for RIIO-ED2.
- Set the baseline allowed return on equity using the same methodology as applied to the other RIIO sectors[15].
- Use either CPI or CPIH for inflation measurement in calculating both RAV and allowed returns.

Rationale for our decision

2.128. In deciding on the appropriate arrangements for RIIO-ED1, our current view is that there are no compelling reasons to reach different conclusions for the electricity distribution sector than the decisions we reached for the other RIIO sectors. We explain this further in the following paragraphs.

2.129. We continue to believe full indexation for debt allowance setting aligns with the principles set out in the Framework Consultation in March 2018. As outlined in the Framework Decision in July 2018, stakeholders broadly support these principles[16] – and the responses to the Open Letter did not indicate that stakeholders seek different principles to be applied to electricity distribution.

2.130. Consultation responses have not provided material evidence that changes our views on the proposed methodology for allowed return on equity. For completeness, we provide more depth on our reasoning as follows:

[15] Rather than re-state the detailed reasoning behind this approach we instead provide a link to our Sector Specific Methodology Decision document where this is fully explained: https://www.ofgem.gov.uk/system/files/docs/2019/05/riio-2_sector_specific_methodology_decision_-_finance.pdf

[16] See paragraph 6.10 (page 50) of the RIIO-2 Framework Decision July 2018: https://www.ofgem.gov.uk/system/files/docs/2018/07/riio-2_july_decision_document_final_300718.pdf

- Regarding Step 1 of the equity methodology, the Capital Asset Pricing Model is, in our view, just as powerful for estimating electricity distribution-investor expectations as it is for estimating investor expectations in the other sectors – responses to the Open Letter did not strongly challenge this.
- Regarding Step 2 of the equity methodology, cross-checks are important for the electricity distribution sector in a similar way to the other sectors – and we noted that responses to the Open Letter generally supported the concept.
- Regarding Step 3, the principle that expected returns can differ from allowed returns applies equally to electricity distribution as it does to the other sectors. In response to the Open Letter, DNOs reiterated their objections, but these were not materially different to those raised by other network companies which we considered within the SSMD. Hence we have reached the same conclusion, that Step 3 should be included within the RIIO-ED2 methodology.

2.131. Therefore, in the absence of material new evidence strong opposition, we currently see no strong reason to apply a unique approach to RIIO-ED2. Further, we see benefits in terms of simplicity and transparency in terms of aligning the approach with the other sectors.

2.132. In terms of using RPI to estimate the weighted average cost of capital (WACC), and to for calculating RAV, the responses to the Open Letter indicate that most stakeholders remain supportive of moving away from RPI towards CPI or CPIH with immediate effect from the beginning of the next price control. As explained in the Framework Decision (July 2018), RPI is upwardly biased and has lost its credibility as an accurate measure of inflation. Responses to the Open Letter did not challenge this and therefore our view remains that we should rely on either CPI or CPIH, insofar as possible, instead of RPI.

Return adjustment mechanisms

2.133. In our Open Letter, we proposed to introduce the sculpted sharing factor Return Adjustment Mechanism (RAM) for RIIO-ED2.

DNO and stakeholder views

2.134. All DNOs expressed a view that a RAM was not necessary, given a shorter price control period and the opportunity that we had to correct for known errors in the setting of the RIIO-1 price controls. Their concern was that a RAM would dampen incentives to seek out cost efficiencies and improve service. SSEN cited a report from EY that the ENA had

previously provided to us[17], that highlighted the potential detrimental impact of RAMs. If we were to introduce a RAM, the consensus among DNOs was that the sculpted sharing factor approach would be the least disruptive approach.

2.135. Non-DNO stakeholders who responded to this question were supportive of having a RAM in the price control, and most agreed that the sculpted sharing approach was proportionate and pragmatic. Centrica preferred an 'anchoring' approach that constrained the average return for a sector, as they considered it was the only failsafe means of keeping returns within acceptable boundaries while maintaining the incentive properties of the regime.

Our decision

2.136. We will apply the sculpted sharing factor RAM for RIIO-ED2, as proposed in the Open Letter.

Rationale for our decision

2.137. Where it is possible to do so, we will develop the RIIO-ED2 price control so as to mitigate the risk of forecasting error, or unanticipated events resulting in higher than expected returns. However, we consider that these will not be sufficient to provide the protection that consumers may require, given a rapidly changing energy sector. Therefore, we believe a failsafe mechanism in the form of the RAM is needed to protect consumers and preserve the legitimacy of the regime.

2.138. We note that DNOs continue to be sceptical on the need for the RAM and we recognise that there is an interplay between an adjustment mechanism and incentives on performance. We do not however agree with the ENA report referred to above that a RAM will yield no net benefit for consumers. This analysis assumes that all or most outperformance is generated by genuine efficiencies or innovation. We consider that this is

[17] "Evaluating the need for, and strengths and weaknesses of, fair returns mechanisms for RIIO-2", Final report for Energy Networks Association, 30 May 2018, see Response 71 to the RIIO-2 Framework Consultation (TOs SOs and ENA responses RIIO-2 Framework Consultation)

unlikely to be the case and we are of the view that other factors can affect the level of return a company earns through incentives.

2.139. In other sectors, we ruled out the use of a discretionary adjustment as a RAM, in preference for a mechanistic approach. We also decided not to apply a mechanistic approach that made adjustments to individual companies based on the level of the sector average return. We excluded this approach due to the concentrated ownership structure in other sectors.

2.140. We recognise there is less concentration of ownership in electricity distribution, and we acknowledge the view of Centrica that an anchoring approach has the potential to preserve the incentive properties of the regime while safeguarding consumers. However, we consider that a sculpted sharing approach – if designed appropriately – can achieve a similar outcome, while being simpler to implement.

2.141. In other sectors, we decided to exclude financial performance in the calculation of returns that would be subject to the RAM. This was because information asymmetry was not likely to be the cause of outperformance against these measures, and including them within the return calculation would likely affect the strength of operational incentives. It is likely that these factors equally apply in electricity distribution and we will consider this further as we develop the RAM for this sector.

3. Strategic approach to RIIO-ED2

Section summary

We received a range of views from stakeholders on how we should use the RIIO-ED2 price control to address some of the key strategic issues facing the sector. These are summarised below. We are not making a decision on any of these issues at this time, however these views will inform the development of the sector methodology.

