Making a positive difference
for energy consumers

To interested parties

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Open Letter Consultation on approach to setting the next electricity distribution price control (RIIO-ED2)

1. Introduction

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 networks. There are fourteen electricity distribution network operators (DNOs) operating in Great Britain, managed by six companies.

Ofgem sets price controls to ensure that the private companies who have a monopoly on the operation of Great Britain's gas and electricity networks continue to act in the best interests of energy consumers. Since 2013 we have used the RIIO (Revenue = Incentives + Innovation + Outputs) framework to set the price controls.

The next electricity distribution price control ("RIIO-ED2") starts in April 2023. We believe that in this period consumers should expect to be served by a local grid that, among other things:

1. is amongst the safest and most reliable in the world;
2. keeps network charges on bills as low as possible;
3. supports the target of net-zero carbon emissions for 2050 by enabling the rapid roll-out of low carbon technologies, including electric vehicles, and the development of a charging network to support them;
4. supports new customers in getting connected to the grid quickly, efficiently and at least cost;
5. enables people to produce their own energy and sell it easily;[1]
6. delivers great customer service; and
7. helps fuel-poor households, and those that are most vulnerable from a loss of supply, by understanding their needs and tailoring their services in response.

This is your opportunity to tell us if we are focussing on the things that matter most to consumers, and whether there are other services you want from your local grid. We will then try to make it happen through the price control. We also want to hear your views on the approach we should take to achieve these outcomes.

[1] For the avoidance of doubt, we have said in our Targeted Charging Review that we expect consumers with final demand to pay a share of residual network costs.

This is an open letter consultation that seeks your views on the strategic issues that could affect RIIO-ED2 (section 4), comprising a number of proposed positions for the RIIO-ED2 framework (section 5). Subject to consideration of the responses we receive, we intend to issue a decision on the RIIO-ED2 framework later this year.

Yours faithfully,

Akshay Kaul
Director, Network Price Controls

Document Guide

1. Introduction 1
2. Our proposed objective for RIIO-ED2 4
3. A changing energy system and what this might mean for DNOs 5
4. Strategic approach to RIIO-ED2 6
How to set price controls that support decarbonisation goals 6
How to set price controls that support strategic investment 7
How to set price controls for DSO functions 8
How to set price controls that drive innovation and competition 9
How to set price controls for a smart, flexible energy system 10
How to set price controls in a big data environment 10
5. RIIO-ED2 Framework Consultation 12
Length of the price control 13
Giving consumers a stronger voice 13
What consumers want and value from networks: Overarching framework for outputs and incentives 14
Meeting the needs of consumers and network users 16
Maintaining a safe and resilient network 16
Delivering an environmentally sustainable network 18
Enabling whole system solutions 19
Managing uncertainty 20
Driving efficiency through innovation and competition 22
Innovation 22
Competition 23
Forecasting and scenarios 24
Business plan and Totex incentives 25
Fair returns and financeability 26
Return adjustment mechanisms 28
6. Process 30
Working Groups 30
7. Your views and next steps 30
Annex 1: RIIO Background 31
Annex 2: Performance in RIIO-ED1 32
Annex 3: Changes potentially impacting RIIO-ED2 33
Energy systems flexibility 33
Distribution system operation and flexibility 33
Future charging and access and wider reforms 34
Annex 4: Summary of proposed positions 35
Annex 5: Full list of questions 37

2. Our proposed objective for RIIO-ED2

We intend RIIO-ED2 to be a tough but fair settlement that enables DNOs to go further in decarbonising the economy whilst ensuring costs are kept as low as possible for consumers in paying for the required investment.

To achieve this, we propose that our overarching objective for RIIO-ED2 is to ensure that the DNOs deliver the value for money services that both existing and future consumers need.

We have set out above what consumers should expect from their local grid, and we think these expectations can be translated in to 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.

The approach we take to achieving this objective and associated outcomes will be consistent with the vision for the strategic medium-term objectives and priorities to regulating the gas and electricity markets as outlined in our recently published strategic narrative[2] covering the period to 2023, when the RIIO-ED2 price control will commence. Reflecting the major transformation underway in the energy sector, this identifies three main priorities to help carry out our principal duty to protect the interests of existing and future consumers:

- Decarbonising to fight climate change at the lowest cost to consumers;
- Enabling competition and innovation, to help increase efficiency; and
- Protecting consumers, especially the vulnerable.

In practice, this means that we have to decide the most appropriate approach to take to meeting this objective and the delivery of these outcomes. We must also take into account the changes that are taking place in the wider energy system that could affect how we regulate the sector.

Question:

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

[2] https://www.ofgem.gov.uk/publications-and-updates/ofgem-strategic-narrative-2019-23

3. A changing energy system and what this might mean for DNOs

The ability to access a reliable, affordable and sustainable source of electricity is essential for a well-functioning society, and the RIIO-ED2 price control has to ensure that the DNOs continue to provide the services and infrastructure that support this.

RIIO-ED2 will come into effect while the energy sector is undergoing a significant, technology-driven revolution as we move towards a more sustainable, low carbon energy system. In April 2017, the UK recorded its first working day without coal power since the Industrial Revolution and, in May 2019, the UK went without coal power for a full 18-day period. With both the UK and Scottish Governments recently laying legislation to set the new net-zero emissions target in law, there will be an increasing focus on decarbonisation, particularly in the transport and heat sectors.

In many ways, the electricity distribution sector is likely (though it is not certain) to be the most dynamic of all the regulated energy sectors. We expect the electricity distribution networks to see the greatest impact arising from the forces of decarbonisation, decentralisation, and digitalisation. This includes:

- New sources of demand, including electric vehicles and the potential further electrification of heat, putting greater demands on local grids. Heat pumps, hybrid heat pumps, and other measures aimed at increasing energy efficiency and/or reduce carbon emissions are likely to vary the demands placed on local networks at different times.

- The use of networks will also change with reforms to network access and charging arrangements, with users facing more accurate price signals about their impacts on network costs across transmission and distribution networks. DNOs will need to anticipate and respond to these changes while also mitigating the considerable uncertainty on the future utilisation of their networks.

- A growing amount of distributed energy resources could offer non-build alternatives that may lead to a smarter, more flexible energy system. Demand side measures could help to reduce the need to build costly new generating or network capacity to meet peak demand. Storage solutions and electric vehicles are expected to help shift demand or release electricity onto the system when it is needed.

It is also clear that network innovation is important in helping the system adapt to new demand such as electric vehicles, and potentially to inform policy choices on the decarbonisation of heat (such as hydrogen as a heating fuel). A summary of these changes is provided in more detail in the Position Paper on Distribution System Operation (DSO).[3]

[3] Ofgem position paper on Distribution System Operation: our approach and regulatory priorities

4. Strategic approach to RIIO-ED2

The changes discussed in section 3 are likely to have an impact on the activities DNOs are expected to undertake, as well as the outcomes we expect them to deliver. In turn, these changes are likely to affect the amount and type of funding network companies require.

The nature of the potential changes, together with their inherent uncertainty, raises a number of questions about our approach to regulating this sector. In the following paragraphs we seek your views on these questions, and the responses that we receive will help to inform our strategic approach for RIIO-ED2.

How to set price controls that support decarbonisation goals

The Government has legislated to set a target of net-zero carbon emissions for 2050. In July, we published Ofgem's strategic narrative, giving our medium term priorities out to 2023. We said that decarbonisation at lowest cost is one of our three core priorities, and we also said that we may have to take a more active role in building Great Britain's low carbon energy system in the interests of future consumers.

The expenditure and outputs that we expected DNOs to deliver in RIIO-ED1 reflected the key services that they provide (reliability, connections, customer service etc.). We have previously focussed on these type of activities, which are within the control of DNOs to deliver and are directly linked to network services, rather than the achievement of wider outcomes linked to decarbonisation targets for energy, transport and heat.

In light of decarbonisation goals, however, there may be reasons to more directly link DNOs' revenues to the achievement of outcomes that go beyond the delivery of traditional network services. This might include, for instance, the decarbonisation of the transport or heating sectors, or tying revenues to outcomes that complement government goals such as reducing peak prices, increasing renewables and reducing demand on the network. In response to previous RIIO-related consultations, we have received suggestions as to how regulation should change to better achieve these goals. To help illustrate the type of alternative models that could be considered, we provide a link to material previously published by IGov.[4]

By linking revenues more directly to these outcomes, DNOs might play a more proactive role in supporting decarbonisation. Indeed, it may be that some pathways to decarbonisation rely on DNOs taking on such a role. However, 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.

Questions:

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?

[4] http://projects.exeter.ac.uk/igov/wp-content/uploads/2018/04/CMitchell-presentation-WEET-Forum-26-April-2018.pdf

How to set price controls that support strategic investment

Strategic investment is where a company invests in assets or facilities in anticipation of changes in demand or network use. In a sense, all investment the companies undertake is strategic, in that the infrastructure they create is expected to be used for many decades.

With increased expectations of how networks should be acting to facilitate the move to a low carbon energy system, particularly in light of the recent reports from the National Infrastructure Commission[5] and the Committee on Climate Change[6], there will need to be careful consideration of how and when strategic investment should be used. A number of bodies have given recommendations of how Ofgem and energy networks should be adapting to facilitate investment for decarbonisation:

- The National Infrastructure Commission recommended that Ofgem take a more proactive approach in preparing the electricity grid to accommodate the potential for systemic changes arising from the electrification of road transport (particularly to support public rapid charge points);[7]
- The Committee on Climate Change recommended that at the point network infrastructure is upgraded, capacity is augmented sufficiently to avoid the need for any further upgrades out to 2050;[8]
- The researchers at IGov suggested that new institutional structures may be required to clarify responsibility for the energy system transition and to ensure the system meets the needs of the future;[9] and,
- Sustainability First suggested that the regulatory regime for the energy system needs to be more anticipatory in nature and to focus more on 'tomorrow's problems'.[10]

We recognise that strategic investment can be an effective tool to ensure the network meets the needs of both existing and future consumers. There is, however, a natural degree of uncertainty associated with any investment, and this increases as the demands it is expected to meet become more dependent on government policy, technology development and changes in consumer behaviour. This uncertainty brings with it an inherent question of whether it is right that this investment is made by the energy networks, with their consumers (or investors) bearing the full risk of anticipated requirements that do not materialise. Of course, this should be balanced by the question of what the consequences would be of not making the investment.

