ofgem Promoting choice and value for all gas and electricity customers

RIIO

Handbook for implementing the RIIO model

Document type: **Handbook**

Date of publication: 4 October 2010

Target audience: Consumers and their representatives, gas and electricity transmission and distribution companies, generators and offshore gas producers/importers, suppliers, shippers, debt and equity investors, those with sustainable development interests, academics and other interested parties.

Overview:

RPI-X@20 is Ofgem's detailed review of energy network regulation. We have looked at how best to regulate energy network companies to enable them to meet the challenges and opportunities of delivering the networks required for a sustainable, low carbon energy sector. There is considerable uncertainty about the best way to meet these challenges whilst delivering value for money for existing and future consumers.

If Britain's energy network companies are to deliver the networks needed for a sustainable energy sector, the way we regulate them needs to change. In July 2010 we published our Recommendations consultation, on a new regulatory framework, known as the RIIO model, which we would use to develop future price controls for electricity and gas transmission and distribution network companies. Following consideration of responses to the Recommendations consultation, on 4 October 2010, the Gas and Electricity Markets Authority published its decision to implement the RIIO model which has been designed to promote smarter gas and electricity networks for a low carbon future.

This handbook is intended to give stakeholders a better understanding of 'how' the RIIO model works in practice. This handbook will be a living document, adapted over time to reflect learning and development as the regulatory framework is applied to price controls.

Contact details: Hannah Nixon, Partner, RPI-X@20 and Transmission
Tel: 020 7901 7165

Email: RPI-X20@ofgem.gov.uk

Team: RPI-X@20 and Transmission

Context

Our principal objective is to protect the interests of existing and future consumers in relation to gas conveyed through pipes and electricity conveyed by distribution and transmission systems. An important element of our work involves regulating the revenues that the monopoly energy network companies are allowed to recover from consumers to ensure that the associated charges consumers face reflect economic and efficient network operation. Since privatisation, we have regulated the network companies using a framework known as RPI-X regulation and, while the framework has evolved over time, the fundamental construct has remained the same.

The gas and electricity industries are facing significant challenges in terms of the need to move to a low carbon economy and maintain secure energy supplies. Energy network companies, as the parties that transmit and distribute our energy, have a vital role to play in this transition.

Recognising these challenges, and the need to have in place an effective regulatory framework to facilitate these required outcomes, in March 2008 we announced that we would be undertaking a review of the existing RPI-X regime used to regulate gas and electricity transmission and distribution companies. The review was extensive, involving consideration of a range of potential regulatory models as well as options to further develop the existing regime. To inform our thinking in these areas we took forward engagement with a range of different stakeholders to attain a full understanding of the issues faced and views held by affected parties.

On 4 October 2010, we published our RPI-X@20 decision document which set out the conclusions of the review and our intention to implement a new regulatory framework, known as the RIIO model. Under this approach we will set **R**evenue using **I**ncentives to deliver **I**nnovation and **O**utputs.

The RIIO model has taken the elements of the old RPI-X framework that work well, adapted other elements to ensure they are focused on delivery of a sustainable energy sector and long-term value for money, and added elements to encourage the radical measures needed in innovation and timely delivery. The model is designed to promote smarter gas and electricity networks for a low carbon future. Further information on the rationale for the design of the RIIO model has been documented throughout the RPI-X@20 review (e.g. in the Recommendations and Emerging Thinking consultation documents[1]).

This handbook provides a detailed explanation of 'how' the RIIO model will be implemented. The handbook is aimed primarily at stakeholders who require an in depth understanding of how the regulatory framework will work in practice. It is intended to be a 'living' document which can be adapted overtime - to reflect learning and development - as the regulatory framework is applied to price controls. A more accessible overview of RIIO is provided in our decision document[2].

[1] These documents can be found on the RPI-X@20 website
http://www.ofgem.gov.uk/NETWORKS/RPIX20/Pages/RPIX20.aspx
[2] Regulating energy networks for the future: RPI-X@20 decision document
http://www.ofgem.gov.uk/Networks/rpix20/ConsultDocs/Documents1/Decision%20doc.pdf

Associated documents

- Regulating energy networks for the future: RPI-X@20 decision document http://www.ofgem.gov.uk/Networks/rpix20/ConsultDocs/Documents1/Decision%20doc.pdf
- A Guide to Price Control Modification References to the Competition Commission - Licensee and Third Party Triggered References http://www.ofgem.gov.uk/Networks/rpix20/ConsultDocs/Documents1/final%20mod%20guidance.pdf
- Regulating energy networks for the future: RPI-X@20 Recommendations http://www.ofgem.gov.uk/Networks/rpix20/ConsultDocs/Documents1/RPI-X@Recommendations.pdf
- Regulating energy networks for the future: RPI-X@20 Recommendations - Impact Assessment http://www.ofgem.gov.uk/Networks/rpix20/ConsultDocs/Documents1/Impact.pdf
- Glossary http://www.ofgem.gov.uk/Networks/rpix20/ConsultDocs/Documents1/rec%20glossary.pdf
- Emerging Thinking consultation (January 2010) http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=42&refer=NETWORKS/RPIX20/CONSULTDOCS
- Principles, Process and Issues consultation (February 2009) http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=76&refer=NETWORKS/RPIX20/CONSULTDOCS
- Alistair Buchanan speech**:** Is RPI-X still fit for purpose after 20 years? October 2008 http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=24&refer=NETWORKS/RPIX20/FACTSHEETS
- Alistair Buchanan speech: Ofgem's 'RPI at 20' project, March 2008 http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=23&refer=NETWORKS/RPIX20/FACTSHEETS
- Working papers, consultant reports and submissions by network companies and other parties can be found on **the RPI-X@20 website:** http://www.ofgem.gov.uk/Networks/rpix20/Pages/RPIX20.aspx
- A full list of all the documents produced for the RPI-X@20 review can be found at: http://www.ofgem.gov.uk/Networks/rpix20/Stakeholder/Documents1/RPI-X@20%20full%20list%20of%20paper.pdf

Table of contents

1. Introduction to the RIIO model

Chapter summary: This chapter explains the objectives of the RIIO model and provides an overview of the key elements of the regulatory framework. We also set out the purpose of this handbook.

1.1. RPI-X@20 is Ofgem's comprehensive review of how we regulate Britain's gas and electricity networks. We have looked ahead, on behalf of consumers, to ensure that we have a regulatory framework capable of meeting current and future challenges.

1.2. In our 'RPI-X@20 decision document', published on 4 October 2010, we confirmed our decision to move to a new regulatory framework, known as the RIIO model. In this document we set out what the new regulatory framework will include and why we think this is the best way forward.

1.3. This handbook provides further details on how the RIIO model will work at future price control reviews. We set out principles and guidelines that we will consider when developing price controls. We also describe how the price control review process will work in practice.

1.4. Much of the substance of this document is unchanged from our July Recommendations supporting document. The structure purposely mirrors that of the July supporting document. However, it has been updated to reflect that the Gas and Electrciity Markets Authority (the Authority) has taken a final decision on the RIIO model and to clarify the model in some areas.

1.5. The RIIO model has been designed to be implemented in all four energy network sectors (gas transmission, electricity transmission, gas distribution and electricity distribution). Variation will arise across sectors in the application of the principles at price control reviews rather than in the principles themselves.

1.6. This handbook is aimed primarily at the network companies, investors and other stakeholders who require a more in depth understanding of 'how' the regulatory framework will be implemented. It is written to allow the reader to dip into the chapters of most interest to them. Those who are looking for a less technical overview of the RIIO model may wish to refer to our Decision document in the first instance.

Objective and core concepts

1.7. The RIIO model - setting **R**evenue using **I**ncentives to deliver **I**nnovation and **O**utputs is designed to encourage energy network companies to:

- play a full role in delivery of a sustainable energy sector; and
- deliver value for money network services for existing and future consumers.

1.8. The two parts of this objective are complementary. Indeed, provision of long-term value for money is a core part of delivery of a sustainable energy sector. The objective is also consistent with our prevailing duties under the Gas Act 1986 and Electricity Act 1989.

1.9. The RIIO model will be applied to the electricity transmission owners (TOs), the gas TO, the electricity distribution network operators (DNOs) and the gas distribution networks (GDNs)[3]. Under the RIIO model, those companies that rise to these challenges will see material upsides and opportunities. While those that do not will be penalised.

1.10. The design of the new regulatory framework focuses on a number of core concepts that are relevant across the different elements of the framework. We define these concepts here, to aid the reader in understanding the meaning and underlying rationale of the RIIO model.

- **sustainable energy sector:** an energy sector that meets the broad needs of existing and future consumers. This includes delivery of low carbon energy and other environmental objectives, delivery of secure safe supplies, and delivery of value for money including meeting the needs of vulnerable consumers;
- **sustainable network services:** providing network services that are safe, reliable and available; minimising the impact of network services on the environment; providing connections and network services consistent with the delivery of a low carbon energy sector (low carbon generation and active demand management); and delivering social obligations mandated by government;
- **play a full role**: the regulatory framework is designed to encourage network companies to take a leading role in the delivery of a sustainable energy sector. We want network companies to be proactive in seeking the best way of providing sustainable network services for the long term, be open minded about how best to deliver and innovate to achieve desired outcomes. They should engage effectively with their existing consumers and respond to the needs of future consumers (and, as part of this, future government targets). They should take responsibility for managing the uncertainty that their businesses face, and learn and adapt in response to new information;
- **long-term value for money:** value for money is about delivering sustainable network services at as low a long-term cost as possible. Focusing on value for money rather than cost efficiency should ensure network companies do not make cost savings at the expense of delivering outputs but that they do focus on minimising the long-term cost of delivering those outputs, rather than necessarily minimising costs over the next price control period;
- **long-term cost:** in our definition of long-term value for money we emphasise that we want energy network companies to minimise long-term cost. We are focusing on total costs of delivering outputs, wanting network companies to make choices between infrastructure (capital) solutions and non-capital solutions on the basis of which is least cost over the long term. The relevant time horizon will vary by the activity being considered; for some costs 'long term' may be within

[3] The framework will not apply to the regulation of independent distribution network operators (IDNOs) in electricity or independent gas transporters (IGTs). IDNOs and IGTs own and operate distribution networks. These networks are predominately extensions connected to the existing distribution network, e.g. to serve new housing developments.

the eight-year price control period whilst for others it will span a number of price control periods. We expect network companies to focus on the life-cycles of assets and to have asset management plans consistent with the long-term nature of network assets. When considering costs we expect network companies to consider the impact on the environment ('environmental costs'), for example taking account of the price of carbon, when comparing the 'cost' of different options for delivering outputs;

- **consumers**: network companies provide the physical link between suppliers of gas and electricity and domestic and business consumers. They provide network services to generators, shippers, interconnectors, independent network operators (IDNOs and IGTs), suppliers and energy service companies (ESCos). We think it appropriate to include users of network services as well as domestic and business end consumers, and their representatives, when considering 'consumers' in the regulatory framework. We recognise that the interests of the users of network services and end consumers will not always be aligned. Indeed, within each type of consumer category (e.g. generators, end consumers) there is unlikely to be complete alignment of interests. Furthermore, in each group there may be more of a focus on what needs to be delivered today rather than a consideration of future requirements. It is therefore important that the Authority, with a principal objective to protect the interests of existing and future consumers, remains responsible for making decisions that balance the different viewpoints; and
- **stakeholders**: in our discussions on enhanced engagement we widen the group of parties that we and network companies may need to engage with beyond consumers (as described above). Government could have a key role in providing updates on the direction of government policy while local authorities could provide insight on the needs of consumers of network services. In addition, stakeholders could include parties that are affected by, or represent those affected by, decisions made by network companies and Ofgem that are not (in that role) direct consumers of network services. A key example is organisations representing environmental interests that are interested in ensuring that the impact of network services on the environment is consistent with broader environmental goals, such as reduction in greenhouse gases and protection of landscape.

1.11. When implementing the RIIO model at future price control reviews the objectives and concepts identified above should remain core to discussions. It is therefore important that there is common understanding of what they mean in the context of the regulation of energy network companies.