Introduction

3.1. RIIO-ED2 will take place at a time of significant change. The role that energy networks, and DNOs in particular, have historically played may need to adapt in order to support decarbonisation targets being met. However, there is uncertainty as to what this will entail. We will have to make choices between different approaches and pathways that can be taken in order to set a price control that balances a number of objectives.

3.2. In our Open Letter, we asked for views on what we considered to be the key strategic issues affecting the overall design of the RIIO-ED2 price control. In this chapter, we explain what the issue is for each topic and provide a high-level summary of the range of views that we have received.

3.3. At this time, we are not making decisions on these matters or (for the most part) responding to the comments raised. In Chapter 4, we describe the working groups we are establishing to develop the RIIO-ED2 Sector Methodology. The views that we have received on these topics will be shared with these groups and help inform the role we expect DNOs to undertake and the detailed arrangements for outputs, incentives, uncertainty mechanisms and cost allowances and other features of the RIIO-ED2 methodology.

3.4. One of the themes that has emerged from the responses is a question of how RIIO-ED2 will enable DNOs to reflect the requirements of regional stakeholders. This is particularly pertinent in relation to supporting decarbonisation targets and anticipatory investment. The Overarching working group that we describe in Chapter 4, will explore these issues in more depth and, in doing so, will consider the role that Local Area Energy

Plans can play in justifying the outputs.[18] A localised approach to planning will need to sit alongside a common forecasting scenario that we will require companies to baseline their plan against, in order to ensure benchmarking of the companies can be conducted on a comparable basis. We recognise that early progress on scenarios and forecasting will be required and we expect to set out further details on specific expectations ahead of the sector methodology next summer.

3.5. In summer 2020, we will consult on the methodology for RIIO-ED2. Here, we will demonstrate through our proposed methodology how we have responded to the questions these topics raise.

How to set price controls that support decarbonisation goals

What is the issue?

3.6. Ofgem's strategic narrative outlined that achieving decarbonisation at lowest cost is one of our three core priorities in the medium-term and that as such, we may have to take a more active role in enabling the transition to a low carbon energy system in the interests of future consumers.

3.7. In RIIO-ED1, the expenditure we allowed and outputs we expected DNOs to deliver reflected the provision of key services within their control. However, in light of the UK Government legislated target to reach net-zero carbon emissions by 2050,[19] we may need to more directly link DNOs' revenues to the achievement of decarbonisation outcomes that go beyond the delivery of traditional network services.

3.8. This could encourage the DNOs to play a more proactive role in supporting decarbonisation, especially in instances where the pathway to decarbonisation relies on DNOs taking such a role. The challenge however is that these outcomes may be dependent upon the actions of other parties and the beneficiaries of these actions may not be the same as the energy consumers who will be paying for the cost of the actions. We therefore sought views on the extent to which we should take into account outcomes linked to

[18] A Local Area Energy Plan (LAEP) is the product of a process involving a range of stakeholders, including gas and electricity network operators, agreeing on the optimal long-term energy solution for an area.
[19] The Scottish Government has set the same target for 2045.

decarbonisation targets, including what these outcomes should be and what activities DNOs are best placed to carry out. We also asked for views on if and how these activities should be funded, why it would be appropriate for energy consumers to fund these activities and how we should incentivise and measure performance.

DNO and stakeholder views

3.9. There was consensus amongst DNOs that outcomes should only be linked to decarbonisation targets where DNOs are responsible for their delivery. Suggested outcomes include reducing their own business carbon footprint; maximising utilisation of existing network through low carbon flexibility and strategic investment to facilitate decarbonisation where market failures exist.

3.10. The majority of non-DNOs who responded to this question considered DNOs to have an important role in facilitating decarbonisation and were supportive of linking outcomes to decarbonisation targets where possible. Like DNOs, stakeholders suggested these should be outcomes where DNOs are in control of the delivery. Non-DNO stakeholders suggested outcomes linked to connecting renewable generation to the network; facilitating the roll out of electric vehicles (EVs); minimising curtailment of renewable generation and facilitating mature and liquid flexibility markets. Consumer groups emphasised that these outcomes must factor in how different regions are planning to achieve net zero carbon emissions.

3.11. Regarding the activities DNOs are best placed to do, the majority view from suppliers and wider industry stakeholders was that DNOs remain best placed to undertake traditional network activities, but that non-traditional activities, such as procuring flexibility, could be done by third parties. One supplier (Centrica) suggested that DNOs should not undertake activities that can be delivered by competitive markets unless it can be robustly demonstrated that DNOs delivering those activities represents better long-term value for consumers. Most DNOs considered their role is now evolving beyond traditional network activities.

3.12. The majority of stakeholders that responded to questions regarding funding, considered that it would be appropriate for energy consumers to fund these activities, as long as a transparent process is followed, because decarbonisation will benefit the whole of society. A few stakeholders noted that funding distribution costs via the energy bill would also enable regional network needs to be funded fairly. UKPN noted that a key advantage of funding through energy bills is it helps to fairly distribute costs between existing and future consumers. With specific regards to EV infrastructure rollout, Citizens Advice Scotland

consider funding for such activities via a universal charge on all consumers' bills would place a significant financial stress on low income households who may be significantly less likely to directly benefit. They suggest a funding model is needed that would allow network costs associated with EVs, to be borne by those who will use the infrastructure and are able to pay.

3.13. With regards to how to assess funding requirements, the majority of stakeholders, including DNOs, noted the importance of well-justified business plans that show evidence of stakeholder engagement and in particular responding to regional variations. It was suggested using benchmarking between companies where possible; willingness to pay research and factoring in carbon savings to CBAs would be important tools and evidence. Many stakeholders proposed that uncertainty mechanisms (eg volume drivers and reopeners) would also be important.

3.14. In relation to how we should incentivise DNOs, many stakeholders again emphasised we should only focus on activities where delivery is within the DNOs' control. DNOs and Citizens Advice suggested the Business Plan Incentive could be appropriate for driving DNOs to link outcomes to decarbonisation goals.

Decarbonisation: our reflections

3.15. This topic may be one of the most challenging issues we address in RIIO-ED2. It is likely that DNOs will have a significant role to play in enabling pathways to a society that has net zero carbon emissions. However, the energy consumer should not be expected to pay any more than is necessary for the services and infrastructure provided by DNOs.

3.16. Through our working groups we will explore what this may mean for the RIIO-ED2, in terms of what we fund DNOs to deliver and what they are responsible for delivering in exchange for these revenues. In light of our Strategic Narrative, and Government targets for Net Zero, we will be setting out our initial actions to drive forward the decarbonisation in the energy sector early in the new year and this will also inform our work on RIIO-ED2.