Coupled with this is the challenge of how we could assess the efficiency of investment in one period when it may take many years to demonstrate it has achieved its intended outcome.

[5] https://www.nic.org.uk/assessment/national-infrastructure-assessment/low-cost-low-carbon/
[6] https://www.theccc.org.uk/publication/net-zero-the-uks-contribution-to-stopping-global-warming/
[7] National Infrastructure Commission, *National Infrastructure Assessment – Revolutionising road transport* (2018): https://www.nic.org.uk/assessment/national-infrastructure-assessment/revolutionising-road-transport/
[8] Committee on Climate Change, *Reducing UK emissions – 2019 Progress Report to Parliament* (2019): https://www.theccc.org.uk/publication/reducing-uk-emissions-2019-progress-report-to-parliament/
[9] University of Exeter, *Enabling the transformation of the energy system: Recommendations from IGov* (2019): https://projects.exeter.ac.uk/igov/enabling-the-transformation-of-the-energy-system/
[10] Sustainability First, *Circling the square: Rethinking utilities regulation for a disrupted world* (2019): https://www.sustainabilityfirst.org.uk/images/publications/other/SF_Future_of_utilities_regulation_Discussion_Paper_FINAL.pdf

Questions:

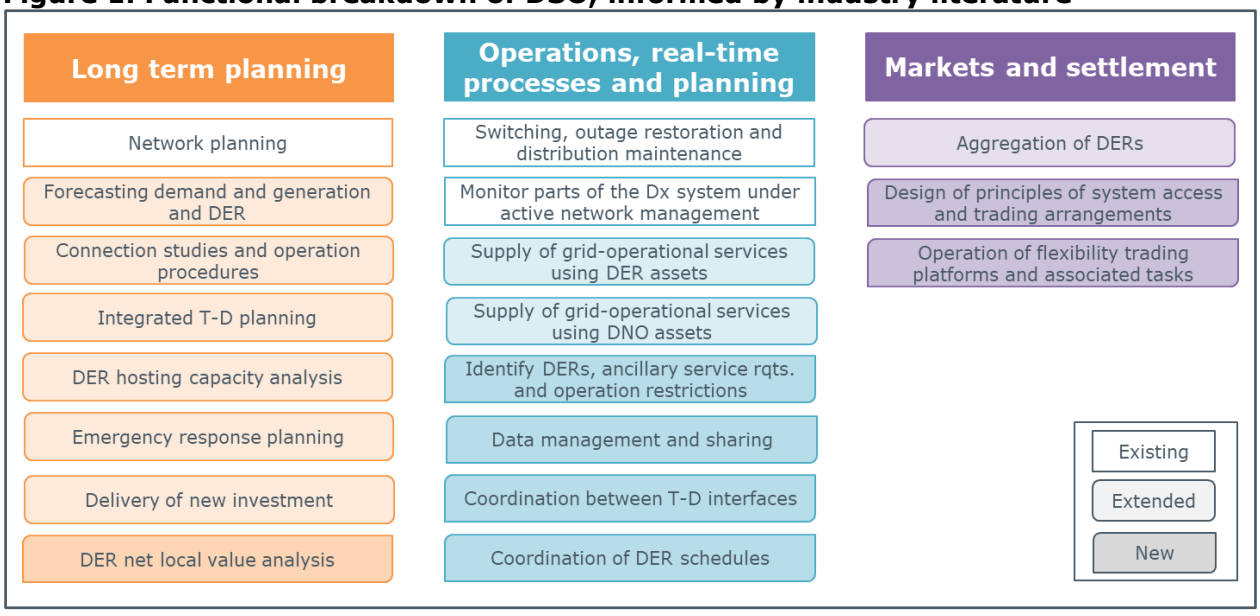
6. How do we ensure that network companies are best placed to undertake strategic investment and manage the associated risk? How should the risks of these investments be managed?
7. What, if any, changes to the framework are required to support strategic investment?
8. How should we hold the companies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

Historically, a DNO's primary function is to develop, maintain and operate network infrastructure to meet electricity demands in an economic and efficient manner. The RIIO-1 price controls reflect this. Revenues are driven by the cost of previously installed assets (including a return to investors), new capital and operating expenditure requirements and associated financing costs, additional funding for innovation and performance against incentives for the efficient delivery of totex and outputs.

Alongside this Open Letter consultation, we have published a 'position paper on Distribution System Operation: our approach and regulatory priorities'.[11] This paper outlines our approach to DSO policy development, highlighting our priorities and forward work plan that will implement changes in advance of RIIO-ED2. In this paper, we discuss a range of DSO functions (shown below). This is not an exhaustive or definitive list, and we recognise there are multiple services, processes, and parties involved in the delivery of DSO functions.

Figure 1. Functional breakdown of DSO, informed by industry literature



Some of these DSO functions may be best delivered through markets by third parties, while others may be more efficiently delivered by DNOs. Where DNOs take on new DSO functions, they will increasingly need to support greater coordination with other distribution and transmission networks 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.

[11] www.ofgem.gov.uk/publications-and-updates/ofgem-position-paper-distribution-system-operation-our-approach-and-regulatory-priorities

In electricity transmission, the Electricity System Operator (ESO) function was recently separated from National Grid Electricity Transmission in order to avoid potential conflicts of interest. In gas transmission, the gas system operator remains a function embedded within National Grid Gas Transmission – an arrangement that we are keeping under review. We recognise potential conflicts of interest associated with the DNO taking on some DSO roles but also the benefits of integration. We believe it is too early to make a decision about future institutional arrangements for DSO at this stage, as DSO functions are still developing.

This is not a case for inaction; there is progress to be made by industry and us today. In our position paper on DSO, we set out clear expectations for DNOs to take on new roles and neutrally facilitate for network and system needs now, and describe the work we are doing to develop appropriate policy reforms to drive progress in this area. A key part of our approach is to ensure that progress today embeds the optionality to explore alternative models for institutional arrangements in the future.

We will be carefully monitoring developments and will consider whether, over time, there may be a case for greater separation of certain DSO functions from the DNOs. This includes considering the effectiveness of DNOs in managing conflicts of interests and neutrally facilitating markets.

Should we decide that the separation of certain DSO functions from the DNO is necessary, a question then arises of the funding model that should be used for the separated DSO functions or entity, as well as what this might mean for the DNO and the funding they receive. Again, with reference to electricity transmission we have recently consulted on a Regulatory Asset Value (RAV) based approach, with the ESO's revenues driven by the value of assets owned by the ESO and performance against incentives. We plan to publish our decision on the ESO's funding model later this month; however, there may be reasons why this is not appropriate or feasible in relation to electricity distribution.

Questions:

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

Access to data, technological advancements and an increase in the number of distributed energy resources creates huge potential for innovation and competition to drive down costs and improve the quality and range of network services that are available in RIIO-ED2. To realise this, it is essential that we provide the environment in which innovation and competition can thrive, both through the actions of DNOs, and by exploiting the potential of third parties.

RIIO drives 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. However, it may be that additional specific incentives or mechanisms are required to place a stronger emphasis on innovation and competition in our approach.

This might come in the form of stronger incentives so that network companies push harder for the best, most innovative solution. Or it could come from having more projects tendered for competition where this competition is managed by a third-party, which requires the DNO to compete with others to design and deliver the best solution. There may also need to be a change to the current arrangements that largely see the DNO as the arbiter of different solutions, or as the proposer of innovation projects. It may be that this approach could result in some alternative solutions not being progressed despite being the most efficient, as the benefits they offer are not aligned with the interests of the DNO.

Question:

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

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

With an anticipated increase in the number of distributed energy resources, we expect DNOs to exploit a greater choice of flexibility solutions, and to consider these alongside better use of existing assets through improved technology and traditional infrastructure projects.

In RIIO-ED2, we will expect DNOs to tender flexibility as neutral facilitators to reduce the expense of network reinforcement. DNOs must already consider the best value network or non-network solutions, and appropriate substitutability in RIIO-ED1. For RIIO-ED2, they will likely need to do this with a whole systems approach in mind.

This creates a challenge for setting allowances for activities that may be delivered through a range of different approaches. This is important because RIIO price controls (in the main) work by providing companies with up-front allowances for activities and allowing them to earn additional profits by delivering these activities in the most efficient way. However, certain activities, such as the creation of new capacity to meet increasing demand, that were traditionally only delivered through infrastructure, may be achieved through different (and potentially much less expensive) routes in RIIO-ED2. It may be that some are not delivered by the DNO at all. Therefore, there is a question of how to set appropriate expenditure budgets for these type of activities, and whether performance against these should be incentivised.

Questions:

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

We welcome the findings and recommendations of the recently concluded Energy Data Taskforce (EDTF) report.[12,13] We agree that better use of data will be central in driving forward the energy system transition, unlocking the benefits of competition, and enabling innovative approaches to network solutions. Access to usable data can be a public good;[14] DNOs must act on the principle that data is presumed open, and they must readily collect, manage and share data on the networks that they own. We expect DNOs to take significant

[12] https://es.catapult.org.uk/wp-content/uploads/2019/06/EDTF-A-Strategy-for-a-Modern-Digitalised-Energy-System-FINAL-REPORT-1.pdf
[13] https://www.ofgem.gov.uk/publications-and-updates/using-energy-system-data-benefit-consumers-our-response-energy-data-taskforce-recommendations
[14] https://www.nic.org.uk/wp-content/uploads/Data-for-the-Public-Good-NIC-Report.pdf

and tangible steps to improve their data management, ensuring that they do not hinder innovation and digitalisation of the energy system.

As the energy system becomes more complex and decentralised, visibility of what data exists will be essential in enabling all players to take on new roles in delivering solutions that deliver a decarbonised system. In the case of distribution system operation, data extensibility will allow DSO functions to be contested, whilst digital system interoperability provides opportunities for further institutional reform.