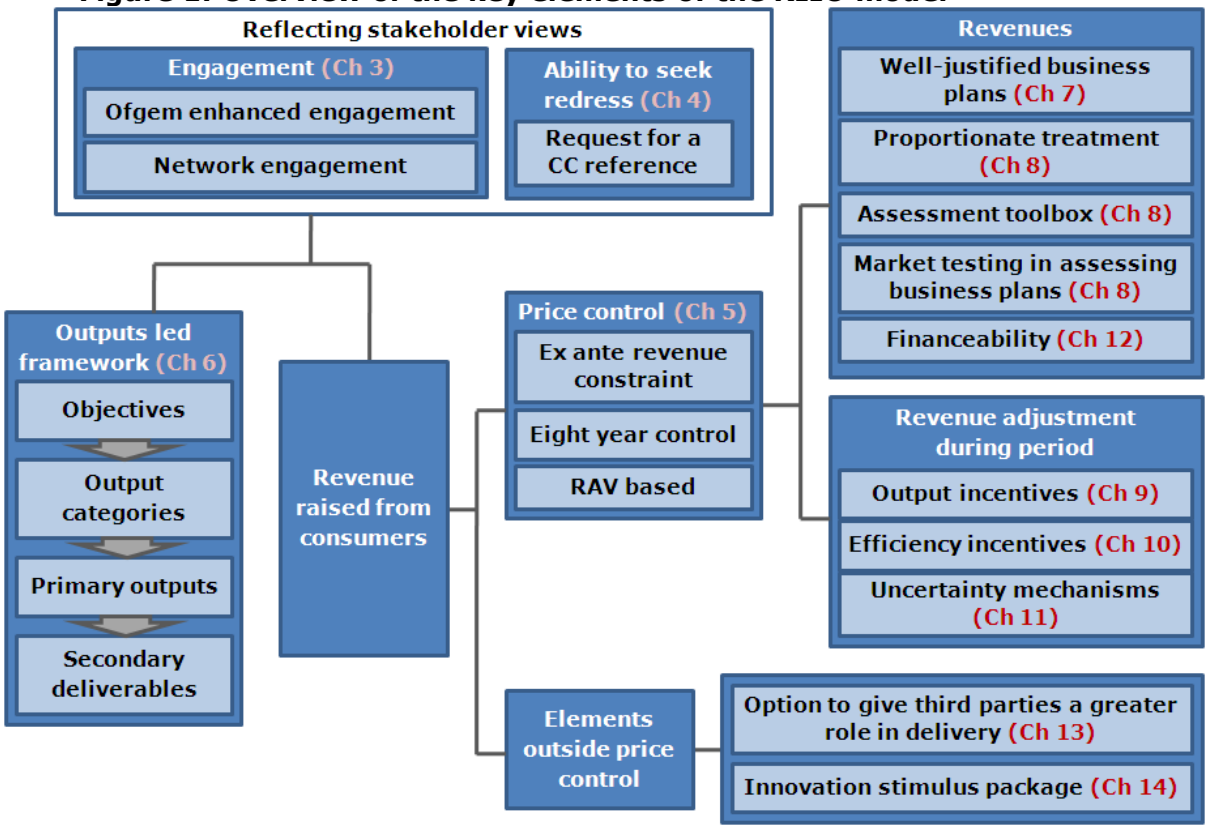
Overview of the RIIO model

1.12. The regulatory framework incorporates three elements which are designed to meet the objectives of RIIO regulation:

- an upfront (ex ante) price control that sets the outputs that network companies are required to deliver and the revenue they are able to earn for delivering these outputs efficiently;
- the option to give third parties a greater role in the delivery of material and separable projects; and

- a time-limited innovation stimulus for electricity networks and one for gas networks - open to network companies and non-network parties.

Figure 1: Overview of the key elements of the RIIO model



1.13. Figure 1 provides an overview of the key elements of the RIIO model and shows where each aspect is discussed in this handbook. We describe the price review process associated with implementing the framework in Chapter 2.

1.14. We set out in Box 1 what will be included in final proposals and hence licence conditions following the conclusions of a price control review. This provides an alternative way of thinking about the framework.

Box 1: Key elements of the final proposals for a price control

Our price control decision for a network company will be set out in final proposals and formally implemented in the relevant licence condition(s). The final proposals will set out:

- the primary outputs that the network company is expected to deliver, including details of the level at which they are expected to operate;
- the £m level of base revenue that the network company is allowed to earn from consumers during the eight-year price control period;
- the proportion of total expenditure to be recovered during the year in which it was spent and the proportion to be capitalised and recovered through the RAV, the assumed asset lives for depreciation, and the allowed return;
- the amount of money to be raised from consumers, and included in the revenue allowance, for the innovation stimulus package;
- the secondary deliverables that the network company is expected to deliver, linked to the revenue allowed to enable the network company to undertake activity in the current price control period to deliver primary outputs and value for money in future periods;
- the upfront efficiency incentive rate, including details of how this will be implemented during the price control period;
- the incentive arrangements for each of the primary outputs;
- action to be taken if secondary deliverables are not delivered;
- arrangements for adjusting revenue for Ofgem-required market testing that is not completed in time for final proposals;
- details of the uncertainty mechanisms included in the price control;
- details of scope and timing of any mid-period review of output requirements; and
- specification of any projects that we are intending to take forward by giving a third party responsibility for delivery and asset ownership.

Details on how we will consider and respond to a request from another party for us to make a price control licence modification reference to the Competition Commission is provided in 'Guidance' on our website. Details on how the innovation stimulus package will be governed and operated will be provided in separate published documents. Arrangements for a competitive process to identify a third party to delivery responsibility for network projects will also be published separately.

Structure of this handbook

1.15. This handbook is divided into three parts as follows. Links are provided to enable the reader to dip into those areas that are of most interest.

1.16. **Part 1** discusses the price control review process and explains the role of stakeholders in the process:

- Chapter 2 describes the price control review process;
- Chapter 3 sets out expectations of how we and network companies will engage with stakeholders; and
- Chapter 4 sets out how we will consider a request from another party for us to make a price control modification reference to the Competition Commission.

1.17. **Part 2** sets out the detail of how the ex ante price control will be set:

- Chapter 5 provides an overview of how we will set the eight-year price control;
- Chapter 6 explains how primary outputs and secondary deliverables will be set and what principles we will consider when setting them;
- Chapter 7 sets out what we expect network companies to include in well-justified business plans;
- Chapter 8 provides details on the proportionate approach we will adopt to assess business plans and expected efficient expenditure requirements;
- Chapter 9 explains how we will consider the design and implementation of incentives for primary output delivery;
- Chapter 10 sets out the issues that we will consider when setting efficiency incentives;
- Chapter 11 explains the principles to be considered when deciding whether and how to implement uncertainty mechanisms in the price control; and
- Chapter 12 sets out our principles for embedding financeability into the price control.

1.18. **Part 3** describes the two elements of the RIIO model that are outside of, but interlinked with, the price control framework:

- Chapter 13 explains when and how we will consider using the option of giving third parties a greater role in delivery; and
- Chapter 14 provides details on the innovation stimulus package.

Part 1 – The price review process

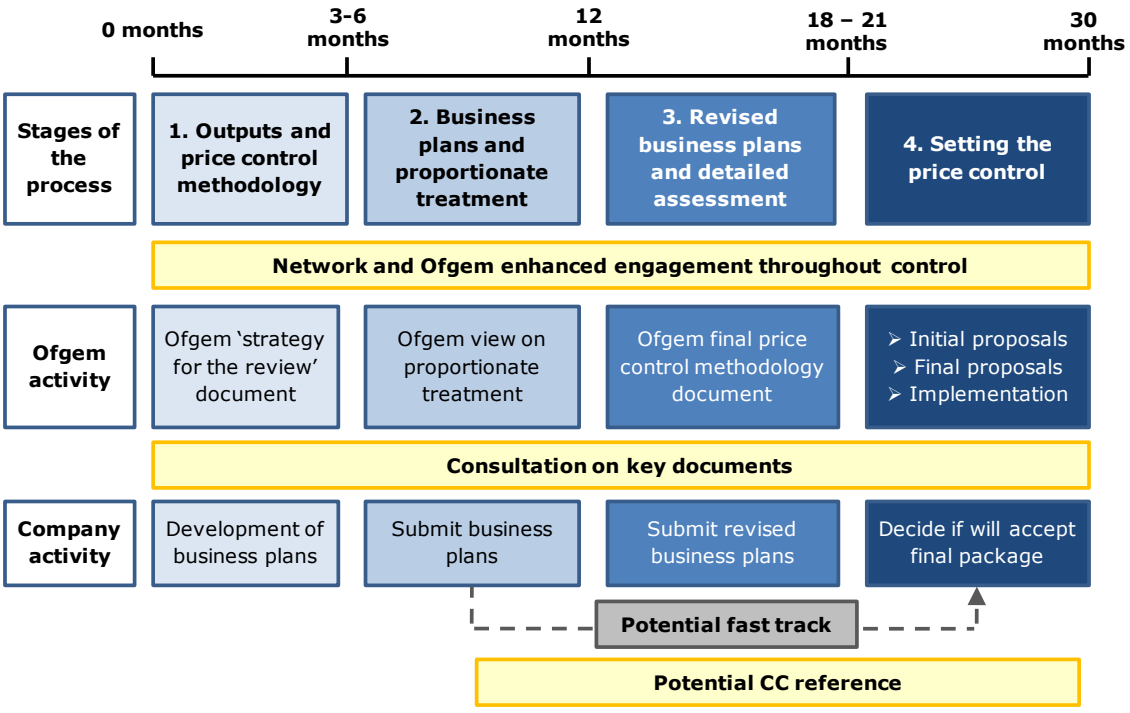
2. Stages of the price control review process

Chapter summary
This chapter provides an overview of each stage of the price control review process under the RIIO model, highlighting the respective roles that each party will take and the decisions that will need to be taken at each stage.

2.1. The price control review under the RIIO model will be conducted over a similar timeframe to those under RPI-X regulation in recent years (2 to 2.5 years). However, changes in how the price control will be set and the role of stakeholders in the price review process mean that the timing of key stages of the review and Ofgem publications will be different from the past.

2.2. Figure 2 provides an overview of the process that will be followed in setting price controls. The timings are indicative only and price control review teams will publish their own timetables at the start of each review.

Figure 2: Overview of the process and indicative timings of a price review



2.3. As Figure 2 illustrates, the price control process will have four main stages:

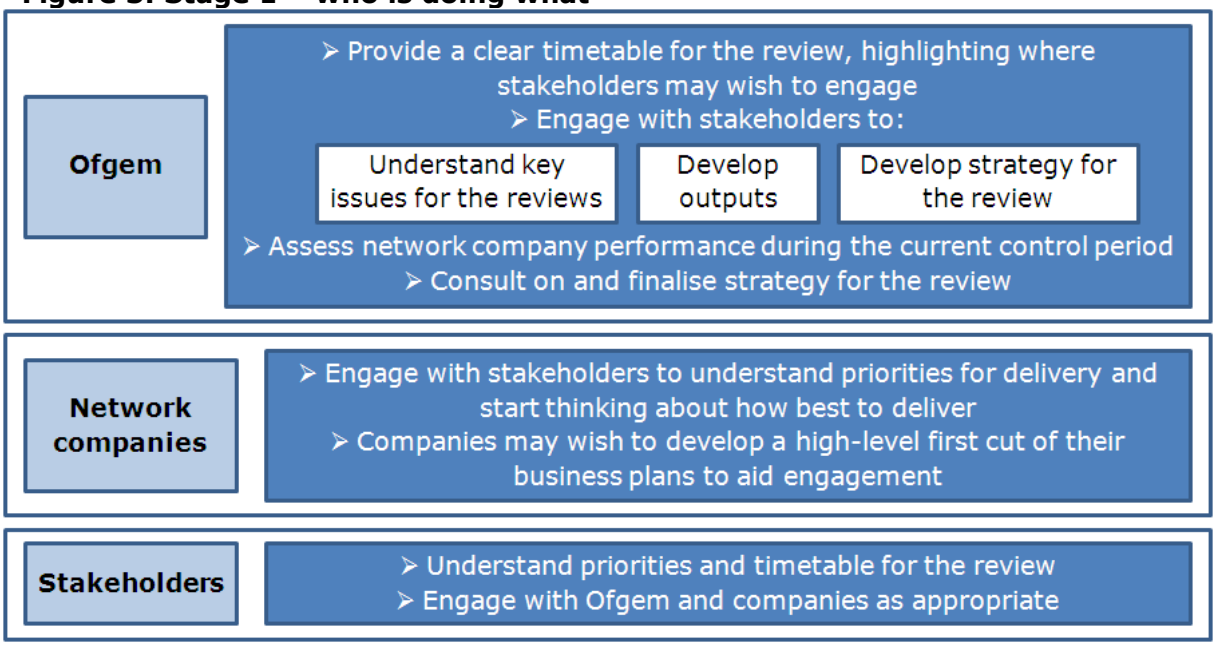
- **Stage 1** - Outputs and price control methodology;
- **Stage 2** - Business plans and proportionate treatment;
- **Stage 3** - Revised business plans and detailed assessment; and
- **Stage 4** - Setting the price control.