How to set price controls that support strategic investment

What is the issue?

3.17. Strategic investment is where a company invests in assets or facilities in anticipation of changes in demand or network use. While making strategic investments may facilitate

quicker and easier connection to the network for new sources of demand or generation, such investment carries the risk that if demand does not materialise as expected consumers would be paying for underutilised assets. Faced with uncertain demand, it will also be necessary for DNOs to consider where it is more appropriate to consider non-build solutions.

3.18. In the Open Letter, we invited views on how we can ensure that network companies are best placed to undertake strategic investment and how the associated risk should be managed. We also asked for views on what changes would need to be made to the existing arrangements in order to facilitate strategic investment and how companies should be held to account for the delivery of this investment.

DNO and stakeholder views

3.19. DNOs were generally in favour of working towards a definition of strategic investment and a common understanding of where it may be appropriate. This could come through the development of a set of rules or principles. Some DNOs commented that a review of the methodologies for cost benefit analysis in investment decisions would be worthwhile, in order to ensure that the risks and benefits that may arise from strategic investment are captured appropriately. Some DNOs commented that the existing framework already enables DNOs to make strategic investment where justified. Northern Powergrid commented that Ofgem should not try "*to 'ensure' that strategic investments are undertaken, or write away the risks of building them, until it is entirely clear to Ofgem (and other parties) that the assets will be used and useful*".

3.20. Centrica highlighted the potential risks to customers of encouraging highly anticipatory investment, stating that this could involve asymmetric risks to the detriment of consumers.

3.21. Some respondents said that the price control needed to incorporate appropriate uncertainty mechanisms in recognition of uncertainty over the nature and timing of investments that will be required.

3.22. In response to the question on how companies could be held to account, WPD said that, reflecting the long-term nature of strategic investment, companies could provide "long-term network plans which compare network capacity against future energy scenarios over a defined time period or periods". UKPN suggested an output to measure the amount of capacity released on the network through the DNO's actions. Other suggestions included

the use of phased investment, the setting of project-specific milestones and uncertainty mechanisms such as volume drivers.

Anticipatory investment: our reflections

3.23. The issue of anticipatory investment has been a feature of previous price controls. It raises questions of how future demand is forecasted, how we approach risk and uncertainty, how we hold companies to account for what outcome is delivered in exchange for revenues, and also on how costs are fairly allocated among different types of consumers.

3.24. In RIIO-ED2, this issue may acquire more prominence than it has done previously as investment in the period between 2023-2028 may be important in achieving net zero targets over the course of the following two decades. Through our working groups we will consider the arrangements that best balance the need to support this type of investment where it is justified, while ensuring it is undertaken efficiently and in a way most likely to deliver the outcome that is intended.

How to set price controls for DSO functions

What is the issue?

3.25. In the Open Letter, we said that some functions that may be considered DSO functions may be best delivered through markets by third parties, while others may be more efficiently delivered by DNOs. We said that, where DNOs take on new DSO functions, they will increasingly need to support greater coordination with other network operators and/or be able to use market-based solutions as alternatives to traditional network reinforcement in providing an efficient, high-quality service to their consumers. Given this potential change to their role, there may be a need to regulate some DSO functions separately from traditional network activities.

3.26. We asked respondents to comment on whether there is a need to separate out revenues and outputs for 'traditional' DNO functions from DSO functions and, if so, how this could be achieved. We asked further questions on how the treatment of DSO functions should vary depending on whether the activity is delivered by the DNO or a third party.

DNO and stakeholder views

3.27. DNOs were generally against a notion that DNO and DSO revenues should be separated out from 'traditional' DNO activities. Several DNOs commented that the outcomes that DNOs and DSOs should be targeting are largely the same and are therefore best regulated through a common framework (eg a totex allowance and efficiency incentive as well as other output incentives). ENWL commented that many of the DSO activities are "so intrinsically linked with existing activities that creating an artificial boundary may lead to sub-optimal or undesired effects".

3.28. In contrast, the majority of respondents that are not DNOs expressed support for the provision of separate allowances and outputs for DNO and DSO activities.

3.29. Some respondents went further than this, for example RWE said the Ofgem should follow the same approach taken with the separation of the Electricity System Operator and "insist on legal separation between the DSO function and the DNO" and EON said that "the activities of the DSO are vital enough to warrant its own price control". Some respondents expressed support for the competitive tendering of DSO functions.

DSO functions: our reflections

3.30. It is clear that there are a range of views on how we should approach the treatment of DSO functions. DNOs appear to be strongly of the view that these activities are inseparable from their current role, while some other stakeholders felt that separation should be considered.

3.31. As DSO functions are still developing, we have not yet reached a view on how DSO functions should be treated. Our policy in this area will be developed through the DNOs and new contestable services workstream. However, if we were to decide that certain DSO functions should be separated from the DNO then this may require a reassignment of certain RIIO-ED2 revenues and associated outputs. We are therefore signalling at this time, our intention to consider the inclusion of a reopener within RIIO-ED2 that would allow for adjustments to the price control to reflect DSO separation arrangements. This reopener would not be triggered if we decide that separation is not required. However, we consider it is prudent to give ourselves the flexibility at the outset of the price control to accommodate a potential decision that we may make on this topic during the period.

How to set price controls that drive innovation and competition

What is the issue?

3.32. The scale of the energy system transition challenges and the huge potential for innovation and competition to drive down costs and improve the quality and range of services that are available to consumers means that network companies have to innovate and find new and better ways of delivering their essential services.

3.33. The RIIO framework encourages innovation and competition by incentivising companies' performance against totex and output targets and allowing them to earn additional returns if these are beaten. We supplement this with a specific stimulus that supports longer-term, more uncertain innovation trials.

3.34. We have set out that companies should do more innovation that delivers short-term financial efficiencies within BAU activities, while the innovation stimulus should increasingly focus on the energy system transition, increasingly coordinate with other public funders and increase third party involvement. Additionally, we have also indicated that we will do further work to develop models of early and late competition.

3.35. In the Open Letter, we asked whether additional specific incentives or mechanisms are required to place a stronger emphasis on innovation and competition in our approach.