To support progressive decarbonisation, we need more dynamic business models that enable the integration of renewables, and drive down system costs. Effective use of data is critical to this – to this sector, to other sectors, and to the manner in which we regulate. This means better data services and more accessible energy system data for users of data. We anticipate that realising the full potential of data in RIIO-ED2 will allow a more competitive and dynamic market to evolve.

This goes hand in hand with the evolution of the role of network companies, and we expect that making data more visible, open, and interoperable (as well as following other 'data best practice' ways of working[15]) will better support both existing and future roles of network companies, as well as helping to embed whole system outcomes. 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.

We will take all necessary regulatory steps to ensure that DNOs adhere to data best practice in RIIO-ED2. In the near term, we will progress policy on updating the Long Term Development Statement (LTDS),[16] which DNOs are required to publish. This work will set a wider precedent for data in the next price control period. We will be consulting later this year on updating the LTDS to start embedding improvements to DNO data availability and accessibility; further details are provided in the position paper on DSO that is published alongside this letter.[17]

Questions:

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?

[15] https://www.ofgem.gov.uk/about-us/ofgem-data-and-cyber-security. Correspondence directly relating to the data best practice themes should be directed to ofgemdataservices@ofgem.gov.uk

[16] The LTDS is an annual publication from every Electricity Distribution Licence holder, in accordance with the requirements Form of Statement under 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.

[17] www.ofgem.gov.uk/publications-and-updates/ofgem-position-paper-distribution-system-operation-our-approach-and-regulatory-priorities

5. RIIO-ED2 Framework Consultation

In May 2019, we confirmed the methodology for setting the RIIO-2 price controls for gas and electricity transmission and gas distribution sectors, and for the electricity system operator (ESO), which will operate from April 2021.[18] This methodology followed on from a consultation, and subsequent decision, on the overall regulatory framework for RIIO-2 that was confirmed in July 2018.[19]

In our decision on both the RIIO-2 framework and the Sector Specific Methodology, we provided the rationale for making a number of changes to the arrangements that had been in place for RIIO-1. This was informed by a review of RIIO-1, carried out by CEPA.[20] In their review, CEPA noted that there was evidence of some areas of expenditure being inadequately linked to outputs (meaning it was not clear how, if at all, allowances could be clawed back), and that some risks have turned out favourably to network companies. CEPA offered a number of observations on how the framework could be amended or improved.

Over this time, we have been clear that these framework decisions would not automatically apply to RIIO-ED2, and we would consider any relevant evidence (including the context of electricity distribution) before making a decision for this sector. This remains the case.

We consider it in the interest of consumers and stakeholders to use the work that has been done to date in the other sectors to inform relevant aspects of the RIIO-ED2 framework. We note that DNOs (and their stakeholders) were active participants in our previous consultations. We note that some areas of the framework will require more consideration and development than others.

We have taken feedback on the other sectors that more time should be spent on the development of the sector specific methodology and the preparation and amendment of business plans. This Open Letter Consultation is intended to seek views on proposed changes to the framework that will apply for RIIO-ED2.

We have set out below our proposed position on certain elements of the framework that might apply in RIIO-ED2. In arriving at these proposed positions we have assumed that the underlying framework will not be disrupted by the strategic approach we take in response to the issues flagged in section 4. This may not be the case however, and we are keen to hear your views on how you think these framework positions might need to be adapted in light of these issues.

Where relevant, in the following sections, we provide a summary of the views previously expressed by DNOs on these issues in response to our previous consultations, and how these have been taken into account in arriving at our proposed positions. We recognise that these views were not provided in the context of the electricity distribution sector, and that the views of DNOs and other stakeholders may be different when considering the specific characteristics of the electricity distribution sector.

We therefore welcome your view on these proposed positions (a summary of these is provided in Annex 4). If stakeholders have other views in addition to our proposed approach we invite them to submit evidence in support of their views, including detail of any alternative approach that may be more appropriate for RIIO-ED2, including evidence to support any such position. We invite stakeholders to consider our previously published material that evaluated the different options in each area.

[18] RIIO-2 Sector Specific Methodology Decision, Ofgem, May 2019
[19] RIIO-2 Framework Decision, Ofgem, July 2018
[20] https://www.ofgem.gov.uk/system/files/docs/2018/03/cepa_review_of_the_riio_framework_and_riio-1_performance.pdf

Length of the price control

Based on the observations of the RIIO-1 price controls, it is clear that the assumptions that are made at the time of setting the price control carry significant risks, in the form of setting allowances too high, or performance targets too low.

The length of the price control is a key factor in determining how great the risk of incorrect forecasts may be. We believe that setting allowances over a shorter period reduces this overall risk.

DNOs' previously expressed views

The majority of DNO groups support the proposed move to a five-year price control for RIIO-2. One DNO group questioned the move to a shorter price control, considering that we had limited information to judge the benefits arising from a longer period. One DNO suggested an even shorter price control period to enable alignment of distribution and transmission price controls.

Our initial view

Although an eight-year price control potentially offers greater incentives for innovation and long-term planning, it also carries a higher degree of risk. We consider that a five-year period still provides incentives on companies to plan and develop their networks to meet future demands, and find innovative ways to reduce costs while improving their performance.[21] While it could be argued that a longer price control period can drive more long-term thinking, the continued uncertainty may need an extended mid period review, effectively creating two mini price control periods that might stifle incentives to innovate.

While a shorter price control, for instance of four or three years, could reduce the impact of inaccurate long-term forecasts we believe this benefit would be outweighed by the negative impact this might have on certainty of investment and ability to innovate effectively.

Therefore, **our proposed position for RIIO-ED2 is to maintain the default length of the price control at five years**, as with the other sectors.

Questions:

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

Engagement with stakeholders is central to the RIIO price controls. Our framework decision set out the arrangements we expected for RIIO-2, namely that distribution companies would need 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. We also decided that we would hold open, public hearings ahead of our final determinations to focus on any areas of contention or disagreement raised by the groups.

The CEGs are required to publicly report their views on the DNOs' business plans from the perspective of local stakeholders. The CG will publicly report on companies' business plans from the perspective of end users. Network companies and Ofgem will provide the secretariat and technical support respectively (where required) for these groups.

[21] Paragraph 3.12 of the RIIO-2 Framework Decision: https://www.ofgem.gov.uk/system/files/docs/2018/07/riio-2_july_decision_document_final_300718.pdf

The CEG is intended to add to the companies' stakeholder engagement while developing their business plans. They should consider, for example, whether companies have properly reflected the requirements of local stakeholders, but they should not be used to identify those requirements. We welcome DNOs' efforts to date in establishing their CEGs in preparation for RIIO-ED2.

DNOs' previously expressed views

All DNOs supported the enhanced engagement proposals. Most companies welcomed further clarity on how the process would work and emphasised the need for sufficient time to be allocated to enable the groups to play an effective role.

Our initial view

We believe that these engagement arrangements will lead to a stronger voice for network users, consumers, and consumer advocates in the overall price control process, and we expect the increased challenge on network companies to produce higher quality plans that better reflect stakeholder needs.

Given the changing nature of the energy system, **our proposed position for RIIO-ED2 is to apply these enhanced engagement arrangements**, as we believe they will produce better quality business plans that are reflective of local stakeholder needs and expectations for the future.

Question:

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

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

Outputs are used to specify what network companies need to deliver in return for the funding they are able to recover from consumers.

In setting outputs, we were clear in the RIIO-2 framework decision that these would be specified as a set of consumer-facing outcomes, distinguishing between licence obligations, price control deliverables, and output delivery incentives.

Licence obligations will set minimum standards as a condition of the network companies' licence. We will use the enhanced engagement framework to help determine what the minimum service standards should be. These obligations will not be directly linked with specific funding, but failure to meet these standards could lead to penalties and/or enforcement action.

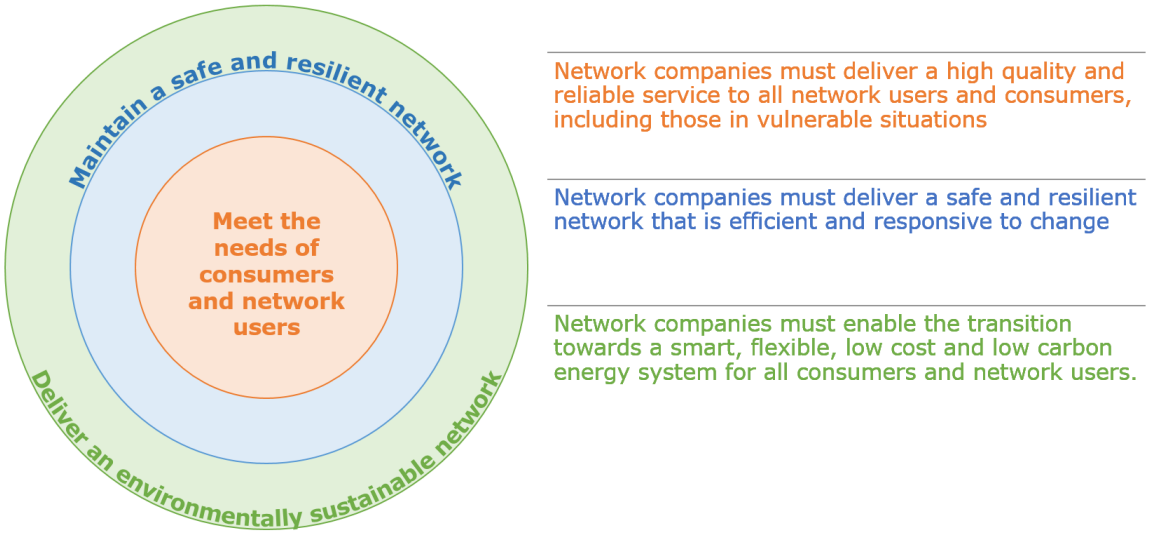
Price control deliverables are expected to capture those outcomes that are directly associated with baseline funding, such as outputs or input activities that should be delivered to a stated standard or that are significant and/or high value. Unlike Licence Obligations, funding for delivery of these will be provided, along with a clear methodology of what happens if an output or input activity is not delivered, or is delivered late or to a lower specification.