2.4. The key steps in each stage of the review are set out in the sections below.

Stage 1: Determining outputs and price control methodology

2.5. The aim of this stage is to set the timetable for the review, understand key issues and establish the outputs to be delivered and parameters for the price control - engaging with stakeholders throughout. It will culminate in the publication of a 'Strategy for the review' consultation document, which will provide network companies with information to develop their well-justified business plans, including the outputs that they need to deliver. The process is outlined in Figure 3 below.

Figure 3: Stage 1 – who is doing what



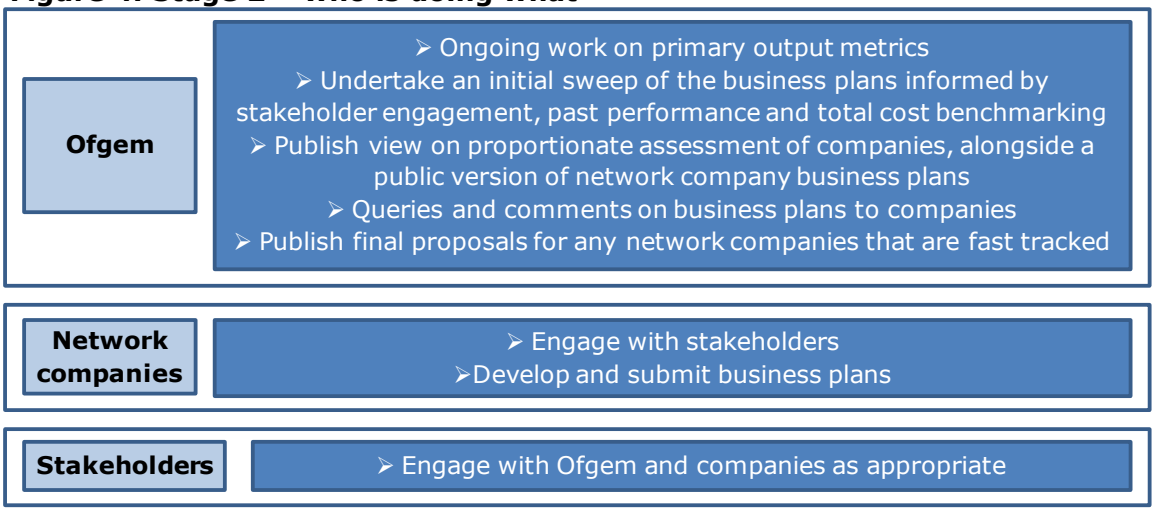
2.6. The 'Strategy for the review' consultation document should:

- set out priorities for the sector over the longer term, identifying the role network companies may play in delivering these, informed by our enhanced engagement;
- provide our initial assessment of network company performance during the price control period. This may be informed by historic evidence from regulatory reporting packs (RRPs) and the return on regulatory equity (RORE) measure. It may also be informed by network company performance in delivering primary outputs and secondary deliverables;
- set out our view, informed by enhanced engagement, on key elements of the price control, including but not limited to: primary outputs and desired levels of performance for the sector; efficiency and output incentives; inflation indexation, business plan requirements; the estimated cost of capital range for the sector; the length of control and the use of uncertainty mechanisms; and
- set out the criteria for a company to be fast tracked.

Stage 2: Business plans and proportionate treatment

2.7. Companies will have time to develop their well-justified business plan, based on the high-level approach set out in the 'Strategy for the review' document, the request for data that we issue to the network companies alongside the 'Strategy for the review' document and their engagement with stakeholders. On receipt of the business plans, we will assess them with a view to which companies will face more or less intensive scrutiny (see Chapter 8). Less intensive scrutiny may include fast tracking a company (i.e. reaching an early decision on the price control). If we decide to fast track a company we will consult on our approach before reaching a decision. If we decide to fast track, we will finalise all elements of a company's price control settlement at this stage including drafting licence changes. These companies will therefore move straight to the end of Stage 4. All other companies will move into Stage 3. The process is outlined in Figure 4 below.

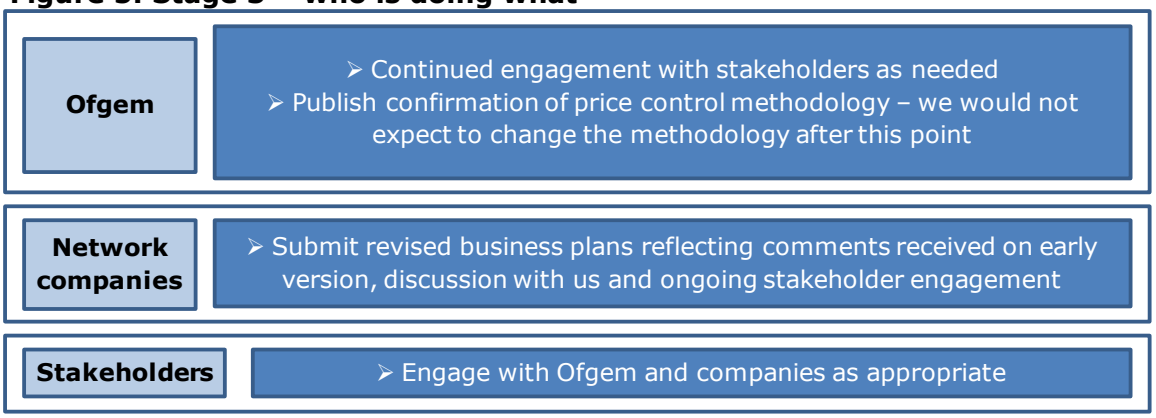
Figure 4: Stage 2 – who is doing what



Stage 3: Revised business plans and detailed assessment

2.8. Network companies that are not fast tracked at stage 2 will submit revised business plans at stage 3 which should address the comments from us on the Stage 2 business plans. We will further scrutinise these business plans. The scrutiny that network companies face will vary according to the categories in which they are placed in line with our approach to proportionate assessment, focusing on areas of particular concern. The objective of this stage is to finalise business plans for the network companies and confirm the methodology to be used to set the price control. The process is outlined in Figure 5 below.

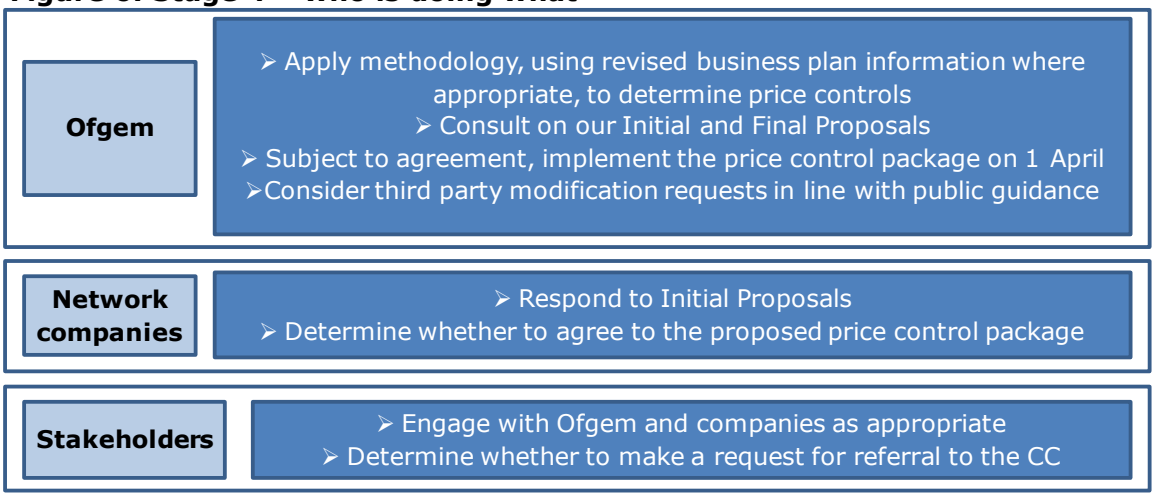
Figure 5: Stage 3 – who is doing what



Stage 4: Setting the price control

2.9. During this stage we will develop initial and final proposals for the network companies and associated licence drafting, in accordance with the final price control methodology, to provide transparency on how the proposals will be implemented. We will not request or receive any new data from network companies, save for identified errors and we would not expect to change our methodology. We will implement the final proposals through licence modifications subject to agreement from the network companies. Should a third party make a request to the Authority to modify the final proposals and/or make a reference to the Competition Commission the request will be considered in accordance with our published guidance (see Chapter 4). The process is outlined in Figure 6 below.

Figure 6: Stage 4 – who is doing what



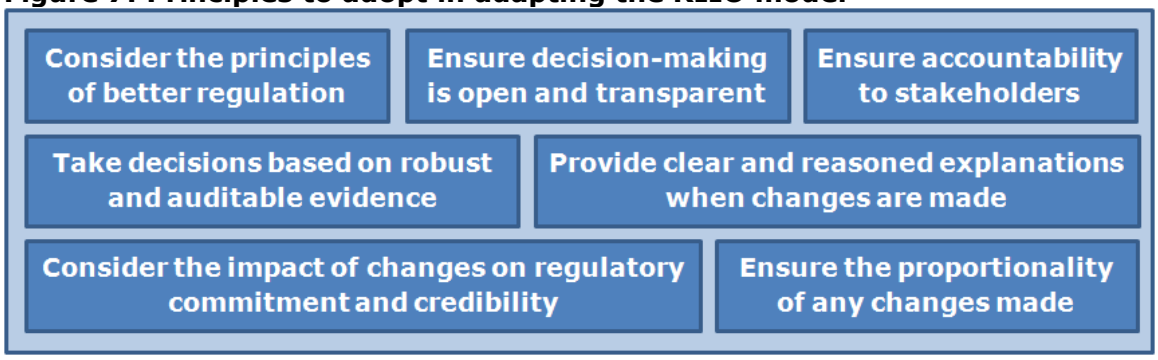
Adapting the framework over time

2.10. We expect the objectives of the RIIO model to be long lived but they must be adaptable to changing circumstances. We will learn from issues identified in previous

control periods, adapt to changing government policy and learn lessons from other sectors.

2.11. Although there are significant benefits from having an adaptable regulatory regime in place, there are potential downsides in terms of the impact on regulatory commitment and certainty. We will therefore be transparent about how adaptation could take place. We will seek to ensure consistency with the principles of better regulation when making any modifications to the RIIO model[4]. Figure 7 below provides an illustration of the issues that will be considered when assessing the need for changes to the regulatory framework.