DNO and stakeholder views

3.36. In addition to the views summarised in Chapter 2 above, stakeholders provided some wider views on what else could be done to drive innovation and competition in RIIO-ED2. A range of stakeholders, including DNOs and industry bodies, suggested that a focus on procurement of solutions should itself increase innovation. Plus stakeholders who supported increased competition within networks noted the potential of this to drive innovation. Additionally, other responses discussing innovation focused on the themes highlighted below.

3.37. Firstly, several responses (including those of industry bodies and innovators, consumer groups, the Energy Systems Catapult and academics) suggested there is a need for increased data transparency from innovation projects as, for example, the use of this data will become increasingly valuable during the energy system transition.

3.38. Secondly, a range of respondents highlighted that it would be beneficial to increase third party involvement in network innovation because this would provide support to new innovative ideas. Some consumer groups, industry bodies and innovators supported third party direct access to innovation funds for similar reasons and, for example, Centrica noted that DNOs should not be the arbitrator of solutions to network problems.

3.39. However, there were also several responses, including those from DNOs and other stakeholders, which noted the difficulties of third party direct access to network innovation funds. For example, one innovator noted that they need a network partner to make the most of their innovation projects, and others noted that the provision of innovation funding needs to be carefully managed to avoid distorting competitive markets.

3.40. Overall, there was concern from the network companies around implementing new models of competition for delivering large infrastructure without significant evidence being provided around the benefits for consumers. Many network companies voiced a preference for the existing level and forms of competition seen in RIIO-ED1, especially through the TIM, and made reference to the proportion of their current expenditure that is subject to competitive processes. All non-DNO stakeholders who responded on this matter supported the increased role of competition in RIIO-ED2, and in particular the introduction of early and late models when implemented sensibly.

Innovation and competition: our reflections

3.41. We will further consider the points raised on these topics as we develop the RIIO-ED2 sector methodology.

3.42. However, it is worth emphasising our view that the implementation of the Energy Data Taskforce recommendations on data, together with the development of flexibility markets are critical in optimising the value that competition and innovation can bring to consumers.

How to set price controls for a smart, flexible energy system

What is the issue?

3.43. RIIO price controls primarily work by providing companies with up-front totex allowances for activities needed to deliver outputs and allowing them to earn additional profits by delivering these outputs at lower cost, or by exceeding output targets (coupled

with the risk of lower profits for overspending and delivering poor service). However, increasingly there may be alternative ways to deliver outputs, such as increased network capacity to meet demand, that do not involve providing new network infrastructure. These 'flexibility' services may increasingly offer lower cost routes to delivering an output. It may be that some are not delivered by the DNO at all.

3.44. In our Open Letter, we spelt out our expectation that DNOs should respond to the anticipated increase in volume of distributed energy sources by exploiting a greater choice of flexibility solutions now and across RIIO-ED2. We also expect DNOs to develop their networks in a manner that considers the optimal outcome for the system as a whole.

3.45. To this end, we have been asking stakeholders to what extent we should set (and incentivise performance against) baseline totex allowances for activities where flexible solutions could be provided; we have further sought views whether we should instead set allowances based on costs revealed through flexibility tendering processes.

DNO and stakeholder views

3.46. In general, DNOs agreed that incentives on totex may be the best mechanism to encourage an uptake in flexibility solutions, however, it was highlighted that additional tools may be needed so that the perceived immaturity of flexibility markets did not suppress the utilisation of flexibility. In this context, one supplier noted that ongoing market monitoring may be required to ensure flexibility markets were developing appropriately; one renewable advocacy group proposed DNOs should be rewarded for developing and operating efficient flexibility markets.

3.47. In addition to the comments above, non-DNO stakeholders who responded to this question held a diverse set of views: one flexibility provider suggested that where a flexibility provider can deliver a more economical solution than a DNO then the DNO should be permitted to retain a proportion of the delivered savings; a stakeholder who operated as a flexibility provider felt that that no uncertain expenditure (spend on infrastructure where the additional capacity could be delivered through flexibility) should be included in baseline totex.

3.48. A consumer group cautioned that reimbursing the DNO at cost for their use of flexibility services, would remove any incentive for DNOs to design tenders in a way that would encourage an increased use of flexibility. Two local authorities encouraged us to incentivise flexibility in a way that promotes its application above traditional infrastructure.

They also challenged us to ensure that in the context of system decarbonisation additional measures such as air quality and environmental impact should form part of the evaluation criteria.

A smart, flexible energy system: our reflections

3.49. The development of flexibility markets are key to enabling a smart, flexible energy system. These markets encompass all of the carbon, energy and network services that could provide value streams for flexibility solutions. These go beyond just those services that a DNO or a DNO undertaking a DSO function might contract for, however DNOs have a critical role to play in enabling these markets to develop.

3.50. We already expect DNOs to be actively considering flexible solutions. By RIIO-ED2, we expect there to be a more consistent approach to forecasting demands on the network to allow flexibility services more visibility on where they may be able to offer solutions; we expect there to be products that are coordinated with other markets so that flexibility providers are able to scale up their services to a wide range of buyers; and we expect there to be robust and transparent valuation and decision-making of flexibility services alongside traditional network solutions or technical solutions. We have seen some progress towards meeting these aims, but we expect a great deal of development to happen over the next couple of years, to fully achieve our vision. We expect to see the delivery of outputs from the Open Networks project supporting the rapid delivery of these outcomes.

3.51. It is important to achieve these outcomes to ensure that business plans for RIIO-ED2 – and how those plans are then delivered – enable the optimal deployment of flexibility services to support an efficient system.

How to set price controls in a big data environment

What is the issue?

3.52. As the energy system becomes more complex and decentralised, visibility of what data exists will be essential. Access to data will enable a range of different parties to take on new roles in delivering a fully decarbonised system. In the Open Letter we spoke of 'big data', however we recognise that a modern data environment encompasses other characteristics of value that are nothing to do with size, such as formats, approach to data validation, processing and sharing.

3.53. We expect that making data more visible, open and interoperable will better support both existing and future roles of network companies. Greater adoption of modern best practices for the use of data should also help enable more competition, innovation and more dynamic markets within the sector. Alongside government, we have signalled a clear commitment to drive change, including through our own data collection, infrastructure, processes and management.