Output delivery incentives will drive service quality improvements beyond a minimum standard, where it is in the interests of consumers. Some of these mechanisms may operate most effectively based on relative rather than absolute performance. Where absolute targets are set, these will be stretching for individual companies, taking into account their historical performance and information that is available at the time. The overall cost of any incentive will not exceed the value of the service improvements to consumers, and where funding is provided in base revenues that leads to performance

improvements we will not additionally reward that improvement through incentive payments.

In addition to specifying outputs in three customer-facing outcomes, in the Sector Specific Methodology Consultation we proposed to group them into three overarching categories that place the consumer experience at the heart of RIIO-2; these are shown in Figure 2. By delivering services that reflect these output categories, and keeping bills as low as possible, networks' will fulfil a key role in helping the energy system change.

Figure 2: Overarching output categories as proposed in the Sector Specific Methodology consultation[22]



Consolidating the six RIIO-1 output areas (reliability and availability, environment, connections, customer service, safety, and social obligations) into these three categories helps articulate the outcomes that network companies are expected to deliver through the price control. These categories aim to strike a balance between capturing the key outcomes that need to be delivered, and providing a list of subjects that network companies need to cover; they are not intended to restrict network companies from delivering for their stakeholders.

DNOs' previously expressed views

The DNOs had mixed views on the proposed output categories, with some in support and some opposed. One group in particular were opposed to this arrangement, as they did not believe it covers all of their activities or commitments. DNOs were opposed to relative targets, as they believe this would dampen incentives and would create uncertainty. There was a mix of views on the applicability of dynamic targets – this varied not only by company but also by the aspect of performance in which this could be applied (i.e. reliability).

Similarly, to the output categories, there were mixed opinions on the proposal to introduce price control deliverables, output delivery incentives, and licence obligations.

The DNO groups were supportive of an incentive framework that drives the right behaviours, but noted that these need to be strong enough to enable change.

Our initial view

Having clarity on the outputs that network companies need to deliver over the price control, and associated consequences for non-delivery where appropriate, will help ensure network companies manage their network as the energy system changes.

[22] Paragraph 4.6 of https://www.ofgem.gov.uk/system/files/docs/2019/01/riio-2_sector_methodology_0.pdf

We note the view that the output categories may not encompass all of the activities that a DNO undertakes. However, our initial view is that these are sufficiently broad to be able to encompass a wide range of activities. We have not yet specified the outputs that will sit within these categories, including bespoke outputs proposed by the companies. In the gas distribution and transmission sectors, early indications are that companies have been able to assign a range of different outputs to these categories. **Our proposed position is that these output and incentive arrangements will apply for RIIO-ED2**.

We also note concerns over the applicability of relative and dynamic targets. We consider these have the potential to minimise the risk that consumers pay for a level of service that is relatively easy to attain and ensure targets remain valid for the duration of the period. As with the other sectors however, we will only apply these where it is appropriate and likely to drive value for consumers.

In the following sections, we seek views on what the application of these three output categories might mean for RIIO-ED2.

Meeting the needs of consumers and network users

Traditionally, network companies and, therefore, price controls have met the needs of consumers by focussing on the delivery of core network services. By this, we mean that there was a clear aim to: reduce the number and duration of interruptions; connect new customers to the networks in the timescales they require at an efficient cost; provide good customer service; and engage effectively with all stakeholders to understand how their requirements are changing. In doing this, it has been imperative that DNOs address the needs of those consumers who are fuel poor and/or most vulnerable in the event of a supply interruption.

We believe that these services will remain central to RIIO-ED2; however, there may be other elements to meeting consumer needs that are not captured by these core activities.

Questions:

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

Historically, we have provided companies with sufficient funding to maintain a reliable network, measuring their performance against a number of metrics and/or targets.[23] These were intended to drive the DNOs to consider reliability improvements across both the short and long-term. We expect the DNOs to continue to ensure their network assets are reliable and secure, by (among other things) investing in security upgrades, defences and resilience measures to deal with metrological and climate threats, their staff, and asset maintenance where appropriate.

Investment decisions and/or approaches to managing these risks may change over time, but we expect the DNOs' core focus to remain on the ultimate goal of maintaining a safe

[23] These include targets under the Interruptions Incentive Scheme (IIS) and the Network Asset Secondary Deliverable (NASD) health and load indices.

and resilient network. Where we provide DNOs with funding to deliver an overall level of risk over the price control, we will ensure there are suitable metrics in place to track this delivery against output targets.[24]

Safe and resilient networks are not defined just by asset resilience. DNOs also need to respond to the threats presented by extreme weather (such as flooding), climate change (increasing likelihood of extreme weather events that may affect their assets, as well as other types of metrological threats affecting their assets), cyber-attacks, and/or physical attacks on the networks. They need to ensure their staff are resilient and properly equipped to carry out their work, and that all staff (including those recruited into the business) have access to suitable training and support. This is particularly important given the challenge presented by an ageing workforce.

In the transmission and gas distribution sectors we developed a new method of measuring performance – the Network Asset Risk Metric (NARM). Chapter 6 of the RIIO-2 Sector Specific Methodology Decision provides further detail on how NARM will work in the other sectors.[25] In setting out our decision on NARM, we noted that we may need to make some changes in the approach based on further development and learning ahead of consulting on RIIO-ED2.

DNOs' previously expressed views

Across the DNO groups there were mixed views on our approach to resilience, particularly when it comes to NARM. Most DNO groups believe that the Network Asset Secondary Deliverables (NASDs) approach in RIIO-ED1 is better developed than NARM, and favour retaining the ED1 method. Generally, the DNOs felt that there was a lack of detail on NARM, and that it would need very clear guidance for it to be used.

The majority of DNOs support the introduction of a workforce resilience measure, though some felt Ofgem should not seek to regulate the approach companies take to workforce management.

Our initial view

We consider that DNOs should ensure their networks remain resilient to the physical and virtual challenges that face them. This is as true of electricity distribution as it is of the other sectors, as the DNOs will need to account for the long term effect of the work they carry out during the price control, just as other network companies do. Given the energy system transition and changing use of assets, it is important to track the benefits that are delivered during the price control. Therefore, **our proposed position is that the Network Asset Risk Metric (NARM) will apply to RIIO-ED2**, as part of a toolbox approach to justifying and assessing network companies' (proposed) investments and preferences for chosen strategies. In developing the detailed arrangements for NARM, we will build on the progress already made in developing NASDs in RIIO-ED1.

We also consider that DNOs will need to deliver a modern, well-trained, high-quality and diverse workforce that is fit for the future, while also taking appropriate and proportional measures to manage the risks posed to the security of the network and information systems associated with their networks. **Our proposed position is to introduce arrangements to ensure DNOs are appropriately managing the risks associated with cyber and physical security, and workforce resilience**.

[24] In RIIO-ED1, this level of risk is assessed and tracked under the health and load indices.
[25] Specifically, paragraphs 6.10 to 6.16, and 6.25 to 6.35 provide the proposed approach and our decision for the transmission and gas distribution sectors: https://www.ofgem.gov.uk/system/files/docs/2019/05/riio-2_sector_specific_methodology_decision_-_core_30.5.19.pdf

Questions:

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

Ofgem's duty to protect existing and future consumers expressly includes their interest in the reduction of greenhouse gases in the supply of energy to them. Additionally, in discharging our responsibilities, we must have regard to the need to contribute to sustainable development.

As the transition to a low carbon energy system accelerates, there will be an increasing focus on decarbonisation and Ofgem's role in assessing the trade-off between existing and future consumers' interests will come into greater prominence. We are currently considering the implications of recent Government policy decisions, and potential changes that may be required from this, in the context of our recently published strategic narrative and medium-term objectives and priorities. If required, any changes will be reflected through our development of the sector-specific methodology for RIIO-ED2.

In the meantime, network companies should continue to deliver the transition to a smarter, more flexible and more sustainable electricity system. Specifically, DNOs will need to facilitate the increasing levels of power coming from cleaner and more diverse sources, the introduction of new load demands such as electrification of the heat sector, and the volume of electric vehicles and other low carbon technologies connecting to their networks. They will need to do this by responding in a timely, efficient and innovative way, coordinating with stakeholders and sharing their data appropriately.

The DNOs' responsibility in this area is not limited to the facilitation of others' activities. In the transmission and gas distribution sectors, we have asked network companies to focus on:

- Decarbonising the networks themselves, with an emphasis on business carbon footprint and embedded carbon in the networks;
- Reducing the environmental impact of network activity in areas such as pollution, resource waste, bio-diversity loss and other local effects; and
- Supporting the transition to a smarter, more flexible, sustainable low carbon energy system.

These actions become even more important in the context of the recent government announcement of achieving net-zero carbon emissions by 2050.[26] We expect all network companies to put this target at the heart of all their decision-making, whether this may be of a financial or operational nature. They should be transparent in accounting for the network's environmental impacts as well as their wider operational activity. We expect companies to take responsibility beyond simply mitigating their own impact on the environment. Network companies should play a proactive role in facilitating the low carbon energy transition by working closely with customers, suppliers, partners and other

[26] https://www.parliament.uk/business/news/2019/june/government-gives-details-on-setting-a-uk-net-zero-emissions-target/

stakeholders in overcoming the challenges this transition brings. We think these expectations should apply equally to electricity distribution, and **our proposed position is to apply these arrangements for RIIO-ED2.**

Questions:

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

As the energy system (and networks in particular) become more interlinked, and flexibility becomes more embedded in the way networks are operated, network companies will need to consider the system as a whole in planning and carrying out their activities. We want RIIO-2 to better capture the value of whole system solutions for consumers, and want to enable all network companies to coordinate and collaborate more effectively. The price controls themselves should not introduce barriers to actions being taken in one area that lead to benefits elsewhere in the energy system and ultimately benefit energy consumers.