Figure 7: Principles to adopt in adapting the RIIO model



2.12. To facilitate a transparent approach to adaptation of the framework we will put clear practices in place. These will include:

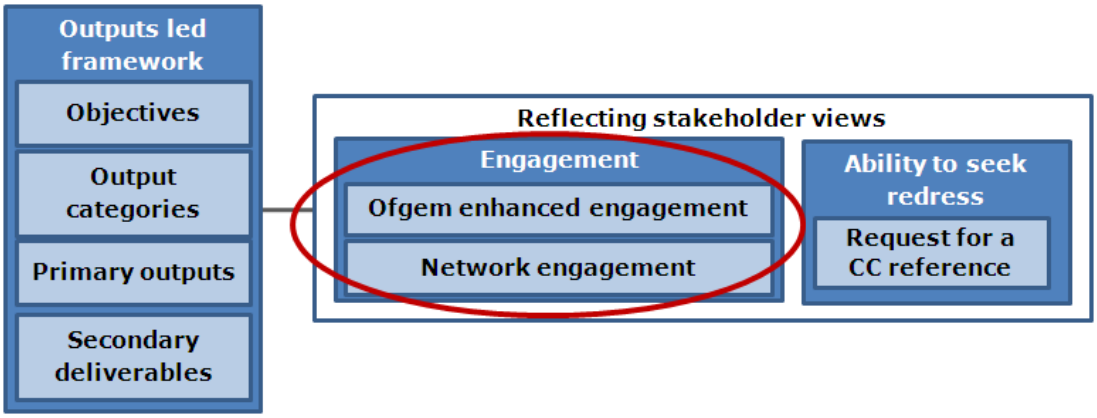
- publication of reports following price control reviews summarising lessons learned, including the effectiveness and transparency of the process and recommendations for future reviews;
- ongoing monitoring and publication of company performance in delivering against primary outputs and of the rewards they have earned from doing so, using the Regulatory Reporting Packs as the basis for collection of information; and
- adopting best practice knowledge retention procedures, including keeping and sharing records of data, discussions, and decisions from one review to the next.

2.13. We will aim to collect new information and learn from lessons in a systematic and open way.

[4] The principles of better regulation are: transparent, accountable, proportionate, consistent, and targeted. Adhering to these principles is consistent with our duties under Section 3A (5A) of the Electricity Act 1989 and Section 4AA (5A) of the Gas Act 1986.

3. Stakeholder engagement during the price control review

Chapter summary
This chapter provides details of the role of stakeholder engagement by network companies and Ofgem in the price control review.



3.1. In this chapter we provide an overview of the range of techniques we will use to obtain up-to-date and relevant stakeholder views. We also set out our expectations of the engagement that network companies should be taking forward with their stakeholders to inform their business plans. The engagement undertaken by network companies at the time of the price control review will be part of the stakeholder engagement that we expect network companies to undertake on an ongoing basis (i.e. not just at the time of the price control review). We set out in Box 2 our principles for effective enhanced engagement.

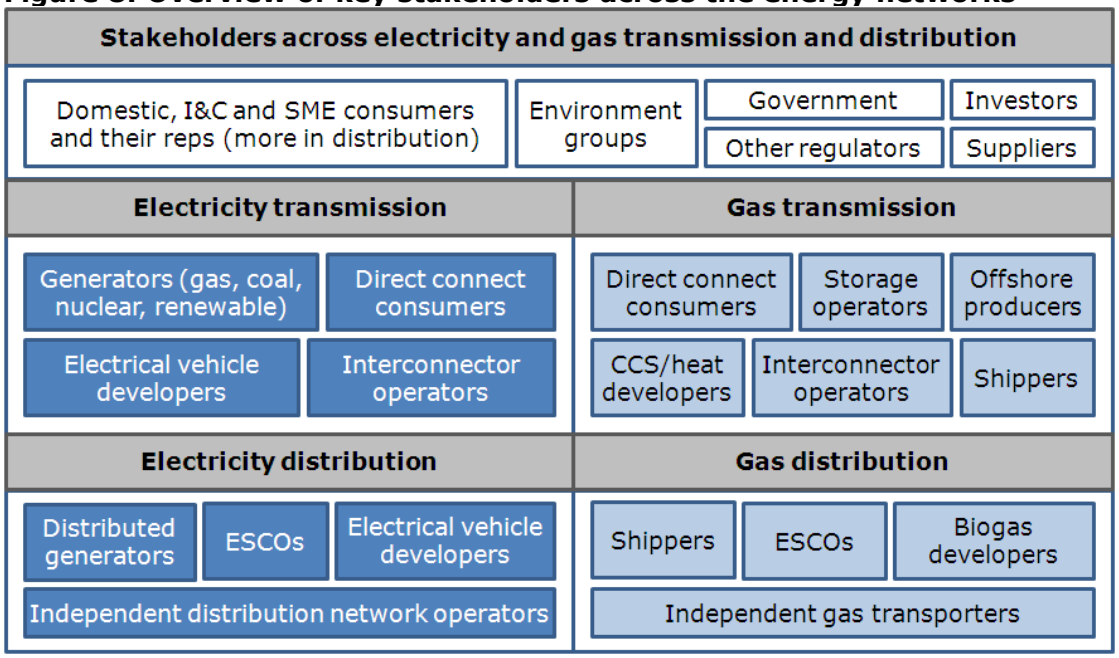
Box 2: Our principles for effective enhanced engagement

- **Inclusiveness:** we will seek to ensure that the views of all interested parties are sought during the process, using a wide range of methods;
- **Transparency:** we will provide transparency on the process we are adopting to raise awareness of the opportunities to engage;
- **Accessibility:** we will make available accessible and targeted information to facilitate discussions at meetings/workshops and during primary research;
- **Control:** stakeholders will be able to indicate to us the specific issues that they are particularly keen to discuss;
- **Responsiveness:** we will seek to adopt a flexible process to our engagement, responding to the information revealed as the review progresses;
- **Accountability:** we will be transparent about the way that we will use the information collated over the course of the price control process to highlight to stakeholders the impact that their engagement could have;
- **Taking views seriously:** we will seek to govern the process effectively to ensure that all the views expressed are appropriately considered;
- **Demonstrating impact:** we will demonstrate the impact of engagement on the outcome of the price control throughout the price control review; and
- **evaluation:** we will evaluate the success of our approach to engagement to enable us to adapt future approaches.

Engagement with whom

3.2. Figure 8 illustrates the wide-ranging parties with whom we will seek to engage. The range of stakeholders and consumers will require the use of a range of techniques to obtain their views, recognising the differences in levels of interest in particular issues, numbers of individuals in each stakeholder group, available resources and levels of desired engagement.

Figure 8: Overview of key stakeholders across the energy networks



3.3. The final decision on the price control will remain with the Authority. The interests of consumers and other stakeholders may differ but we will remain responsible for balancing these interests in line with our duties, having particular regard to the needs of existing and future consumers. However, several elements of the RIIO model should help us to balance our decisions between the needs of existing and future consumers. These include:

- the focus on the longer term and on sustainable development;
- the application of financeability principles, which are aimed at balancing costs fairly between existing and future consumers; and
- the option to give third parties a greater role in delivery, underpinned by an assessment of the long-term benefits and costs.

3.4. These elements of the framework should complement our principal objective and help to ensure that we retain sufficient focus on the needs of future consumers.

Role of Government

3.5. Government could play a key role in enhanced engagement, providing clarity on relevant policy. For example, the Department of Energy and Climate Change (DECC) could provide information on developments in energy policy. Other government bodies, such as the Department for Environment, Food and Rural Affairs (Defra) and the Department of Communities and Local Government (CLG), could also provide clarity on key policies relevant to the energy networks. There may also be benefits, particularly in the gas sector, from participation of the Health and Safety Executive (HSE) in enhanced engagement.

3.6. We will consider how best to involve government and public body representatives in stakeholder meetings or workgroups to provide clarity on policy as required and, as appropriate. We will continue to make use of bilateral discussion sessions with government. We will also expect network companies to engage with government where they are unclear about the implications of relevant energy policy.

3.7. The EU Third Legislative Energy Package ('the third package') requires the national regulatory authority to be legally distinct and functionally independent from any other public or private entity and not to 'seek or take direct instructions from any other private or public entity when carrying out the regulatory tasks'. We will therefore need to ensure that any role of government in enhanced engagement is consistent with the EU third package.

Network company engagement with their consumers

3.8. Network companies should proactively engage with consumers of their network services and wider stakeholders, as highlighted in Figure 8 above. We expect this engagement to take place on an ongoing basis, not just as part of the price control review. While we do not want to be prescriptive about how network companies engage with their stakeholders, Table 1 provides an illustration of the type of issues on which network companies should engage in the context of the price control review and what engagement might involve. It also explains how the framework is designed to provide network companies with a strong incentive to engage effectively on an ongoing basis.

Table 1: Overview of the key elements of network company engagement

Issue	Engagement during price control review
What issues might network companies need to engage on?	▪ the early development of their business plans at Stage 1; ▪ business plans at Stage 2; ▪ revised business plans at Stage 3; ▪ engagement should cover all aspects of the business plan; and ▪ potential areas of engagement include, but are not limited to: ○ **electricity transmission:** the volume of generation likely to connect to a network now and in the future; ○ **electricity distribution:** the level of reliability consumers expect and their willingness to pay; ○ **gas transmission:** expected changes in required capacity now and in the future; and ○ **gas distribution:** potential rate of biogas deployment.
How might network companies engage with stakeholders?	▪ we will not prescribe how companies should engage; ▪ network companies should take decisions about how best to understand and respond to the needs of their consumers; and ▪ network companies may wish to explore a range of techniques, providing accessible information to facilitate this, including public versions of their proposed business plans.
How will we assess network company engagement?	▪ credibility of engagement: we will consider the range of stakeholders whose views had been sought, the information provided to stakeholders and the form engagement took; and ▪ impact of engagement: network companies should clearly set out how they had used the views expressed through engagement. Where they had not made use of stakeholder views, they will need to provide robust reasons for this.
What incentives are there for network companies to engage effectively?	▪ if they engage effectively they may face less scrutiny under proportionate treatment; ▪ the primary output related to customer satisfaction relates to the experiences of a range of users of network services providing incentives to deliver a service and level/quality of engagement aligned with their expectations; ▪ we could enhance reputational incentives, publishing best performance examples of network company engagement; and ▪ if there was evidence of insufficient engagement, we could seek to place a licence obligation on the companies requiring that they demonstrate thorough and ongoing engagement – enforcement action could then be taken for breaching the condition.

3.9. The onus is on the network companies to determine their strategy for engagement, and to demonstrate how this engagement influences their thinking on what needs to be delivered and how it should be delivered. It will be important that there is scope for this engagement to impact on the business plans developed by the network companies. Where effective engagement takes place this will provide opportunities for (a) stakeholders to drive changes to the regulatory regime, (b) network companies to explore and get stakeholder buy-in to proposed approaches

for the delivery of primary outputs, and (c) network companies and stakeholders to identify delivery solutions that involve them working together. Where any of these effects is evident this will provide persuasive evidence to the Authority of the need for change.

3.10. In some cases, it may prove difficult for network companies to accommodate the needs of stakeholders given that many network activities are mandated through licence conditions. Where network companies encounter any such obstacles to the delivery of network services in line with stakeholder expectations, they should approach us setting out the apparent inconsistency between their licence conditions and stakeholder needs, emphasising where stakeholder views differ and proposing a way forward that is consistent with the relevant statutory obligations. An example of where this could happen is set out in Box 3 below.

Box 3: Example of where stakeholder views may not be consistent with licence requirements

The increased emphasis on facilitating the transition to a sustainable energy sector is evident through a number of government policies including the commitment to the decarbonisation of electricity generation by 2030. There is significant uncertainty about the best way to meet this target but we anticipate that where network companies engage with their stakeholders, this should provide more information about the potential routes available and the associated costs. In this regard, network engagement with their stakeholders could expose information about the availability of generation and the potential to meet the targets. In the event that the GB market was significantly lagging behind the levels of decarbonisation needed to meet the 2030 aspiration, some smaller generating facilities, e.g. domestic microgen, may be willing to delay connection to the system to allow larger generators to connect and this could increase the ability to decarbonise the sector.

However, standard condition 4a of the electricity distribution licence requires that in carrying out work for the purpose of connection to the licensee's distribution system, network companies should not discriminate between any persons or classes of persons. This could therefore prohibit the network company from delaying the connection of certain types of generator, even where they had obtained agreement. In such a situation, we expect the network company to present the case to us to allow us to determine the most appropriate way forward. We will need to have regard to a number of issues, including compatibility with the third package.