3.54. In this context, we have welcomed the findings and recommendations of the Energy Data Taskforce (EDTF) report.[20] In the near term, we will progress policy on updating the Long Term Development Statement (LTDS)[21] licence condition (under which DNOs are required to publish a LTDS) and other proposals from our Key Enablers and Long Term Development Statement consultation.[22] This work will set a wider precedent for data in the next price control period. We are further progressing work on data best practice,[23] and both network operators and industry stakeholders should expect an initial view on this in Q1 2020. We are further supporting these recommendations through the Modernising Energy Data Access competition.[24] This competition is funded by Innovate UK, part of UK Research and Innovation, in collaboration with BEIS and Ofgem and it aims to solve the problem of exchanging digital information between energy organisations and other stakeholders.

3.55. In our Open Letter, we asked stakeholders the degree to which DNOs should modernise their handling practices to adhere to data best practice. We further sought views on how we should structure RIIO-ED2 to encourage data to be presumed open and what this may mean for DNO performance measures and funding.

[20] Energy Data Taskforce (EDTF) report https://es.catapult.org.uk/wp-content/uploads/2019/06/EDTF-A-Strategy-for-a-Modern-Digitalised-Energy-System-FINAL-REPORT-1.pdf
[21] The LTDS is an annual publication from every Electricity Distribution Licence holder, in accordance with the requirements of Standard Licence Condition 25. The LTDS is intended to provide prospective generators, demand customers and other interested parties with data on network planning and forecasting.
[22] Long Term Development Statement consultation https://www.ofgem.gov.uk/publications-and-updates/key-enablers-dso-programme-work-and-long-term-development-statement
[23] Data Best Practice Guidance https://www.ofgem.gov.uk/publications-and-updates/we-are-creating-data-best-practice-guidance
[24] Modernising Energy Data Access competition https://apply-for-innovation-funding.service.gov.uk/competition/491/overview

DNO and stakeholder views

3.56. We noted broad agreement from DNOs that there is a need for data practices to keep pace with the changing uses of data. There was endorsement for the recommendations of the EDTF. However, three DNOs commented specifically on the size of the challenge and the associated investment needed to deliver recommendations set out by the EDTF. In this context, it was queried what funding mechanisms we will make available to deliver the required investment in appropriate technologies. Two DNOs cautioned against the potentially detrimental impact of regulatory micro-management in matters related to data; one DNO raised concerns regarding the value of investment required to enable desired data gathering and sharing when the ultimate purpose and use may be unclear.

3.57. A few industry (non-DNO) stakeholders noted the need for a greater degree of urgency in enhanced data disclosure, and that waiting until 2023 would be too late. Industry and consumer groups called for clear and measurable goals, with one consumer group suggesting that incentives on data may prove more costly for consumers than a minimum standard. Industry further suggested that DNOs should be measured on provision of accurate and complete datasets in a timely manner.

3.58. With regards to the themes for our data best practice guidance, no explicit concerns were raised by any of the stakeholders that responded to this question. One DNO sought clarification of some of the concepts referred to in our Open Letter, specifically on 'common assets' and which party may be the 'data controller'. One stakeholder raised the question of whether DNOs are the best parties to manage data, or whether third parties with expertise in data management may offer more cost-effective solution.

Data best practice principles and guidance: our reflections

3.59. We welcome the views that we have received on this topic. We want to clarify at this time that we will adopt a principles-based approach that focuses on outcomes. We do not intend to micro-manage how DNOs handle data. Data sharing should be driven by user needs and, as a result, there does not need to be a blanket approach to opening up data. We do, however, see value in a holistic approach to metadata being made available, as this allows users to decide which data they want to gain access to.

3.60. We will mature our approach, and provide more precision in the definition of some of the associated key concepts, as part of our ongoing data best practice work. We also recognise the importance of data in facilitating whole systems solutions and will be expanding on this in a forthcoming consultation on a Whole Electricity Systems licence

change. As both these areas of work progress, it will become clearer how this might impact upon the RIIO-ED2 sector methodology.

4. Approach to working groups

4.1. We have commenced a series of working groups for RIIO-ED2. These will provide a forum for Ofgem, the DNOs and other interested stakeholders to discuss the development of the proposals for our RIIO-ED2 Methodology Consultation. The working groups are advisory rather than decision making bodies, and are additional to the wider stakeholder engagement and consultation for the RIIO-ED2 programme.

4.2. We have initially set up five working groups. These are:

- Overarching approach to setting RIIO-ED2
  Purpose: To inform the overall approach to establishing the need for outputs and incentives and addressing strategic issues such as decarbonisation, flexibility and strategic investment, forecasting scenarios and the role of local area energy plans.

- Outputs and Incentives: Safety, resilience and reliability
- Outputs and Incentives: Customer service, vulnerability and connections
- Outputs and Incentives: Decarbonisation and the environment
  Common purpose of the Output and Incentives groups: To inform the approach to setting outputs and incentives in the relevant categories.

- Cost Assessment
  Purpose: To inform the approach to developing the cost assessment toolkit.

4.3. There will be significant interplay between the groups. We do not expect that all groups will run throughout the process of setting the methodology, and expect that the outputs of some groups may feed into work being carried out in others. Additionally, new work streams may develop, creating a need for additional groups or sub-groups.

4.4. As these are working groups, members are expected to be able to provide expertise in a particular area as well as, where necessary, information and analysis that will support policy development. To be kept up to date with working groups' progress or express

interest, please refer to our website.[25] We will publish the agendas ahead of meetings as well as any relevant materials and the minutes.

[25] The RIIO-ED2 Working Groups: https://www.ofgem.gov.uk/publications-and-updates/riio-ed2-working-groups

5. Approach to impact assessment

5.1. In this document, we have reached decisions on some elements of the regulatory framework that will be applied to electricity distribution. However, we are not publishing an Impact Assessment specific to the decisions we are taking now.

5.2. The relevant sections of this document, and of previous documents that we have published in the development of a framework for gas distribution and gas and electricity transmission, should be referred to for the reasoning, evidence, assumptions and calculations we have used to inform our assessment of the impact of these decisions and our conclusions. These previously published documents include the draft Impact Assessment[26] that accompanied the RIIO-2 Sector Specific Methodology Decision in May 2019.

5.3. At this stage we are not making decisions on the specific outputs and incentives to which DNOs may be exposed, or their associated costs. Moreover, on a number of key strategic topics, we have not yet established the approach; in particular how RIIO-ED2 will:

- support decarbonisation
- enable strategic investment
- reflect the functions of distribution system operation
- drive innovation and competition
- support a smart, flexible energy system
- reflect the needs of a big data environment.