We have previously explored the costs and benefits that would be associated with aligning the electricity transmission and distribution price controls.[27] We believe that whole system outcomes can be supported and delivered through price controls without aligning either the start or finish dates of electricity transmission and distribution price controls (RIIO-ED2 will start 2 years later than the electricity transmission price control), and that aligning them would carry major risks and/or downsides.[28]

DNOs' previously expressed views

Most DNO groups agreed that the electricity distribution and transmission price controls should not be aligned. There was a range of views on how whole systems should be treated within the price control. A common theme among DNOs was that innovation support and the Totex Incentive Mechanism (TIM)[29] can drive whole systems solutions, especially if there are strong incentives. Some suggested an ex ante or discretionary allowance for additional 'whole system' activities should be set, while others believed that related costs should be logged up over the price control.

DNOs raised a number of concerns about how funding and/or outputs would be transferred in a whole systems world; one DNO suggested there should be a cross sector requirement to transfer outputs and/or funding. There were also differing views on how wide the definition of whole systems should be set, with some noting that a broader definition does not necessarily mean additional costs and could deliver greater benefits, whereas others stated that a narrower definition gives the necessary clarity.

[27] Paragraphs 4.45 to 4.47, and Table 2, of the RIIO-2 Framework Consultation: https://www.ofgem.gov.uk/system/files/docs/2018/03/riio2_march_consultation_document_final_v1.pdf
[28] Further discussion and reasoning for this decision is available in the *RIIO-2 Framework Decision* (2018): https://www.ofgem.gov.uk/system/files/docs/2018/07/riio-2_july_decision_document_final_300718.pdf
[29] The Totex Incentive mechanism incentivises network companies to outperform their totex allowances. Those companies that submit better forecasts of their expected costs in their business plans receive a higher totex efficiency incentive rate. This means they get to keep a higher proportion of any underspend, but equally means they bear a higher proportion of any overspend.

Our initial view

Our proposed position is that we will not align the electricity distribution and transmission price controls.

We consider that whole system outcomes can be achieved with an approach that establishes a clear scope and ambition for whole system outcomes in the price control context. We believe this goes a long way to capturing the associated benefits. Additional tools, such as the Coordinating Adjustment Mechanism and price control incentives,[30] can be used to further support whole system outcomes. **Our proposed position is that the Coordinating Adjustment Mechanism design for the electricity distribution sector needs to be sufficiently consistent with the other sectors.**

Our initial view is that the TIM is the best and most balanced incentive for supporting whole system solutions, but other mechanisms may be required to provide more directed support. We will consider whether any other arrangements are necessary for electricity distribution in the development of the Sector Specific Methodology. As with the other RIIO price controls, we believe that whole systems should be included in network companies' planning and engagement as they consider the other sectors that are affected by their behaviour.[31] **Our proposed position is that the whole system scope for electricity distribution needs to be consistent with the other sectors and that there is benefit to include whole systems elements in any Business Plan Incentive that we may introduce**.

We note concerns raised by DNOs in relation to funding arrangements and the transfer of outputs. We will address these in development of the Sector Specific Methodology for RIIO-ED2.

Questions:

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

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. The RIIO framework includes a range of mechanisms to help manage this uncertainty and allow the price control to be reactive to changes.

To minimise the risk that forecast allowances are set too high or too low, it is possible to index some uncertain costs. The measure by which these costs are indexed and the frequency with which to update the allowances require careful consideration, but the use of indexation has the benefit of reducing the risk of forecasting error.

[30] See, for example, the inclusion of whole system considerations in the Business Plan Incentive and innovation stimulus packages, and the decision to design the Coordinate Adjustment Mechanism in the *RIIO-2 Sector Specific Methodology Decision* (2019): https://www.ofgem.gov.uk/publications-and-updates/riio-2-sector-specific-methodology-decision

[31] To meet their licence requirements to be efficient, DNOs should already be coordinating with other electricity network companies to deliver solutions that benefit consumers more generally, where it is not to the detriment of their own customers. We will be consulting on this later this year, issuing licence clarifications, with associated guidance, to make this expectation clear. In the next price control, we want to enable a more coordinated approach to identifying and implementing efficient whole system solutions.

By its nature, all investment proposed in a Business Plan is anticipatory, but some projects have a level of anticipation that is considered too risky for consumers (these projects are referred to as 'highly anticipatory investment'). When future need is forecast accurately, highly anticipatory investment can generate significant long-run benefits for consumers; conversely, where the forecasted need does not emerge, highly anticipatory investment can produce inefficient costs for consumers.

DNOs' previously expressed views

In terms of using indices to set allowances, there were mixed views amongst the DNOs. The majority agreed with this approach, but noted that further clarity will be needed. Other DNOs felt that ex ante allowances should be provided instead of using indices, with network companies then made responsible for managing the risk of price changes. One DNO did not agree with indexing, as they believed this would not be possible; another felt that no appropriate indices had been identified yet.

Several DNO groups supported the introduction of a governance arrangement to review anticipatory investment proposals, similar to the Electricity Networks Strategy Group established prior to RIIO-1. There was broad support for the opportunity to explore different risk sharing arrangements that might support certain types of highly anticipatory investment.

Our initial view

Our proposed position for RIIO-ED2 is to use indexation where feasible. This may include adjustments for labour and construction cost inflation, where evidence suggests this is different from the general consumer price inflation.

The May 2019 RIIO-2 Sector Specific Methodology Decision addresses the issue of how to treat anticipatory investment for the transmission and gas sectors, by inviting networks to propose investments they considered to be highly anticipatory. They were also required to propose how these investments should be treated within the price control. **Our proposed position for RIIO-ED2 is to offer the same opportunity to DNOs to present us with highly anticipatory projects in their business plan**. We will provide more detail on how 'highly anticipatory projects' should be defined in the Sector Specific Methodology.

When it comes to expenditure that carries a greater (than normal) level of uncertainty associated with either the need or the benefit, it may not be appropriate for customers to be fully exposed to these risks. **Our proposed position for RIIO-ED2 is to offer DNOs the opportunity to set out in their business plan how these investments should be treated**.

Questions:

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

In Section 4, we discuss the importance of innovation and competition and we ask whether (and how) these can play a more important role in RIIO-ED2. This is important context for the following section. Although here we are seeking views on the type of framework we should apply, it is important to stress how this framework has to enable an outcome where the potential benefits of innovation and competition can be unlocked.

Innovation

Innovation is at the heart of the RIIO framework and, we believe it will play a central role in achieving the faster transition to a smarter, more flexible, sustainable low carbon energy system, while limiting costs to consumers. The RIIO-1 innovation stimulus (which consisted of the Network Innovation Allowance (NIA), Network Innovation Competition (NIC) and Innovation Rollout Mechanism (IRM)) provided companies with additional funding for innovation beyond their Totex allowance.

We now expect innovation to be at the heart of what network companies do, and we want to ensure that the RIIO-2 price controls encourage DNOs to undertake more innovation as part of their business as usual (BAU) activities. The TIM, along with the business plan incentive and suitable challenge from the enhanced engagement process, encourages network companies to do this. These mechanisms alone are not enough to provide the incentive for network companies to innovate, particularly when we want to focus network innovation more on strategic challenges related to the energy system transition and increase the coordination with other bodies and/or innovation funding that is available. In order to do this, we decided to replace the NIC with a new funding pot that would focus on big strategic innovation challenges within networks and system operation, supporting projects that address a broad range of whole system solutions.[32]

In addition to these reforms to the innovation stimulus, we also decided to remove the IRM from the RIIO-2 framework, as companies will be incentivised to include plans to roll out proven innovation as part of the Business Plan Incentive. If network companies can demonstrate they need additional funding to do this, they will be able to receive additional totex allowances.

Finally, we also decided to retain the opportunity for network companies to receive reformed NIA funding in RIIO-2. This funding will primarily focus on those projects that are

[32] See paragraphs 10.6, 10.16 to 10.23, 10.39 to 10.46, and 10.54 to 10.62 of the RIIO-2 Sector Specific Methodology for our decisions, and associated rationale, in this space.

related to longer-term energy system transition and consumer vulnerability, and there must be improved public reporting of any projects that are funded. This reporting must include costs and benefits, and companies must demonstrate that any successful innovation is diffused across the energy sector. The final reform was that any allowance would be set based on the justification set out in the network company's business plan submission.

DNOs' previously expressed view

All DNO groups supported the removal of the IRM. There were mixed views on whether to retain both the NIA and the NIC, but all DNO groups were supportive of an innovation stimulus in some form, noting that the benefits that have been delivered so far notably outweigh the costs of delivery. Some DNOs highlighted that a price control with lower returns will yield less innovation, which therefore increases the need for some form of stimulus.

Our initial view

To ensure that DNOs continue to focus on the key energy system transition challenges, **our proposed position will be to introduce a funding pot that targets future-facing strategic challenges**; this will replace the Network Innovation Competition. This new funding will support innovation projects that address a broad range of whole system solutions, including the future(s) of heat and transport, among others.

In addition, our proposed position is to retain the opportunity for network companies to receive Network Innovation Allowance (NIA) funding, but this will focus primarily on projects that are related to the longer-term energy system transition and address consumer vulnerability. To support the retention of the NIA, we will require network companies to improve how they monitor and report on those projects that are funded. These proposals mirror the decisions taken for the transmission and gas distribution price controls in relation to innovation funding.

Finally, **our proposed position is to remove the Innovation Rollout Mechanism (IRM).** This mechanism has had little use in RIIO-1 and lacks flexibility. Additionally, a shorter RIIO-ED2 price control reduces the need for specific innovation rollout re-openers.

Competition

Efficiency is also 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 (i.e. those competitions run by network companies within the price control framework under the TIM) already takes place under the current price control arrangements.

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 non-network (and flexibility) solutions. Further consideration needs to be given to the role early competition can play in improving outcomes for electricity distribution consumers, and how it might be better utilised in existing processes (such as through the High Value Project regime). With regard to late competition, where a competition is run later in a project's lifecycle,[33] we are interested in detailed views on information and issues that may need to be considered in more detail to account for any sector-specific differences in the design and implementation of the models.