Enhanced engagement by Ofgem

3.11. Our enhanced engagement processes are intended to complement the engagement that network companies take forward with their stakeholders. Table 2 below provides an overview of the type of issues on which we expect to engage with stakeholders, our approach to engagement and examples of the methods we will consider using to obtain stakeholder views. This includes the new price control review forum which is intended to get consumers, network companies and other interested stakeholders 'in the room' during a price control review to provide opportunities to come together and discuss 'big picture' issues. Government representatives will also be invited to attend to provide guidance on the direction of

energy and other related policies (for further details on the role of government in engagement, see paragraphs 3.5 to 3.7).

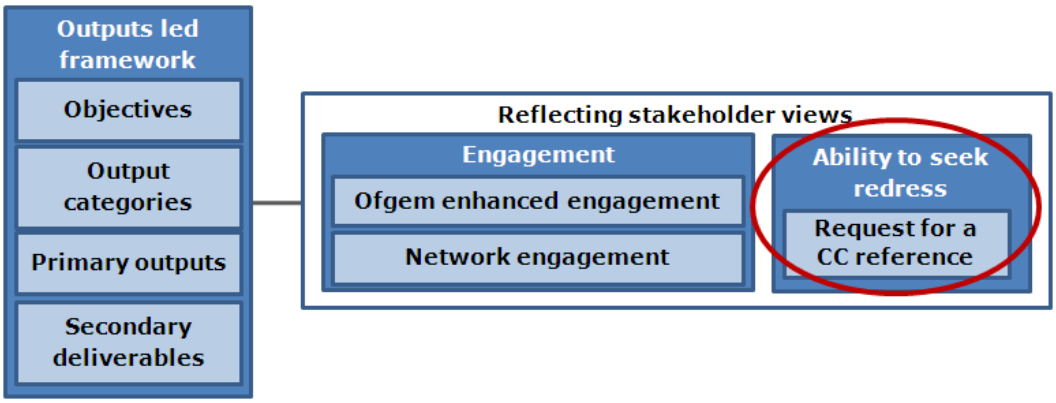
Table 2: Overview of the key elements of Ofgem's enhanced engagement

Issue	Approach under the RIIO model
Issues we expect to engage stakeholders on	▪ key sector-wide issues; ▪ majority of engagement will be on outputs and the form of the price control package.
Approach to enhanced engagement	▪ developed on a case-by-case basis depending on key issues for the review and the key stakeholders to engage with; ▪ a multi-layered approach incorporating a range of techniques; ▪ make use of, and build on, tools developed during previous price controls, e.g. the consumer challenge group; ▪ a flexible approach, evolving mechanisms over time and learning from our experience through regular reviews; ▪ ensure the provision of targeted information to facilitate input; ▪ be transparent about our approach at the start of the review, in terms of timings and forms of engagement; and ▪ a key input to our consultation documents.
What methods will we consider using to obtain stakeholder views?	▪ market research – qualitative and quantitative; ▪ the consumer first panel; ▪ the consumer challenge group; ▪ Ofgem-led workshops and working groups; ▪ Ofgem-led industry fora, e.g. the large users group (LUG); ▪ Ofgem-led advisory groups, e.g. the environmental advisory group; ▪ consultation documents and factsheets; ▪ meetings – the price control review forum and bilaterals; and ▪ investor relations.
What is the price control review forum?	▪ a series of Ofgem-led meetings open to a cross-section of industry stakeholders and network companies to allow views to be shared/issues debated; ▪ held prior to document publication to inform developing policy; ▪ discussion will allow stakeholders to tangibly influence policy; ▪ we will provide targeted information to facilitate effective contributions from a range of stakeholders; and ▪ complemented by other elements of enhanced engagement approach, for example targeted working groups on key issues.

3.12. The purpose of the price control review forum is to inform our policy making. Therefore, attendees do not have to reach agreement on pre-specified areas. To facilitate effective outcomes from the sessions, we expect consumers and stakeholders to make use of existing meeting opportunities (e.g. the LUG and association meetings such as the Energy Retail Association) to discuss the issues at hand prior to the meeting of the forum.

4. Third party modification requests

Chapter summary
This chapter explains how, through published guidance, we will respond to a request from a third party for the Authority to make a price control modification reference to the Competition Commission (CC).



4.1. Under existing legislation, if a third party writes to us setting out a material and legitimate concern that our price control determination may act against the public interest, the Authority would need to respond. In response, we could consider a number of options including: maintaining the original price control and rejecting the concerns, changing the final price control proposals (including undertaking the additional consultation required to facilitate this) and making a price control modification reference to the CC.

4.2. Given the increased focus on stakeholder engagement by us and network companies under the RIIO model, we have published guidance on how the Authority will respond to third party and network company concerns that our price control determinations may operate against the public interest. The guidance document is intended to complement the existing ability of any party to commence Judicial Review proceedings against a decision taken by Ofgem.

4.3. The prospect of the Authority making a CC reference following a request by any stakeholder will be flagged as a possibility during the price control review process.

4.4. We will keep the guidance under review in light of experience and changes in government and EU policy.

Guidance on third party modification requests

4.5. Under existing legislation, the power to make a modification reference to the CC sits with the Authority. The guidance document sets out the process and criteria that the Authority would adopt to determine whether to make a price control modification reference to the CC should a third party raise 'legitimate and material' concerns with

our final price control proposals. Although each case will be considered on its merits, we would be unlikely to refer an issue raised if a third party had not complied with the criteria laid out in the guidance.

4.6. If we decided to make a reference, the CC would investigate the reference in the same way that it currently investigates references made by the Authority where a licensed network company has rejected final proposals. The CC would consider whether our proposals operate or may be expected to operate against the public interest - with a likely focus on the merits of the Authority's decision.

Features of the design

Gatekeeper

4.7. Under existing powers, the Authority is responsible for determining whether a modification request from a third party is compliant with the criteria laid out in the guidance document - an overview of the key criteria is outlined in the subsections below. It is then at the Authority's discretion whether to make a modification reference to the CC or to pursue an alternative course of action (which may include making no change).

4.8. The Authority's decision on how to respond to a modification request will be based on a clear and transparent process against the following matters:

- the criteria for making a price control modification request set out in the guidance document; and
- the Authority's principal objective and wider statutory and public law duties, including European legal obligations.

4.9. In the Authority's role as 'gatekeeper', it is vital that it provides clear and well formed justifications for its decision in responding to modification requests. If this is not demonstrated, then the process followed and the reasons provided for the decision will still be amenable to Judicial Review.

4.10. If we decide that it is appropriate to make a modification reference to the CC, we will likely make the reference on the grounds that, while we considered our final proposals to be consistent with our primary objective and other duties, a third party had raised concerns that we consider are sufficiently 'legitimate and material' to warrant further investigation and consideration by the CC.

Who can make a modification request?

4.11. There are no restrictions on who can make a modification request to us. However, save in exceptional circumstances, a third party will need to meet the criteria set out in the guidance document for us to make a reference to the CC. The

direct costs of making a modification request, along with reputational costs if unsuccessful, would be borne by the third party making the request.

Grounds for a modification request

4.12. The price control modification request will, save in exceptional circumstances, need to demonstrate 'legitimate and material' concerns, supported by detailed reasons and evidence, why our price control final proposals:

- operate against the public interest; or
- may be expected to operate against the public interest.

4.13. To do this, third parties will be expected to demonstrate how their request for a price control modification reference is consistent with the Authority's statutory objectives. It should be consistent with the Authority's principal objective, explaining why such a reference would be in the interests of existing and future consumers. It should also take account of the Authority's wider statutory duties, including the need to secure that licence holders are able to finance their activities.

4.14. As part of the grounds for making a modification request, third parties will also be expected to provide evidence that they had engaged effectively throughout the price control review process. This includes showing that they had brought any evidence relied upon in the price control modification request to our attention during the price control review process. Stakeholders who choose not to participate in the price control review process may limit the likelihood that we refer their modification request to the CC. While under our existing powers we are unable to rule out consideration of 'exceptional' modification requests, i.e. from a party not engaged in the process and/or raising a new issue, it is expected that this will be rare.

Nature of request

4.15. Third parties ought only to make a modification request to us on the merits of our final price control proposals – broadly consistent with what licensed network companies are able to do in rejecting a price control package. Were a third party to raise a modification request around a process issue, this would likely be seen as out of scope and the request likely refused by the Authority on the grounds that other routes, such as Judicial Review, are available.

Scope of request/Scope of referral

4.16. The issue(s) raised in the modification request to us should relate to the price control final proposals. The Authority may refuse a price control modification request where the issue(s) raised are deemed out of scope because they could be appropriately addressed elsewhere. Examples of areas that would be deemed out of scope include:

- process issues seen as amenable to Judicial Review;

- matters relating to industry codes, which can be altered by reference to the governance rules in the relevant code. For example, issues relating to the modification of charging methodologies; and
- planning matters, which should be left to the planning process and the relevant planning agencies.

4.17. Third parties may decide whether to make a modification request with respect to the price control package as a whole or with respect to a particular element(s) of it. However, the Authority will have discretion in setting the terms of the reference to the CC and will decide whether it refers:

- the whole price control package specified in final proposals; or
- a single issue or specific parts of the package specified in final proposals.

4.18. Ordinarily, we would expect to refer the package as a whole but could decide, if appropriate, to make a reference on a single issue that was considered separable. If we were to make a single issue modification reference, we would expect the CC to adhere to the scope of the referral and not to widen their investigation beyond this issue. Single issue references will only be considered where the element of the price control in the request is sufficiently separable from the rest of the package.

Outcome of CC reference

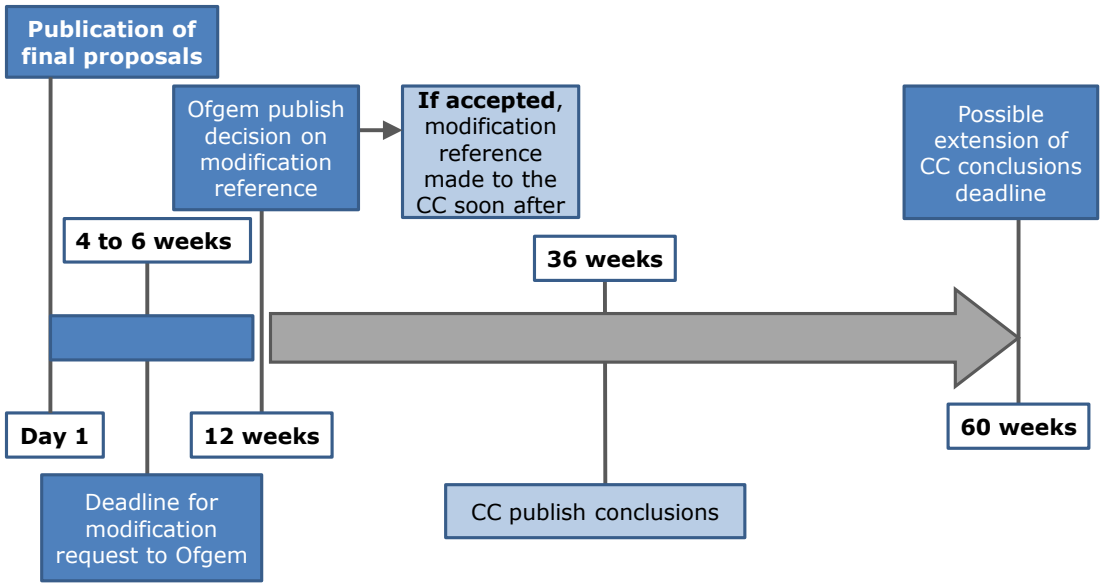
4.19. Consistent with existing powers in the Gas Act and Electricity Act, the CC would investigate the matter referred and report to the Authority whether there was a public interest concern. Where the CC concluded that any adverse effects identified could be remedied or prevented by licence modifications, it would specify these in the report.