5.4. We plan to publish a draft Impact Assessment alongside the sector methodology consultation that we will issue in summer 2020. Our assessment will consider the impact of the decisions we have taken in this document, as well as proposals regarding the key strategic areas mentioned above.

5.5. We have started a programme of work, which includes the working groups discussed in Chapter 4, to inform our development of options and the analytical models to evaluate them. As we develop these detailed options for electricity distribution and move towards the consultation and decision on the sector methodology, we will analyse the impact of

[26] RIIO-2 SSMD Impact Assessment: https://www.ofgem.gov.uk/system/files/docs/2019/08/ssmd_ia_updated_version_31_july_2019.pdf

these potential decisions on network companies and consumers in both the period of RIIO-ED2 and over a longer time period (the length of which is to be determined).

5.6. In assessing the impact on DNOs, we will consider how our proposals will affect their revenues and financeability. This may be as a result of changes that could be made to financial parameters and the methodology for estimating these, alongside changes to the incentives that companies are exposed to. We will also consider how changes resulting from the introduction of both early and late competition models, and arrangements to ensure effective native competition, might affect distribution companies.[27]

5.7. Our Network access and forward-looking charging review and our wider work to promote a flexible energy system, will ensure that we get better value from our electricity system and that where market participants can take action to reduce system costs, they will share in those benefits. These are running in parallel with our work on RIIO-ED2, which will ensure that the benefits of smarter networks are realised by consumers. Across both projects, we will ensure interactions are considered in their respective Impact Assessments.

5.8. In assessing the impact on consumers we will consider the costs that they will be exposed to, the benefits that they receive through network services and the wider impacts of network activities, including enabling decarbonisation targets to be met and any societal benefits that may lead from their actions. In considering the impact on consumers we will also assess, where possible, how these may differ between different types of consumers and consider risks and uncertainty associated with these impacts.

[27] In undertaking this analysis, we will consider the Draft Impact Assessment on late competition https://www.ofgem.gov.uk/system/files/docs/2018/12/competition_draft_ia_dec_2018.pdf published by Ofgem in December 2018 and any other associated document that we might produce in the future.

6. Design principles

6.1. Since 2017, we have been developing a framework and methodologies for the RIIO-2 price controls. In the first instance, our decisions concerned the price controls for gas distribution, gas and electricity transmission and the electricity system operator. We have now added to these, with our decisions on the RIIO-ED2 framework.

6.2. Through this process, we can draw a number of key principles from the decisions that we have made to date.

6.3. It is important to note that the decisions that we have made have been based on the evidence and reasoning that we provided in support of that decision. These principles have been derived from these decisions; the decisions were not made on the basis of these principles.

6.4. Nevertheless, going forward we consider that sharing these principles will serve as a useful guide for stakeholders to indicate how we might consider a topic in the context of a future price control, and in particular for RIIO-ED2. We consider that this will be helpful in supporting transparency in decision-making and consistency in our approach to setting price controls.

6.5. These principles are not 'set in stone'. We may choose to deviate from them where this serves the consumer interest, and there may be other principles that should also be applied, but they are the starting point.

RIIO-2 design principles

Setting outputs and incentives

1. Outputs (including bespoke outputs) should be set to reflect the attributes of network service quality that are of most value to current and future consumers (including those in vulnerable situations), based on rigorous consumer research and engagement.
2. Outputs should be specific, measurable and substantively within the control of network companies to deliver.
3. As a general rule, the delivery of a target level of outputs should be funded through baseline allowances, rather than through incentives. Target levels should be set so that the benefit to consumers of achieving target levels is broadly balanced by the cost in higher network charges.
4. Output delivery incentives (ODIs) (rewards and penalties) should be calibrated to reflect the value (or loss) to the consumer of service quality improvement (degradation).

5. ODIs should reward or penalise service quality improvements, but rewards should be capped where appropriate at a maximum service level where the benefit to consumers of further improvement is likely to tail off. The need for mechanism-specific caps and floors should be considered alongside the presence or absence of global return adjustment mechanisms (on the upside and downside).
6. Where value to the consumer cannot be demonstrated or quantified, we should be wary about using financial rewards based on absolute performance. Reputational or relative incentives should be considered in such cases instead.
7. ODIs should focus on the average level of performance for some attribute of service (across all consumers). In contrast, license obligations should reflect minimum standards expected of companies for individual cases (ie no consumer should be served worse than the minimum standard without being compensated directly for the detriment, or where the company may face a more severe penalty). Price control deliverables should be used to ensure that funding provided in baseline totex that is related to the delivery of specific projects is automatically returned to consumers if those projects are no longer required (or are delivered to a materially different specification) due to a change in circumstances since the control was set.

The equivalence principle:

8. Incentives to improve service quality and cut costs should be equalised at the margin, by applying the same incentive rate to reward/penalise service quality improvement/degradation as cost reductions/overruns.
9. Incentives to be cost-efficient should be equalised, by applying the same incentive rate to opex as to capex.
10. Incentives to surrender value to consumers upfront (through higher quality or lower cost in business plans) or to deliver it to consumers within the control period should be equalised, by applying the same incentive rate to the business plan incentive as to ODIs/totex. Business plan rewards, like other incentives, should be based on quantified value to the consumer.

Setting baseline totex allowances

11. We aim to set the baseline totex allowance so that, in conjunction with uncertainty mechanisms, the licensee has sufficient but not excessive funding in the round to deliver the baseline level of outputs and deliverables through the control period. To determine that the allowances are sufficient but not excessive, we make our best estimate of what a notional company of average efficiency (that has operated its network economically and efficiently in the past) would need to spend in the RIIO-2 period to deliver the relevant outputs. To construct this best estimate of average efficiency, we either use independent benchmarks of efficiency where available, and set allowances at the lower of the independent benchmark and the company's own forecast

of costs. Or, where no independent benchmarks are available, we start with the company's forecast but disallow any costs that are not adequately justified.

12. We will provide a baseline totex allowance, and incentivise companies to outperform this where we are confident that expenditure is likely to impact on the delivery of outputs. This should lead to companies identifying the right projects/activities and seeking to maximise profits through improvements to service quality while lowering costs. Where the delivery of outputs may not fully align with expenditure (for instance due to time horizons, or difficulty in measuring network contribution to consumer outcome) then the need for the work should be independently validated, and any associated network expenditure should only be subject to totex incentives for the delivery of discrete projects.