DNOs' previously expressed views

Broadly speaking, the DNOs were not strongly in favour of establishing explicit competition arrangements for RIIO-ED2. Some felt that the evolution to Distribution System Operation would build on the native competition that already occurs, and that the Totex approach

[33] This could be after a solution has been identified but ahead of construction and ongoing operation, or after construction and ahead of operation.

already drives DNOs to explore and use competition. Some DNOs suggested that Ofgem or a Customer Engagement Group should run the competition process.

Our initial view

Our proposed position for RIIO-ED2 is that the extension of both early and late models of competition to electricity distribution is likely to provide better value for money for consumers, and we will work towards introducing models for RIIO-ED2 which are in consumers' interests.

Our proposed position for RIIO-ED2 is to introduce arrangements, potentially by enforcing best practices or competition obligations, which will enable native competition to be more effective. These will help to enhance the transparency around networks' competitive processes, to obtain public commitments from networks on where they will go above-and-beyond the competition minimum legal requirements, and to help drive the changes to the roles of the networks in the future system.

Questions:

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

Overall network revenues are driven by numerous elements, from the financial cost of servicing previous investments, the maintenance of existing assets, to the unavoidable costs of fees and licences. One aspect that drives both network investment and behaviour is the view of the future towards which the network company plans. If that view involves a static world with very little changes in consumer behaviour, then the network will not need to make many investments to support these changes. If, however, the view of the future is of a rapidly changing system, then a network company's planning must consider a range of possible outcomes.

To give a sense of the magnitude of risk that potentially inflated forecasts pose to consumers, our high-level analysis of RIIO-ED1 reveals that under 10% of the electricity distribution component of a consumer's bill was linked to variable (forecasted) outcomes. This number does not take into account the tools we use, such as uncertainty mechanisms, to further protect consumers from such forecasts.

For RIIO-2, for the purposes of developing their business plans, Ofgem required the transmission and gas networks to form a 'consistent view of the future' across all regulated sectors (gas, electricity and the ESO). This included a view on the primary drivers of investment, including relevant government policy, across a range of plausible future scenarios. This work was to help manage forecasting risk, and to support better network engagement and whole system outcomes by helping to align planning between the networks. Importantly, where networks believed their plans needed to deviate from the common view, then they needed to provide proportionate evidence for this and propose the most appropriate mechanism to allow expenditure allowances to adjust.

Business plans need to be able to demonstrate how the sector as a whole can accommodate the government's target of achieving net-zero carbon emissions by 2050. Our starting position for RIIO-ED2 is that we encourage all networks to form a consistent view of the future. While baseline revenues in Business Plans should reflect this common view, they should also evidence how they are designed to flex to meet other outcomes (including the numerous pathways of meeting environmental objectives).

Question:

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

The introduction of the RIIO framework brought with it the concept of fast tracking which was designed to drive companies to compete against each other to submit a high-quality plan. One component of fast tracking was early settlement. This process gave companies the opportunity to settle their price control early where their business plan was deemed of sufficient quality. It was anticipated that this competitive dynamic would improve the quality of all business plans that would, in turn, improve our scrutiny of the 'slow track' submissions (those that were not fast tracked).

Fast tracking operated alongside other incentives to improve the quality of business plans. In the delivery of their plan, RIIO exposes companies to incentives to drive down costs and improve service quality. For expenditure (Totex), these incentives work by allowing network companies to keep a share of any underspend (and bear a proportion of overspend) against predetermined allowances. This share is referred to as the Totex incentive rate. In RIIO-ED1, the Totex incentive rate was determined through the Information Quality Incentive (IQI), which sought to reward companies by maximising their rewards the more their forecast submissions matched their actual spend. This was intended to discourage networks from submitting forecasts that were higher than their actual requirements, in order to receive budgets that could be easily beaten.

Our review of RIIO-1, highlighted concerns with the effectiveness of both fast tracking and the IQI as mechanisms for encouraging high-quality plans. Concentrated ownership structures and lack of comparability between companies weakened the competitive dynamic that is necessary to make fast tracking effective. Early settlement also requires a compression of the timetable potentially making it incompatible with enhanced engagement. In relation to the IQI, we have witnessed systematic outperformance across different sectors, suggesting that, at least in some instances, the underlying information that was drawn from company business plans and used to set the price control, was not accurate and was of a nature that favoured the network companies.

DNOs' previously expressed views

Most DNOs believed that fast-tracking should not be retained, although one DNO considered that we had not demonstrated how an alternative approach would deliver a better outcome.

The majority of DNOs were opposed to a Totex incentive rate that took account of our level of confidence in setting cost allowances. Several DNOs preferred retaining a methodology either the same, or similar to the Information Quality Incentive (IQI) approach used in RIIO-ED1. Some DNOs felt that, regardless of the methodology, the Totex incentive rate needed to be set above 50%, arguing that this would ensure a focus on longer-term efficiencies.

Our initial view

Running the fast track process is onerous and reduces the time available not only for Ofgem to set the price control, but for network companies to effectively engage with their stakeholders. Combined with the fact that there may be other methods of incentivising good quality business plans, this means that **our proposed position is to remove the early settlement process for RIIO-ED2**.

An alternative mechanism to incentivise companies to submit high-quality, rigorous, and ambitious business plans could be through a single Business Plan Incentive (BPI). In gas distribution and gas/electricity transmission we developed a BPI that encourages companies to submit ambitious plans by financially rewarding those plans that represent genuine value for money and provide information that helps to set better price controls. Similarly, low quality plans will be subject to a financial penalty. **Our proposed position is to use the Business Plan Incentive (BPI) for RIIO-ED2**.

We consider that the IQI arrangements applied in RIIO-ED1 did not sufficiently take into account our level of confidence in setting baseline cost allowances, based how independently we had arrived at our view of costs. As a result, companies could be rewarded or penalised for performance that may not reflect their efficiency, but could reflect errors in setting baseline allowance or inflated cost submissions. To mitigate against this, we believe that Totex incentive rates in RIIO-ED2 should take account of our level of confidence in our ability to independently set baseline cost allowances.

Our proposed position is to set incentive rates via a confidence-dependent incentive rate approach. For this, a higher incentive rate will apply to those costs that we assess to be 'high-confidence' (i.e. where we have a high level of confidence in our ability to independently set a baseline allowance), and a lower incentive rate will apply to the remaining elements of totex (known as 'lower-confidence baseline' costs). A single confidence-dependent incentive rate would apply, and would be calculated as the ratio of high-confidence baseline costs to allowed totex.[34]

While our proposal is that both the BPI and the confidence-dependent incentive rate will be used for RIIO-ED2, we are not proposing to fix the size of the rewards and penalties under the BPI or the range of the confidence-dependent incentive rate at this stage. These will be considered later in the overall process, and we welcome views on the potential range that should be used.

Questions:

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

The changes facing the energy sector, and the associated questions around how RIIO-ED2 will need to adapt to meet them, should not mean a higher risk exposure for investors or consumers. We aim to use the price control to ensure that investors continue to enjoy the benefit of investing in a low-risk environment, and consumers enjoy the corresponding advantage of lower bills.

[34] The numerator will be our independent baseline for high-confidence baseline costs; the denominator will be the company's overall totex allowance.

In setting the price control, GEMA has a duty to have regard to licence holders' need to be able to finance their regulated activities, at the same time as allowing them to recover the efficient costs of running their networks. Investors in a network company expect to receive a return on their investment, and we will allow returns on capital to reflect the associated risks. The actual return may vary depending on a company's performance against incentives and/or delivering cost efficiencies. Ultimately, we want to ensure that the overall returns earned are fair for both consumers and investors.

One element of allowed returns is the allowed return on debt, and we believe that consumers should only pay for efficient costs. This should be achieved by ensuring that companies are incentivised to obtain the lowest cost financing (without incurring undue risk), and by setting the allowance based on a fair and reasonable estimate of the actual cost of debt that is likely to be incurred by a notional efficient operator.

In RIIO-1, the allowed return on debt is updated ex post (debt indexation) which protects consumers from forecast errors. **We propose to retain debt indexation for RIIO-ED2,** with the specific details to be confirmed after the business plans have been submitted.

Another key element of allowed returns is the allowed return on equity, which is an estimation of the return that equity investors expect; it is an inherently unobservable quantity, typically obtained using some model of investor expectations. For RIIO-ED1, Ofgem set baseline allowed returns on equity at 6.0% (RPI-real, slow-track) and 6.4% (RPI-real, fast track). In March 2018, Ofgem published a report by CEPA (a consulting firm) suggesting a plausible range for the cost of equity for RIIO-2 of 3% to 5% (RPI-real).

In May 2018, for the forthcoming gas distribution (RIIO-GD2) and electricity and gas transmission sectors (RIIO-T2), Ofgem decided a methodology for setting the baseline allowed returns on both debt and equity.

DNOs' previously expressed views

There was strong opposition from DNOs to a number of the finance issues in the sector specific methodology consultation, including the Cash Flow Floor, Total Market Returns, the assumption for CAPM beta, and the allowed-expected wedge. Several DNOs noted that the estimated cost of equity was lower level than Ofwat proposals for water companies, and that the overall package was inconsistent, poorly targeted, and does not give a symmetrical risk exposure. DNOs were generally supportive of the move away from RPI, towards either CPI or CPIH.

Our initial views

For RIIO-ED2, we propose to set the baseline allowed return on equity using the same methodology. The responses provided by DNOs were generally consistent with responses received from other network companies. Indeed DNOs, while working with the Energy Networks Association and other energy network companies, submitted jointly funded studies to support their arguments on various financial issues (primarily relating to allowed returns). Rather than restate the detailed reasoning behind our approach, and our consideration of the points raised by network companies, we instead provide a link to our decision document where these are fully explained.[35]

In addition to updating the way in which we determine allowed returns, we also need to consider how we index the Regulatory Asset Value (RAV) and set allowed revenues in real terms. In RIIO-ED1 we use estimates of RPI inflation when setting allowed returns to capital and when updating RAV values. However, RPI is no longer seen as a credible measure of inflation (see for example the Johnson Review published in 2015).[36] The Office

[35] https://www.ofgem.gov.uk/system/files/docs/2019/05/riio-2_sector_specific_methodology_decision_-_finance.pdf
[36] https://www.statisticsauthority.gov.uk/archive/reports---correspondence/current-reviews/uk-consumer-price-statistics---a-review.pdf

of National Statistics now use CPIH as the headline measure of inflation and other regulators have been moving away from the use of RPI in price controls. **For RIIO-ED2, we propose to use either CPI or CPIH for inflation measurement in calculating both RAV and allowed returns**.