Timings

4.20. Figure 9 sets out an illustrative timeline for consideration of a modification request raised at final proposals and the reference to the CC – if one is made. A third party who wishes to make a request for a price control modification reference will be expected, save in exceptional circumstances, to do so following the publication of final proposals. The timescales that would be attached to a price control modification request, and any modification reference itself, are subject to existing legislative requirements and constraints. As such, save for statutory periods, the timetabling may be extended or reduced at the Authority's discretion[5]. However, where possible, the time periods and deadlines will be specified in final proposals in order to minimise uncertainty. The timescales for a third party modification request will be consistent with those applied to licensed network companies at final proposals.

[5] Further information on timetabling can be found in the Guidance document.

Figure 9: Indicative timeline for price control reference decisions



Awarding of costs

4.21. Parties will incur their own costs under the third party price control modification request model. We do not expect these costs to be trivial given the criteria that need to be met for a request to be referred to the CC. For example, a party will need to demonstrate effective engagement throughout the price control review process, which will involve significant resource costs. The reputational costs of making an unwarranted and/or unsuccessful modification request may also be seen as significant.

4.22. Where the Authority makes a modification reference to the CC, licensees and third parties will bear their own costs associated with the reference. In terms of the costs incurred by the CC, they will only be recovered via licensee charges. How the costs are apportioned between licensees will be determined by the CC at its discretion under the power contained in section 177(3) of the Energy Act 2004 once their work on the modification reference is complete.

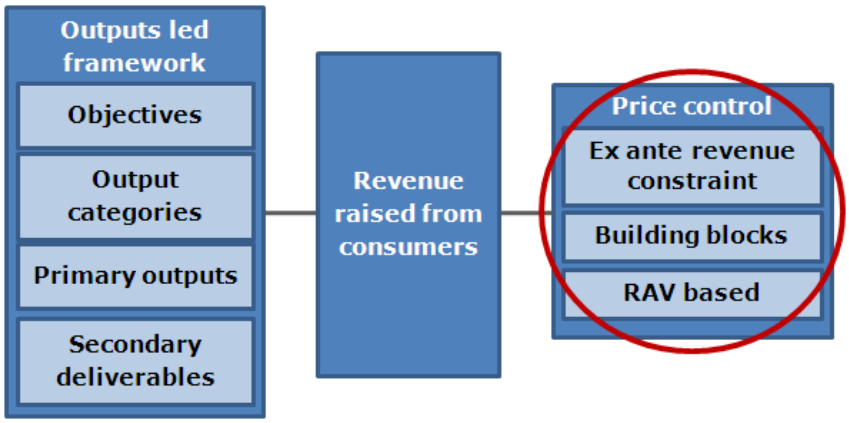
Implementation of licence change

4.23. Each case will need to be considered on its own merits and in light of the particular circumstances that pertain at the relevant time that the Authority makes a price control modification reference. Where licensees agree final proposals, the Authority may consider it appropriate to apply the new price control terms and will normally take this course of action, making adjustments retrospectively after the CC recommendations. However, in the event that a reference is made which relates to a 'single issue', the Authority may consider implementing the final proposals through licence modifications save, where possible, the single issue referred. This flexibility available to the Authority may help to minimise disruption and potential uncertainty caused by a modification referral to the CC.

Part 2 – Setting the price control

5. Setting the eight-year ex ante price control

Chapter summary: This chapter provides an overview of the parameters of the price control under the RIIO model and discusses the length of the control period.



5.1. Under the RIIO model the price control will be set upfront for a fixed period into the future. We discuss here the length of the upfront, or ex ante, price control and the components of the price control framework.

Longer-term thinking and a longer price control period

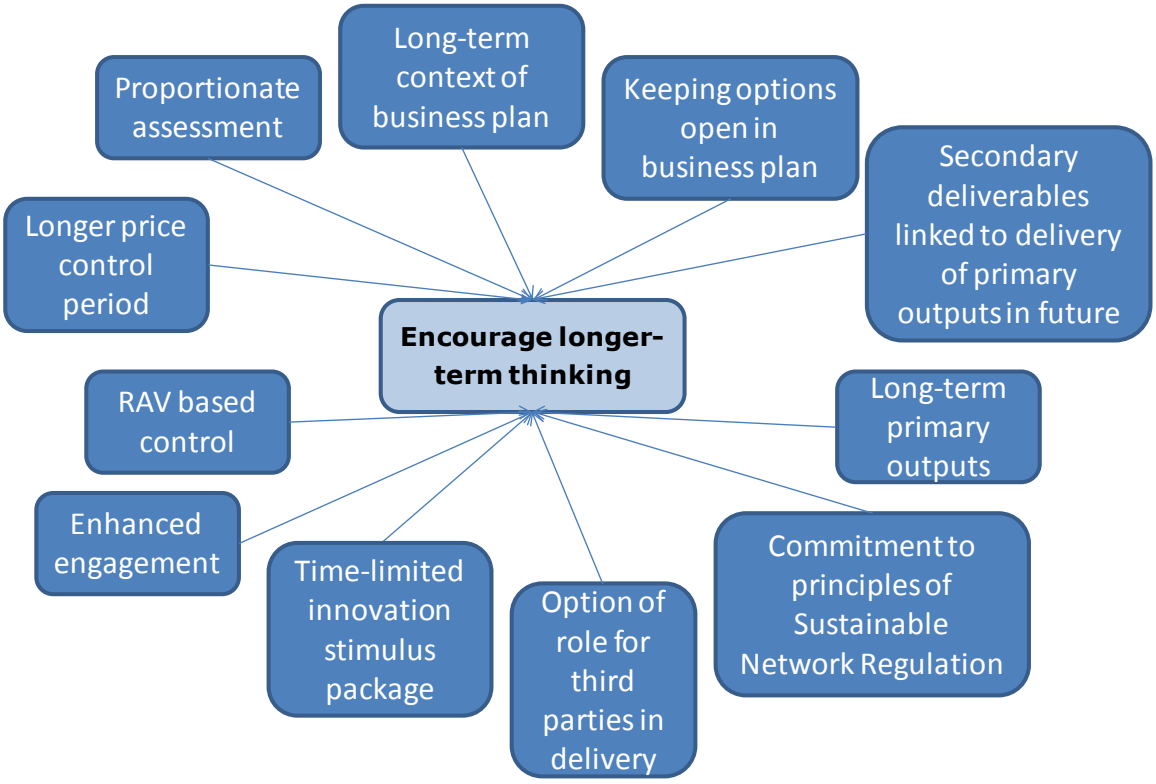
5.2. Network companies need to focus on the long term when considering what to deliver and how best to deliver. The longer-term focus is needed given the challenge of delivering a sustainable energy sector, the long lived nature of network assets, and the uncertainty about how best to meet the needs of existing and future consumers. We set out here how the RIIO model will encourage longer-term thinking and explain the role that a longer price control period can play.

Encouraging longer-term thinking

5.3. Decisions that network companies make about how best to play a role in delivering a sustainable energy sector and how best to deliver value for money over the long term involve a mix of different time horizons. In some cases taking action in the next year or two to deliver outputs in the short term will be what is relevant. For other investments or operational decisions, taking action over a ten or twenty-year period to deliver outputs for a long period (e.g. commensurate with the life of network assets) will be what is relevant.

5.4. There are a number of elements of the regulatory framework that are intended to encourage network companies to focus on the longer term (i.e. on their existing and future consumers). These are illustrated below in Figure 10.

Figure 10: Encouraging longer-term thinking



5.5. These aspects of the RIIO model, illustrated in Figure 10 above, are designed to encourage network companies to focus on the time horizon that is most relevant for each type of decision, and are complemented by the extended length of the control period:

- we expect well-justified **business plans** to be set in a **longer-term context** (e.g. an asset management strategy consistent with asset life cycles) and include evidence that network companies have considered alternative options for delivering outputs at long-term value for money as set out in Chapter 7;
- this will be facilitated by **proportionate treatment** which will, as set out in Chapter 8, provide incentives to the network companies to present their business plans in a longer-term context in order to be classified as category A and receive relatively lower levels of scrutiny.
- the emphasis on **keeping options open where appropriate** will encourage network companies to consider value for money over the longer term;
- network companies and Ofgem will discuss these longer-term strategies with stakeholders as part of **enhanced engagement** as set out in Chapter 3;
- we expect ideas on **innovative ways of delivering** (technical and commercial) to be included in network company business plans, with extra encouragement provided through the innovation stimulus package as set out in Chapter 14;
- we expect to allow network companies funding in a price control period linked to the delivery of primary outputs and long-term efficiency savings in future periods. Where such funding is allowed, there will be a clear link between the revenue

allowed and specific approaches that the network company is proposing to adopt in the next price control period (for further details see discussion on **secondary deliverables** in Chapter 6);
- we will, when considering whether to use the option of **giving third parties a greater role in delivery**, focus on the potential longer-term benefits and costs. Further details can be found in Chapter 8 and Chapter 13;
- as far as possible, we will aim to provide assurances about how long-term investment projects will be treated in the future. We will **continue to use the RAV** as the vehicle for providing a reasonable return to investors and will commit to **not making retrospective adjustments** to the RAV so long as outputs are delivered; and
- by providing **commitment to the principles of the RIIO model** for future price control reviews, including our principles on financeability we aim to provide network companies and investors with more certainty about how plans and delivery decisions will be treated over time.

5.6. We anticipate that this package of measures will promote longer-term thinking and encourage network companies to identify ways of delivering better value for money over the longer term.

5.7. The default price control period will be eight years. Extending the price control period provides a further strong signal that we, and network companies, will focus on long-term value for money. However, it will be a matter for the individual price controls to determine whether an eight-year control period is appropriate give the specific factors faced in the relevant industry at the time.

5.8. In some cases, it may be appropriate to treat high value projects that relate to delivery of outputs in future price control periods differently. Linking expenditure in the current period to delivery in future periods, is achieved through the use of secondary deliverables (see paragraphs 6.26 to 6.42). When designing incentive mechanisms and uncertainty mechanisms at price control reviews we will also consider whether and how to allow some incentive mechanisms to span price control periods to encourage high value long-term projects to be delivered at long-term value for money.

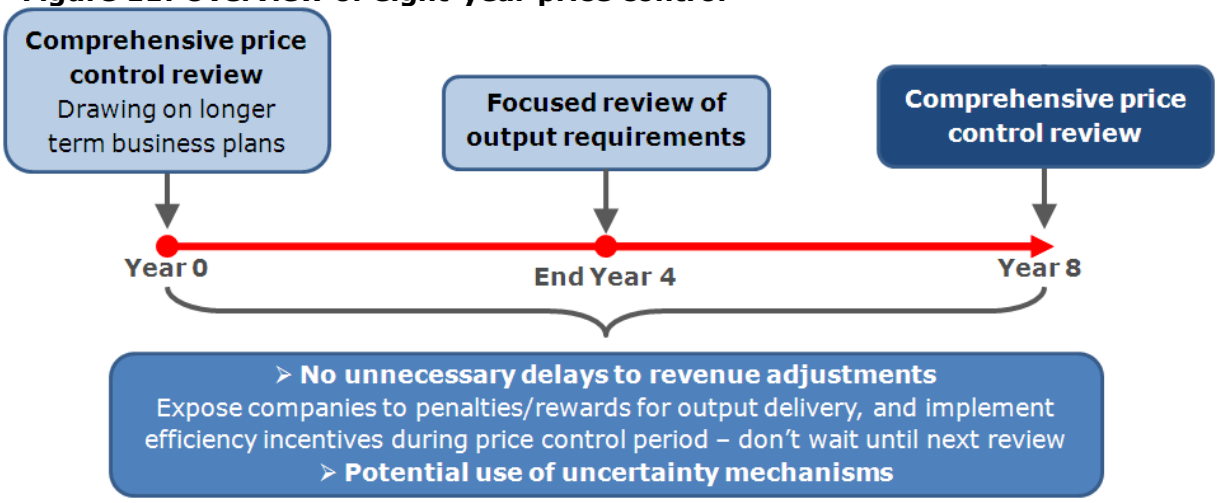
5.9. There is, inevitably, some element of judgement in the choice of the length of the price control period. We therefore recommend reviewing the eight-year price control period at future price control reviews. We will consider lessons from the experience of different sectors under the eight-year control period to determine whether it will be appropriate to increase the length further or potentially to revert to the five-year price control length.