Setting the incentive rate

13. The strength of the incentive regime should balance the harm to the consumer from encouraging companies to inflate spending plans before the control and the harm from having weak incentives that are not powerful enough to drive companies to find cost efficiencies once the control is set.
14. Within an appropriate range, incentive rates should be set to reflect the level of confidence in our estimate of the totex baseline, so that the more confidence we have, for instance due to better quality information in plans, the higher the incentive rate should be.

Setting the cost of capital

15. The cost of capital allowance should be set to enable a notional efficient operator to maintain an investment grade credit rating, and generate an expected return to equity that fairly reflects the risk facing investors in the price control settlement.
16. Notional gearing should be determined as a reference point for the notional company for the purposes of calculating the weighted average cost of capital (WACC) with consideration of the risks network companies face, rating agency views on gearing levels for investment grade regulated networks, balancing an appropriate cost of capital and the impact medium term market conditions have on debt servicing.
17. The cost of capital allowance should be set so that it remains current and in line with changing financial market conditions.
18. The cost of capital allowance should be set so that the sector on average, has sufficient but not excessive funding to meet its forecast actual efficient and verifiable costs of debt. Companies that are more efficient than the sector on average in raising finance should expect to outperform the sector average, while companies that are less efficient should expect to underperform it.

19. An explicit distinction should be made between allowed and expected returns to equity, with any difference between the two reflecting the extent to which there is a reasonable expectation of average outperformance on output or totex incentives.

Setting depreciation and capitalisation rates

20. The depreciation allowance (the rate at which the regulated asset value (RAV) is 'repaid' to investors) should be set, so that different generations of consumers pay for network services broadly in proportion to the value of the services they receive, whilst having regard to balancing affordability, financeability and the interaction between depreciation and capitalisation.
21. The capitalisation rate (the proportion of totex that is added to the RAV each year) should reflect the broad balance between capital and non-capital expenditure (as forecast at the start of the control period), whilst having regard to balancing affordability, financeability and the interaction between depreciation and capitalisation.

Setting tax allowances

22. Tax allowances should be set so that companies are provided sufficient, but not excessive, funding to meet their legal obligations to pay corporation tax.

Specifying uncertainty mechanisms

23. Where there is material uncertainty in the evolution of prices at the start of a control period, indexation should be used to avoid forecasting errors – this includes the prices of financial securities as well as the prices of labour and construction materials.
24. Where there is material uncertainty in the evolution of quantities (but unit rates are stable) at the start of the control period, volume drivers should be used to adjust allowances within the control period.
25. Where there is material uncertainty as to both prices and quantities (and/or the economic needs case is not proven, or the scope of expenditure is unclear) at the start of the control period, a reopener should be used to consider variation in allowances within the control period.
26. If scope changes during the control period so that allowances are no longer required (or are delivered to a materially different specification), there should be automatic mechanisms to return such unused allowances to consumers (identified upfront as price control deliverables).

Designing the innovation programme

27. The price control framework should encourage companies to undertake innovation using their totex revenue as part of their everyday activities (ie BAU innovation).
28. An innovation stimulus should be designed to promote research, development and demonstration into projects that would yield payback over timeframes longer than a price control would allow, or projects which do not deliver financial benefits within the price period, reflecting the interests of future consumers.

29. This innovation should be supported by a framework to ensure that companies operate transparently, collaborate and work towards a strategic industry-wide direction, avoid unnecessary duplication, share learnings from projects and track the benefits that spending is delivering. Innovation activities should be joined up with Government innovation funding (including UKRI); and enable a bigger role for third parties to play a large role in network innovation.
30. The stimulus should be targeted at a wide range of network and system operation projects, including projects in other sectors such as heat and transport, providing it delivers net benefits to sector consumers, focusing on projects companies would not otherwise do, primarily energy system transition problems and projects which have the potential to benefit the needs of consumers in vulnerable situations.

Competition

31. Competition should be introduced where appropriate where the net benefits of competition are likely to outweigh the costs to consumers (including wider non-financial costs to consumers).
32. A sufficiently independent organisation(s) should play a central role in developing system requirements that are subject to competition (in response to new energy system needs), and then in coordinating and/or competing expenditure across the energy system.
33. Early competition models should be applied to projects where different technical solutions are feasible, where appropriate.
34. Late competition models should be applied to new, high value and separable projects, where appropriate.

Legitimacy

35. Automatic correction mechanisms should be incorporated into the price control design so that companies do not make excessive returns during the control period.
36. The reporting of performance under the price controls (by the companies and by the regulator) should provide a transparent account of the overall returns being made through all incentive mechanisms, including finance and tax, against the operating performance of the companies in delivering outputs for consumers.
37. Network companies should publish details of executive pay and remuneration at Board and senior management levels, on par with public companies.
38. Choices as to capital structure (including the level of gearing and corporate finance/treasury strategy) should be left to company management, with investors (and not consumers) fully exposed to the upsides and downsides of making such choices. The consumer interest should be protected through a strong regulatory 'ring-fence', that requires (a) that the licensed entity that provides services to consumers maintains an investment grade credit rating, and (b) that early warning triggers of financial

distress allow cash to be locked up within the licensed entity to facilitate continuity of service to consumers.

39. Dividend policies should be a matter for management and investors. However, company management should not be incentivised to degrade the longer-term resilience of human or physical capital in the networks in a bid to keep up short-term dividends. Companies should therefore be encouraged to adopt sustainable dividend policies that keep the long-term interests of their customers, their workforce and their wider stakeholders in focus.

Supporting whole system activities which deliver benefits to consumers

40. The benefit associated with network activities should be to existing and/or future energy consumers. These benefits can be delivered directly by a network operator to its customers, but the interconnected nature of the energy sector mean that greater coordination across networks can be exploited to deliver whole system benefits. However, each sector's consumers should not inefficiently cross-subsidise operations on the other's network.
41. This can support a wide range of projects, including projects in other sectors such as heat and transport, providing it delivers net benefits to sector consumers and it is appropriate for networks to do the work.

Appendix 1 Full list of questions from Open Letter

Proposed objectives for RIIO-ED2

1. Do you have any views on the proposed objective for RIIO-ED2?

Strategic approach to RIIO-ED2

How to set price controls that support decarbonisation goals

2. To what extent should we take into account outcomes linked to decarbonisation targets, and what outcomes might this involve?
3. Are there activities that DNOs are best placed to carry out in order to achieve these outcomes? What are the alternatives? Why would it be appropriate for energy consumers to fund these activities?
4. How should we assess DNO funding requirements and measure DNO performance in these areas?
5. How should we incentivise DNO performance when the achievement of outcomes could be dependent on the actions of others?