Questions:

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.

Return adjustment mechanisms

To protect against companies earning returns that do not align with the level of risk to which they are exposed, we can consider failsafe mechanisms. Known as Return Adjustment Mechanisms (RAMs), these protect against the risk of extreme deviations from the expectations set at the start of the price control.

One particular RAM is known as a 'sculpted sharing factor'. This would adjust individual companies' Return on Regulatory Equity (RoRE) when that company deviates from a predetermined cap or collar. It does not provide a complete backstop against a high or low sector average return, but instead results in companies sharing more of their outperformers with consumers the more they outperform above the threshold.[37] Alternative approaches could include a discretionary adjustment, or sector average sculpting and anchoring – arrangements that would adjust individual company returns in response to how the sector average return outturns.

DNOs' previously expressed views

DNOs did not consider that there was a need to introduce RAMs, if the price control was set accurately. Their view was that there was a risk that any RAMs would weaken incentives and create uncertainty.

One DNO supported the use of RAMs, but only in relation to profits driven by Totex underspends – and in that event, only where these were not the result of genuine efficiency improvements. By contrast, the majority of DNOs were opposed to RAMs on Totex as they considered that the benefit of underspends were already shared with consumers via the Totex incentive mechanism.
Of all the Return Adjustment Mechanisms (RAMs) proposed, most DNOs took the view that the sculpted sharing factor would be the least disruptive, while still providing protections to consumers.

There was also strong opposition to the potential use of anchoring, with many DNOs believing this would undermine investor confidence. Finally, many DNOs noted that RAMs, and other elements of our proposed framework, may not all be needed if they are each seeking to address the same issue of uncertainty and information asymmetry.

Our initial view

[37] Conversely, the more a company underperforms against a threshold, the more of their underperformance is shared with consumers.

We are able to make specific amendments to the RIIO-ED2 framework to guard against higher than expected returns. However, these may not be sufficient to provide the protection that consumers may require, given a rapidly changing energy sector. Therefore, we consider there is a need for a RAMs to guard against unanticipated factors driving high returns.

Our proposed position is to introduce the sculpted sharing factor RAM for RIIO-ED2. However, we are interested to hear stakeholders' views on the other RAMs that we proposed as part of the RIIO-2 Framework decision, particularly around discretionary adjustments, sector average sculpting, and anchoring.[38]

Questions:

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.

[38] See Appendix 4 of the RIIO-2 Framework Decision for further details: https://www.ofgem.gov.uk/system/files/docs/2018/07/riio-2_july_decision_document_final_300718.pdf

6. Process

This open letter consultation marks the start of the process for setting RIIO-ED2. Following this letter, we intend to reach a decision, setting out the key decisions on the overarching framework for RIIO-ED2 that we will take ahead of developing the methodology we will use to set the price control.

As we move through the process towards the methodology development, we will ensure that we address specific issues arising from RIIO-1, as well as understanding how the energy system challenges may affect electricity distribution.

Table 1 contains a high-level timeline for developing the RIIO-ED2 price control assuming no early settlement. The timetable may be subject to change or addition as we progress through the price control process.

Table 1: Indicative timeline for RIIO-ED2

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

Working Groups

To help deliver the arrangements for RIIO-ED2, we will hold a series of working groups. These will be open to all interested stakeholders to attend, and we will publish the agendas, minutes and presentations of these working groups on our website.[39]

7. Your views and next steps

As noted above, this open letter consultation marks the start of the process for setting RIIO-ED2, and we are keen to ensure that we get views from a wide range of stakeholders. We have set out specific questions in this letter, and a full list of questions is provided in Annex 5. We would welcome written comments on these questions, or any other issues you believe we should address, by 15 October 2019. Please email responses to RIIO2@ofgem.gov.uk. Unless clearly marked as confidential, we will publish responses on our website shortly after the response deadline.

If you would like to discuss the contents of this letter in more detail, please contact James Veaney on 0207 901 1861.

[39] https://www.ofgem.gov.uk/publications-and-updates/riio-ed2-working-groups

Annex 1: RIIO Background

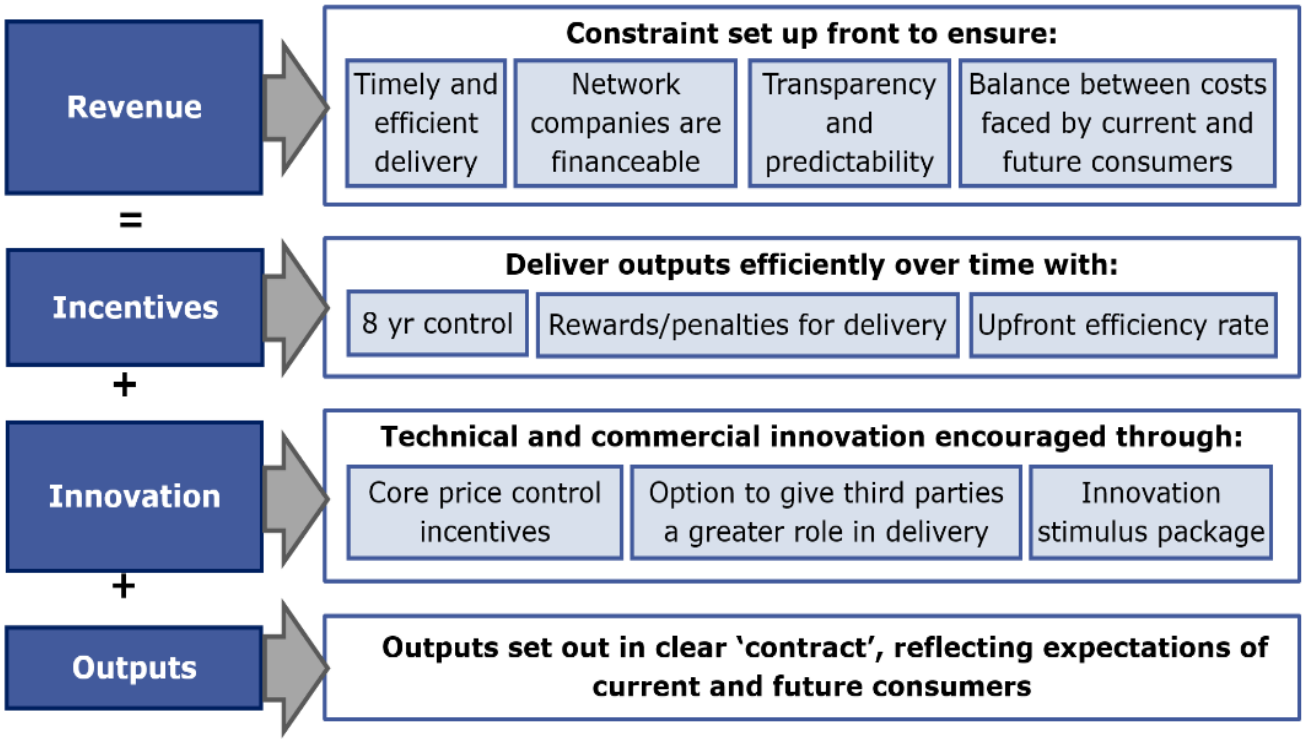
RPI-X@20 was a detailed review of energy network regulation and resulted in our new RIIO regulatory framework, which was set out in the RPI-X@20 Decision Document[40]. We also set out more details of how the RIIO model would work in practice in the "Handbook for implementing the RIIO model".[41]

RIIO (Revenue = Incentives + Innovation + Outputs) is designed to encourage network companies to:

- Put stakeholders at the heart of the decision-making process
- Invest efficiently to ensure continued safe and reliable services
- Innovate to reduce network costs for current and future consumers
- Play a full role in delivering a low carbon economy and wider environmental objectives.

In 2013, we completed the first price control reviews to use the RIIO framework: RIIO-T1 (gas and electricity transmission) and RIIO-GD1 (gas distribution). In 2015, we published our final determinations for the RIIO-ED1 price control review for electricity distribution. Each of the RIIO-1 price controls are set to run for an eight-year period.

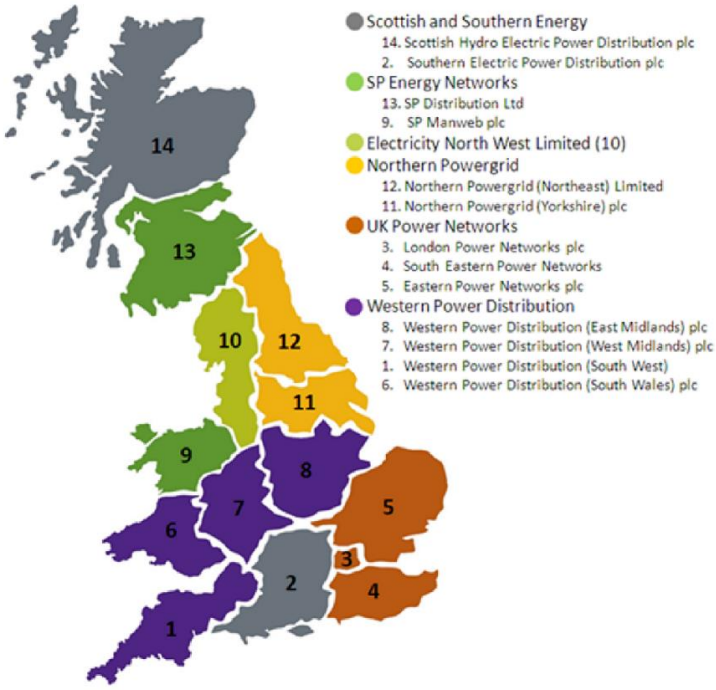
Figure A1: The RIIO model



[40] https://www.ofgem.gov.uk/ofgem-publications/51870/decision-docpdf
[41] https://www.ofgem.gov.uk/ofgem-publications/51871/riiohandbookpdf

Annex 2: Performance in RIIO-ED1

In the first three years of RIIO-ED1, the DNOs have continued to invest in their networks to improve reliability. On average, the number of customer interruptions has fallen by 11% since the start of the price control, and the duration of interruptions has, on average, reduced by 9%. There have also been improvements in the level of customer service provided by DNOs, as well as the way in which they actively engage with all stakeholders and work to address the needs of their vulnerable customers. Across the industry, a number of innovation projects are helping to maximise the use of existing network infrastructure, minimise disruption and outages, increase the safety of maintenance works, facilitating the transition of DNOs to DSOs.