How will the eight-year price control work?

5.10. Figure 11 illustrates how the eight-year price control framework will work. There will be a comprehensive price control review every eight years, covering all aspects of the price control. The principles and incentive arrangements underpinning

the control will be fixed for the eight-year period, as will the assumptions on financial elements (e.g. WACC, depreciation profiles, and capitalisation policy).

Figure 11: Overview of eight-year price control



5.1. We recognise the uncertainty about what network companies need to deliver over the eight-year period and have included the potential for a tightly-scoped mid-period review of output requirements to take place to manage significant incremental changes in one go during the period. The scope of any mid-period review would be set out in licence conditions as part of the comprehensive price control review. We do not expect to review past expenditure, financial assumptions (e.g. components of the allowed return) or incentive arrangements for cost efficiency or existing output incentives.

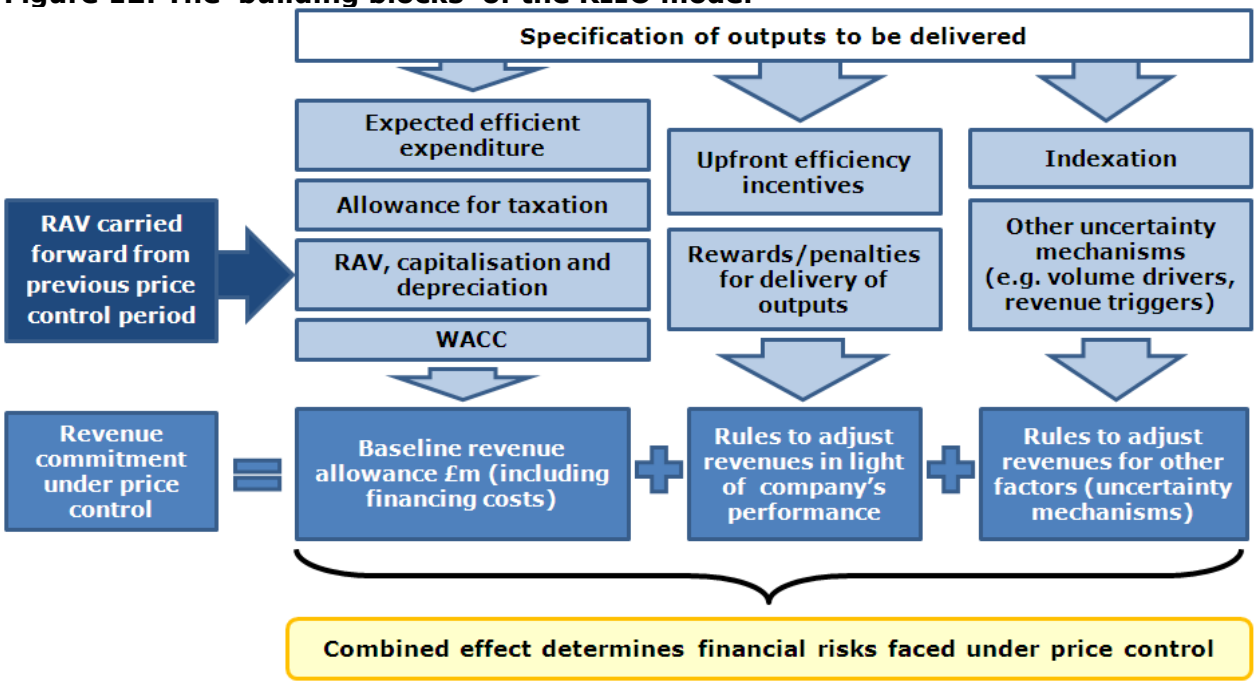
5.2. The intention is that any mid-period review should be focused on any step-changes in the primary outputs that companies are expected to deliver (for example a change in the scale or urgency of government requirements to connect electric vehicles to the distribution network). The mid-period review will prioritise and aggregate key changes in the sector to enable holistic changes to be made at a designated point, rather than considering piecemeal changes throughout the price control period. The mid-period review is discussed further in Chapter 11.

5.3. In addition to the potential for a mid-period review there will be scope for revenue to adjust during the period to reflect performance in delivering outputs efficiently (as discussed in Chapter 9) and uncertainty mechanisms (discussed in Chapter 11). The basis on which these adjustments are made will be set out at the beginning of the price control period.

Price control building blocks

5.4. The price control will be set using a 'building block' approach, incorporating incentives to encourage network companies to deliver outputs and value for money over the long term. Figure 12 illustrates the core building blocks.

Figure 12: The 'building blocks' of the RIIO model



5.5. Under the RIIO model the price control will include details of the primary outputs network companies are expected to deliver (see Chapter 6) and will set revenue for efficient delivery of these outputs. This revenue commitment will comprise three elements:

- **base revenue** to cover expected efficient costs (including financing costs) of delivering outputs and long-term value for money, including allowances for maintenance of, and investment in, capital assets and taxation (see Chapters 7 and 8);
- **adjustments to reflect company performance** in delivering outputs efficiently and innovating to expose efficiencies during the control period (see Chapters 9 and 10); and
- **adjustments made during the control period for specified uncertainties** that are considered to be outside the company's control but will have a significant impact on costs of delivery (e.g. compensation for changes in general price inflation in the economy) and changes to financial parameters that are updated during the period (e.g. annual adjustment to the cost of debt, pension adjustments) (see Chapter 11).

5.6. Network company decisions will be influenced by their perceptions of the credibility of the regulatory framework. The RIIO model is designed to provide certainty and transparency about how the framework will work in the future. As part of this, we will seek to avoid any retrospective/ex post adjustments to the package agreed in final proposals and licence modifications as this could undermine regulatory commitment.

5.7. The way the price control will be set is intended to ensure that network companies will earn higher returns for good performance in line with consumer expectations and lower returns for poor performance. Incentives will be calibrated to ensure they provide long-term value for money and to ensure the package is consistent with our financeability principles.

Profile of revenue collection

5.8. As part of the price control review, we will reach a view on the expenditure requirements of each network company to deliver the agreed outputs in each year of the price control period. Our default approach will be to set base revenues for each year of the price control that are consistent with the expected path of expenditure requirements.

Profiling at the price control review

5.9. In some cases, there may be concerns with the impact that the profile of base revenue will have on the profile of prices that consumers are expected to pay over the price control period. For example, the default approach might lead to prices that increase substantially from current levels at the start of the control period, fall back down and then increase again towards the end of the period. In such circumstances, we may consider setting base revenues that will give rise to a less volatile profile of prices. We will consider the impact of price volatility and the potential to use smoothing measures to even out the effect on existing and future consumers.

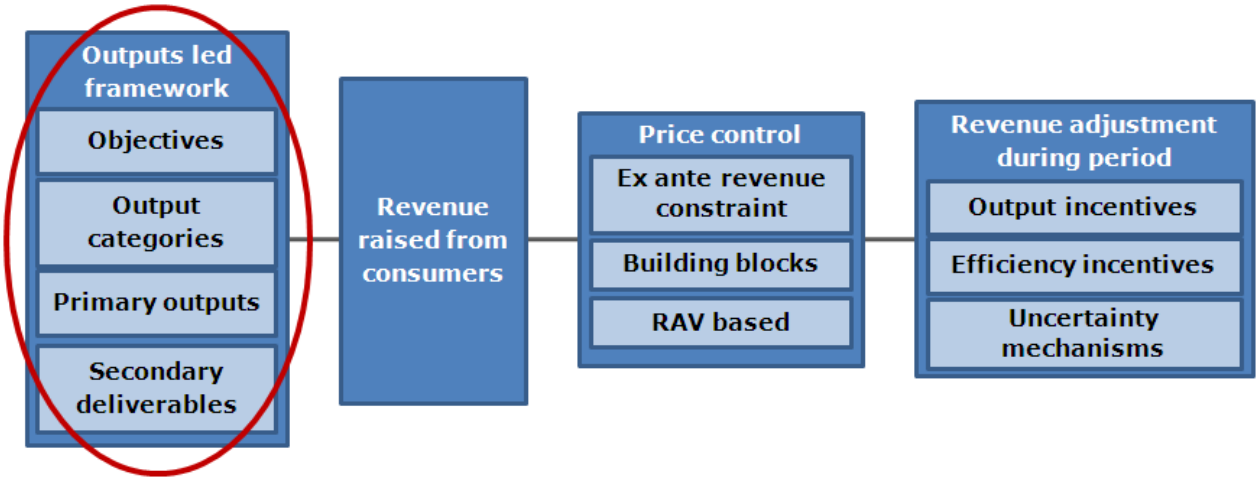
Re-profiling during the price control period

5.10. The arrangements that allow revenue to adjust during the price control period (for uncertainty mechanisms and output and efficiency incentives) could lead to network companies wanting to adjust the profile of prices during the period. Ordinarily we will expect companies to manage the variation and adhere to the price profile assumed at the price control review. However, if a company needed to make a large but transitory change in its prices, compared to what was expected at the price control review, it will need to provide a clear and robust justification, comparing forecast revenue for the remainder of the period with and without re-profiling.

5.11. If we consented to a change in the profile of revenue collection — either at or during the price control period — we would need to use an appropriate discount rate. This should be set to ensure that network companies are neither penalised nor rewarded for any re-profiling of revenues. We expect an appropriate discount rate to be consistent with the interest rates from low-risk investments. It will not necessarily be the weighted average cost of capital assumed for the price control.

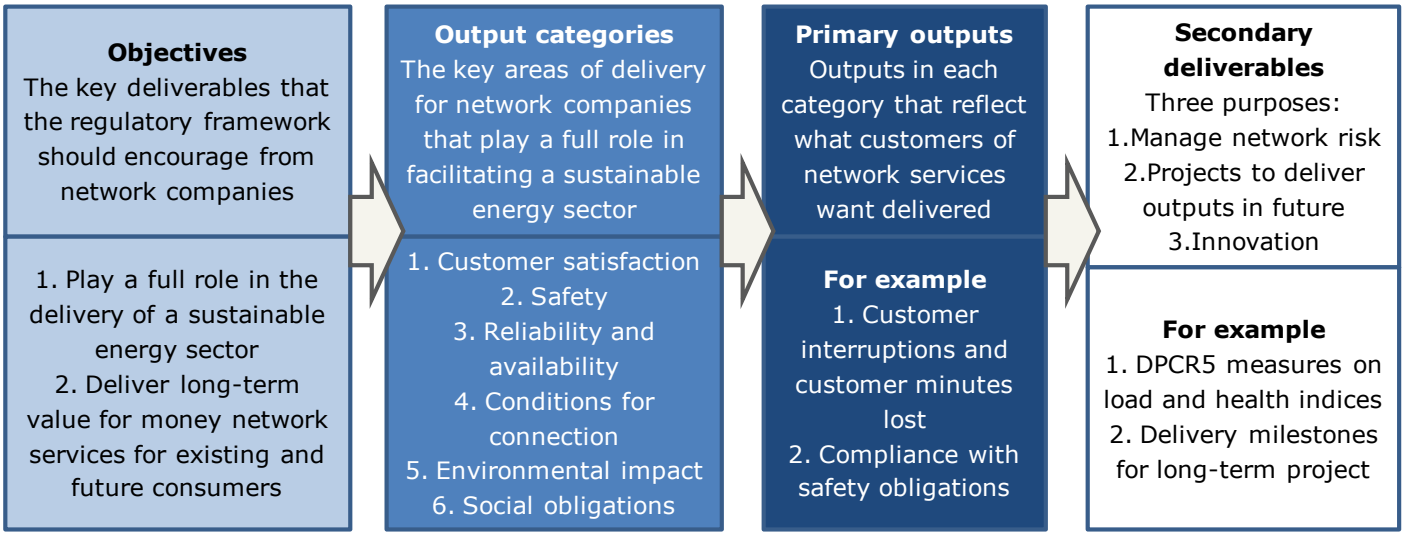
6. Setting outputs

Chapter summary
In this chapter we set out how the two objectives of the RIIO model will be translated into outputs that network companies will be 'held to account' to deliver in return for earning revenue from consumers under the price control. We describe the six output categories that will be used and explain the role of primary outputs and secondary deliverables in the framework.