How to set price controls that support strategic investment

6. How do we ensure that network companies are best placed to undertake strategic investment and manage the associated risk? How should the risks of these investments be managed?
7. What, if any, changes to the framework are required to support strategic investment?
8. How should we hold the companies to account for the delivery of strategic investment, and the outcomes that they are expected to deliver?

How to set price controls for DSO functions

9. Is there a need to separate out the revenues and outputs for 'traditional' DNO functions from DSO functions? How could this be achieved?
10. In the event of the DSO function being delivered by a separate party, how might we determine the revenues for DSO activities? What type of funding model would be appropriate to set DSO revenues? In this event, would changes also be required to DNO revenues and outputs?
11. Where a DNO is undertaking a DSO function, what type of outputs or outcomes are necessary to measure how efficiently they are performing this function? Over what time period could these be measured?

How to set price controls that drive innovation and competition

12. In what ways could the existing arrangements drive more innovation and competition?

How to set price controls for a smart, flexible energy system

13. To what extent should we set (and incentivise performance against) baseline totex allowances for activities where flexible solutions could be provided?
14. Should we instead set allowances based on the costs revealed through the flexibility tendering process? How might this work?

How to set price controls in a big data environment

15. To what degree should DNOs modernise their handling practices to adhere to data best practice, and therefore (among other things) provide available, transparent, and interoperable data about their networks? What measures will be needed to ensure data remains secure?
16. How should we structure RIIO-ED2 to encourage metadata to be made available, and for data to be presumed open? How should we measure DNO performance in this area, and on what basis should funding be set to deliver relevant outcomes?
17. Do you agree with the themes we plan to include in our guidance on data best practice?

RIIO-ED2 Framework Consultation

Length of the price control

18. We welcome views on our proposed position of a five-year price control for RIIO-ED2.
19. Are there any elements of RIIO-ED2 price control that we should consider setting over a longer or shorter period? Please give reasons.

Giving consumers a stronger voice

20. We welcome views on whether these enhanced engagement arrangements are appropriate for RIIO-ED2.

Meeting the needs of consumers and network users

21. We welcome views on whether the proposed output categories and incentive arrangements are appropriate for RIIO-ED2.
22. We are interested to hear if there are new elements of the services DNOs will need to deliver that should be included in the current output categories. Alternatively, we welcome views on whether these should be captured by a new output category. For these new elements, we are interested to hear how delivery of these services should be valued and measured.

23. We welcome thoughts on how to ensure that we continue to protect the interests of vulnerable consumers, particularly in light of the energy system transition.

Maintaining a safe and resilient network

24. We welcome views on how DNOs should continue to ensure their networks are resilient, particularly in the context of the new or changing way assets are used.
25. We are interested to hear stakeholder views on how DNOs should ensure their networks are resilient to physical and/or virtual threats, as well as being able to withstand the effects of adverse weather and the impacts of climate change.
26. We would also like to hear how stakeholders believe climate change mitigation and adaptation may affect network maintenance and development in the short, medium, and long term.
27. We would like to hear views on how we ensure DNOs remain resilient to the challenges presented by an ageing and changing workforce.

Delivering an environmentally sustainable network

28. We welcome views on how DNOs should work to minimise the impact of what they do on the environment and facilitate the transition to a low carbon energy system. We are particularly interested in the implications of the government's updated target of net-zero emissions by 2050.
29. We also welcome views on what this may mean for the type of activities networks undertake, how these may be funded, as well as the outputs and/or incentives they should be exposed to.
30. Finally, we are keen to understand how DNOs' performance should be measured, and how we should assess the value that consumers place on the provision of these services and activities.

Enabling whole system solutions

31. We welcome views on how RIIO-ED2 can best capture the benefit of whole systems solutions. We are also interested in views on how these benefits should be measured.
32. We further welcome stakeholders' opinions on whether the electricity distribution sector's approach to whole systems should be different from the other sectors and, if so, why.

Managing uncertainty

33. We welcome views on how we should manage the uncertainty associated with forecasting allowances, and whether there are any mechanisms we could or should consider in helping to manage this uncertainty.

34. We seek views on the use of indexation, particularly on any adjustments for labour and construction cost inflation.

35. We welcome views on our approach to highly anticipatory investment projects. We are interested to hear whether stakeholders would suggest additional processes or regimes for facilitating such investments that support the energy system transition whilst protecting consumers from potentially inefficient investments.

36. We welcome views on the type of issues that should be considered through an inter-institutional group.

37. We invite stakeholders to advise what type of expenditure they believe should be subject to alternative arrangements for sharing risk, and what these arrangements may look like.

Driving efficiency through innovation and competition

38. We welcome views on the proposed innovation stimulus. We are interested to hear views on the types of projects that should be funded through either the NIA funding or a new funding pot.

39. How can the benefits of the innovation stimulus be maximised by supporting schemes proposed by non-network parties?

40. We also welcome views on our proposals for the different competition models in RIIO-ED2, and what, if any, criteria should be set out for the use of early or late stage competition models.

41. We also seek input from stakeholders on how native competition obligations and best practices can be used to ensure the best outcomes for consumers and to drive changes in the role of the networks in a transforming energy system.

Forecasting and scenarios

42. We welcome views on our approach to planning, forecasting and scenarios for RIIO-ED2. In particular, do stakeholders have other suggestions as to how we can best manage forecasting risk for consumers?

Business plan and totex incentives

43. We welcome views on our proposal to remove the early settlement process for RIIO-ED2, instead focusing on alternative mechanisms to receive high-quality and ambitious business plans.

44. We also welcome views on our proposals to use the Business Plan Incentive and the confidence-dependent incentive rate arrangements for RIIO-ED2. In line with this, we are interested to hear stakeholder views on the range that should be used for both of these.

Fair returns and financeability

45. We welcome stakeholder views on our proposals to introduce measures to enable network companies to finance their activities whilst ensuring they receive a fair return.
46. We are interested to hear from stakeholders on how they believe we should set allowances for the cost of debt, particularly around the method of recalibrating the index.
47. We also welcome views on our proposed approach to setting allowances for the cost of equity, as well as our proposal to move away from RPI.
48. Finally, we would like to hear stakeholders' views on our proposed introduction of a 'sculpted sharing factor' in instances of high out- or under-performance, or whether an alternative mechanism could be more effective.