Similarly, there have been improvements at an industry level in the efforts to manage the DNOs' impacts on the environment; all companies are on track to meet their targets for Business Carbon Footprint reduction. And the DNOs continue to look to adapt to the future – in June 2019, all DNOs (along with the TOs and the ESO) renewed their commitment to flexibility by pledging to openly test the market to compare grid reinforcement and market flexibility solutions for all new projects of significant value.[42]

In delivering this strong performance against the outputs, the DNOs have underspent against allowances by around 6% to date, and are forecasting to continue this performance for the remainder of the price control. Any underspend against allowances is shared between the DNO and its customers through the Totex Incentive Mechanism, leading to a reduction in customer bills. Although if budgets were set incorrectly at the outset, these 'savings' are in relation to starting price that was higher than it could have been.

This overall underspend is largely driven by two main cost categories – the replacement and refurbishment of assets, and network reinforcement. Some of this underspend is driven by external factors beyond the DNOs' control, some by efficiencies the DNOs have achieved, and some by the timing of investment.[43] Contrasting this, there are two areas with relatively high levels of overspend – network faults and operational support costs. Generally, this overspend has been driven by external factors such as storms driving up fault costs, but investment in operational support to achieve wider efficiencies is also a factor.

Overall performance is reflected in the level of return the DNOs are achieving. The Return on Regulatory Equity (RoRE) forecasts the DNOs' eight-year average performance, and factors in the DNOs' financing and tax performances. These forecasts range from 6.51% to 11.63%, at an average of 9.15%, notably higher than their allowed cost of equity of 6%.[44] Further details on the DNOs' performance to date is provided in our latest RIIO-ED1 annual report.[45]

[42] http://www.energynetworks.org/assets/files/ENA%20Flexibility%20Commitment%20Our%20Six%20Steps%20for%20Delivering%20Flexibility%20Services.pdf
[43] Under RIIO, the DNOs are given allowances to spend over the entire 8 years. This means they may choose to delay or move investment later in the price control.
[44] WPD's four licensees (covering the Midlands, the South West, and South Wales) were fast tracked through the RIIO-ED1 price control. As part of their settlement, they were given a cost of equity of 6.4%.
[45] https://www.ofgem.gov.uk/publications-and-updates/riio-electricity-distribution-annual-report-2017-18

Annex 3: Changes potentially impacting RIIO-ED2

Energy systems flexibility

Flexibility – the changing of generation or demand in response to a signal – is a central component of the energy system. We set out two types of flexibility: price flexibility, where actions are in response to energy market prices and network usage signals; and contracted flexibility, where parties trade and directly contract with one another. Ofgem support the use of flexibility and continue to create a policy environment where the benefits of flexibility can be realised. The RIIO-ED2 price control will encourage the use of flexibility throughout the framework, embedding best practice in DNOs to ensure that value can be unlocked for the energy consumer.

Distribution system operation and flexibility

Distribution system operation (DSO) is the effective delivery of a range of functions in the distribution network, these functions cover: long-term network planning; operations, real-time processes and planning, and markets and settlement. Ofgem policy and the RIIO-ED2 price control ensure that the building blocks and framework are in place to enable DSO functions to be undertaken in an efficient and well-coordinated manner. DNOs and markets must evolve to deliver these functions, but as we drive progress now, our approach should recognise that the energy system continues to change. This means we should ensure we embed the optionality to review and reform institutional arrangmeents to best ensure function delivery.

We consider it important to clearly define the roles of the DNO as a neutral market facilitator. This means delineating the boundaries of DNOs and markets, and mitigating real and perceived conflicts of interest. Greater clarity on appropriate roles and regulatory treatment of DNOs' engagement in and with markets will drive efficient delivery of DSO functions, and provide DNOs and markets with greater confidence to plan and invest. Ensuring that the most appropriate key enabling technology, data and engineering specifications are adopted will facilitate the delivery of DSO functions, whether through the DNO or by alternative function providers, as well as ensuring optionality in institutional arrangements in a developing energy system.

DNOs are expected to tender flexibility as neutral facilitators to reduce the expense of network reinforcement, whilst also making best use of available assets. Transparency in decision-making and the valuation of flexibility is required. Diverse procurement needs from DNOs must be considered alongside standardised product descriptions and procurement practices, thereby lowering barriers to entry for market participants. Coordination across tenders and other markets for flexibility is important to realise the true value of flexibility; it can enable value stacking and avoid conflicting procurement actions.

Throughout, whole systems outcomes must be considered. DNOs must consider the best value network or non-network solutions across energy vectors and assets and appropriate substitutability. Adopting data best practice, such as ensuring data is interoperable and that coordinated exchanges of information are effective are critical to delivering whole systems outcomes.

Price control changes in RIIO-ED2 will be important in driving DSO, but there is much to be done now across the areas described above. This includes action for DNOs, but also for us to develop supporting policies. Alongside this open letter we are publishing a position paper on DSO.[46] In this paper, we describe in more detail the outcomes we seek to achieve from our DSO policy reforms, describe our work programmes to deliver this, and explain our emerging conclusions and expectations for DNOs.

[46] www.ofgem.gov.uk/publications-and-updates/ofgem-position-paper-distribution-system-operation-our-approach-and-regulatory-priorities

Future charging and access and wider reforms

Alongside the work on RIIO-ED2, and opening up markets to flexibility, we are also looking at how to make better use of our electricity networks and accommodate more technologies that facilitate moves towards a less-carbon intensive energy system, such as electric vehicles, heat pumps, and storage. We have two major projects to help us do this.

At the end of 2018[47] we announced the scope, timescale, and delivery mechanisms for access right and forward-looking reform.[48] This review will ensure that electricity networks are used efficiently and flexibly, reflecting users' needs and allowing consumers to benefit from new technologies and services while avoiding unnecessary costs on energy bills in general. We will also need to think about how any access and charging reforms may change the scope of what is included in a given sector's price control.

One important interaction is that any change to the connection charging boundary at distribution level would affect the allowed revenue which DNOs recover from all customers under the RIIO price control rather than directly from a connecting customer. We will only make such a change if we are satisfied that our overall package of reforms adequately protects the interests of consumers.

Our work on access and charging reform goes hand in hand with flexibility and our reform of system operation at transmission and distribution level. By making more efficient use of the existing system, we reduce the need for expensive new wires and help minimise the costs to consumers.

We also recently consulted on our proposed direction on the Targeted Charging Review – aimed at reducing the harmful distortions caused by the current charging arrangements and ensuring we allocate residual charges in a fairer way.

Market based solutions require certain enablers. For example, market wide half-hourly settlement, we are continuing to support the smart metering programme and are working closely with government in facilitating the increasing use of electric vehicles.

We also want to encourage innovation and market opportunities in the retail sector: We established the innovation link to provide support on energy regulation to businesses looking to introduce innovate propositions to the energy sector. All of these initiatives are part of our overall strategy for the future energy system.

This innovation will help reduce costs to businesses and consumers and help make better use of networks and other existing energy assets, saving money for everyone and improving service standards.

[47] https://www.ofgem.gov.uk/publications-and-updates/electricity-network-access-and-forward-looking-charging-review-significant-code-review-launch-and-wider-decision

[48] Access rights define the nature of users' access to the electricity networks (for example, when users can import/export electricity and how much). Forward-looking charges are the type of electricity network charges that signal to users how their actions can ether increase or decrease network costs in the future.

Annex 4: Summary of proposed positions

Length of the price control
Maintain the default length of the price control at five years, as with the other sectors
Giving consumers a stronger voice
Apply the enhanced engagement arrangements for RIIO-ED2
What consumers want and value from networks: Overarching framework for outputs and incentives
Apply the output and incentive arrangements developed for the other sectors
Maintaining a safe and resilient network
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
Introduce arrangements to ensure DNOs are appropriately managing the risks associated with cyber and physical security, and workforce resilience
Delivering an environmentally sustainable network
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
Refrain from aligning the electricity distribution and transmission price controls
Ensure Coordinating Adjustment Mechanism design for the electricity distribution sector is sufficiently consistent with the other sectors
Ensure whole system scope for electricity distribution needs is consistent with the other sectors and that there is benefit to include whole systems elements in any Business Plan Incentive that we may introduce
Managing uncertainty
Explore the use of indexation where feasible
Offer the same opportunity to DNOs to present us with highly anticipatory projects in their business plan
Offer DNOs the opportunity to set out in their business plan how these highly anticipatory investments should be treated
Driving efficiency through innovation and competition
Introduce a funding pot that targets future-facing strategic challenges
Retain the opportunity for network companies to receive Network Innovation Allowance (NIA) funding
Remove the Innovation Rollout Mechanism (IRM).
We will work towards introducing models of both early and late for RIIO-ED2 which are in consumers' interests.
Introduce arrangements, potentially by enforcing best practices or competition obligations, which will enable native competition to be more effective
Business plan and Totex incentives
Remove the early settlement process for RIIO-ED2
Use the Business Plan Incentive (BPI)

Set incentive rates via a confidence dependent incentive rate approach
Fair returns and financeability
Retain debt indexation for RIIO-ED2
Set the baseline allowed return to equity using the same methodology as applied to the other RIIO sectors
Use either CPI or CPIH for inflation measurement in calculating both RAV and allowed returns
Return adjustment mechanisms
Introduce the sculpted sharing factor RAM for RIIO-ED2

Annex 5: Full list of questions

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.