6.1. Outputs are at the heart of the RIIO model - derived from the two high-level objectives of the regulatory framework. Base revenues and incentives in the framework are linked to the delivery of the outputs. Figure 13 illustrates how, under the RIIO model, the objectives and outputs will fit together. This chapter provides further details on each of the elements.

Figure 13: The framework for setting outputs



6.2. Outputs will be set for the duration of the eight-year price control period, with an expectation that they will remain in place over the long term unless a different time frame is specified at the price control review. Network companies will have a clear role in determining the best way to deliver outputs at long-term value for money. As set out in Chapter 5, a review of the output requirements will take place mid-way through the price control period, to reflect any changes in what network companies are required to deliver. Companies will be accountable for delivering outputs and will be incentivised through rewards for delivery and penalties for non-delivery. This is discussed in further detail in Chapter 9.

Objectives

6.3. The objectives of the RIIO model are the cornerstone of the regulatory regime. The objectives are to encourage energy network companies to:

- play a full role in the delivery of a sustainable energy sector; and
- deliver long-term value for money network services for existing and future consumers.

6.4. We do not expect the outcomes to change significantly in the foreseeable future. However, what is required of Ofgem and/or network companies could change over time and therefore provisions should be put in place to allow a review of the objectives, where required. For example, a review could take place if:

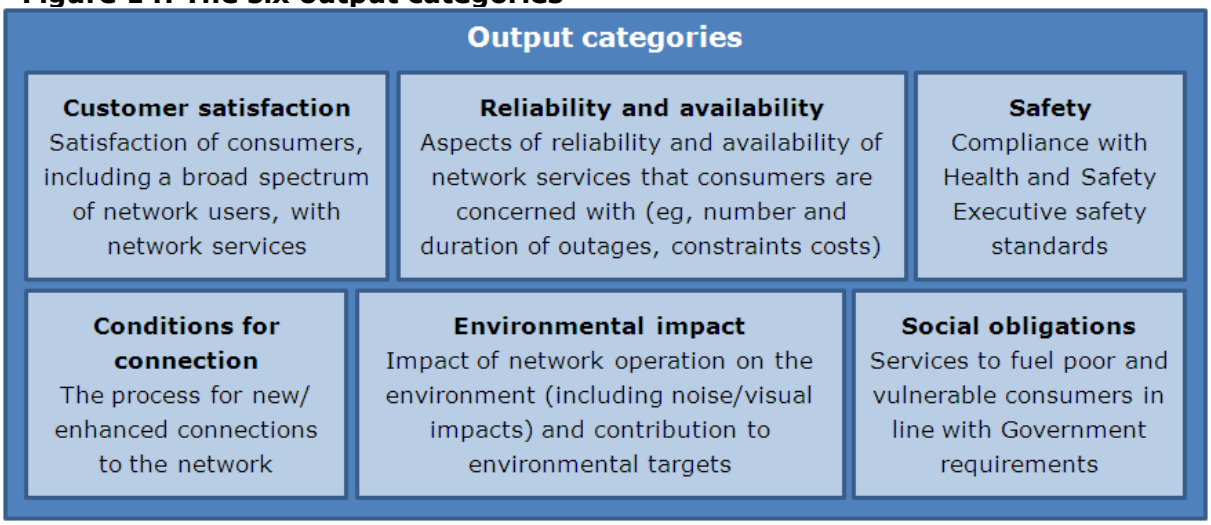
- a fundamental change to our primary or secondary duties was implemented;
- there was a strong signal from enhanced engagement with stakeholders that the objectives were no longer fit for purpose; and/or
- there was a fundamental change in the direction of energy policy, e.g. government decided to move away from the existing 2020 and 2050 targets.

6.5. A change in the overriding objectives will not necessarily change the regulatory framework but we would need to take account of any changes to the objectives when setting outputs and the price control more generally.

Output categories

6.6. The outputs that network companies are expected to deliver will sit in one of the six output categories shown in Figure 14. These categories reflect the broad role that energy network companies will play in delivering the objectives of the RIIO model. Output categories will be at the centre of the price control review and drive the setting of the price control itself.

Figure 14: The six output categories



6.7. We note that the inclusion of a safety category should not undermine what network companies are required to deliver by statute. Network companies will be expected to include in their business plans costs associated with delivery of safety obligations set by the Health and Safety Executive, and consider safety when assessing how best to manage overall network risk. Therefore, it is important that when undertaking price control reviews we understand what is being delivered in terms of safety and how it links to costs. However, we will not use automatic financial incentive mechanisms that could have a detrimental effect on safety.

6.8. There may be value in providing incentives on network companies to undertake safety related initiatives over and above those required under statute, where it can be reasonably demonstrated that public safety will benefit. We therefore expect network companies to consider such safety initiatives in their business plans.

6.9. The relative importance of the six output categories will vary between the four energy network sectors. For example, in transmission there are currently no specific social obligations on the companies but the presence of the output category will allow relevant outputs to be developed in the event that Government implemented obligations in this area.

6.10. The appropriateness of the categories should be reviewed periodically, to reflect network company activities, changing stakeholder priorities including Government priorities, and any lessons learnt from implementing the RIIO model. Any changes to the categories will be consulted on in the relevant price control reviews.

Primary outputs

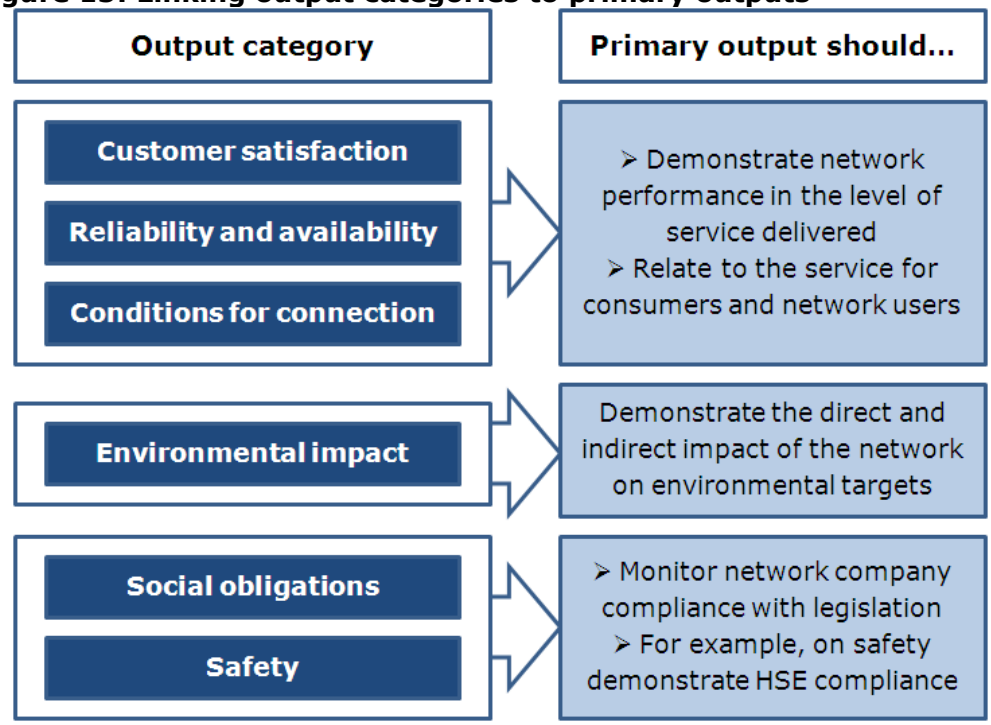
6.11. For each output category, a set of primary outputs will be developed at the price control review to enable us, network companies and stakeholders to have a

clear understanding of what is being delivered in each area. Where possible, we will commit to primary outputs over a number of control periods to support the focus on the longer term. We will also aim to limit the number of primary outputs in each category, but not at the expense of ensuring that the set is comprehensive. These primary outputs should reflect the expectations that consumers have with respect to the delivery of network services and network companies will be responsible for determining how best to deliver against these. We will encourage delivery by developing incentives for each primary output with a clear link between delivery of the outputs and revenue allowed in the price control. Further details on these incentives are provided in Chapter 9.

Linking output categories to primary outputs

6.12. Figure 15 illustrates how the primary outputs will be derived from relevant output categories. Three of the categories will include primary outputs directly related to the 'experience' of consumers of network services. The environmental impact category will include outputs related to the impact of network companies and the provision of network services on the wider environment. Primary outputs in the social obligations category will include those mandated by government and those in the safety category will be mandated by the Health and Safety Executive.

Figure 15: Linking output categories to primary outputs



Principles for setting primary outputs

6.13. As far as possible, primary outputs should adhere to the following principles:

- **material:** the primary outputs should make a significant contribution toward the objectives of Sustainable Network Regulation;
- **controllable:** the network company should have full or a sufficient degree of control over performance against the primary outputs, with the strength of any incentive taking account of the degree of controllability;
- **measurable:** it should be possible to meaningfully measure the primary outputs using quantitative or qualitative methods;
- **comparable:** it should be possible to measure the primary outputs meaningfully over time and across network companies in a sector by normalising the levels of performance that they are incentivised to achieve;
- **applicable:** it should be possible to use the primary outputs to set penalties and rewards as part of the process of determining revenue allowances;
- **compatible with the promotion of competition:** the primary outputs should facilitate competition in upstream and downstream markets, e.g. for independent gas transporters and independent distribution network operators as well as developing retail models such as energy service companies (ESCOs); and
- **legally compliant:** the primary outputs should be compatible with existing legal obligations that are within our remit and the remit of other government bodies.

6.14. The development of primary outputs at each price control review should, as far as possible, include reference to new government policies and initiatives in areas such as sustainable development, social issues and safety. We may have primary outputs that do not meet all of the above criteria and, in these cases, we will expect to limit the strength of any financial incentives accordingly.

Example primary outputs and link to outputs in existing frameworks

6.15. To illustrate how the primary outputs might look, Table 3 provides examples of the types of primary outputs that might be relevant in each category by sector. Specific primary outputs will be developed as part of a price control review.

6.16. As the examples show, some of the primary outputs could build on existing schemes in place. For example the broad measure of customer satisfaction (to be implemented as part of DPCR5), could be developed to apply across each of the sectors and extended to recognise the range of stakeholder views that should be captured, including both consumers and network users. However, under the RIIO model we expect some changes to existing outputs to be made and some new primary outputs to be developed. The rationale for these changes can be largely attributed to two main factors.

1. Streamlined approach

6.17. We will seek to limit the number of primary outputs to ensure they are focused on the key areas of importance to consumers of network services. This streamlined approach could simplify the regulatory framework by allowing us to focus attention on the key primary outputs and more easily link revenue to these. This approach could also facilitate stakeholder understanding and allow them to engage effectively

on key issues. We will only discuss detailed metrics with stakeholders where delivery performance is a concern.

2. Focus of the framework

6.18. As illustrated by the objectives, the framework and hence the price control reviews will be focused on delivery of a sustainable energy sector. This means, in particular, that alongside our focus on ensuring the delivery of a safe, secure and reliable network service, environmental impacts will have a higher profile than in the past. This is consistent with our principal objectives[6] as amended by the Energy Act 2010[7].

6.19. Primary outputs underpinning environmental impacts could be narrow, focusing on the carbon footprint of the network companies (as per DPCR5), or wide focusing on reducing the carbon footprint across the energy system. In the context of a wider role, network companies could seek to facilitate an increase in the flow of low carbon generation and encourage active network management through demand side response and consumer energy efficiency.

6.20. Although energy efficiency is an area in which network companies do not presently have a role, they may have a part to play in working with other industry parties (e.g. suppliers) to support this. Areas where network companies have a role in working with, and providing information to, other players in the industry (e.g. meter point administration services) could be captured in the customer satisfaction output category, recognising the broader range of stakeholders that this will cover. In addition, in the future, network companies may also have a more distinct role in facilitating energy efficiency, for example, through the roll out of smart meters.

6.21. We intend to develop a set of primary outputs on environmental impacts focused on wide impact but this is subject to prevailing legal provisions. This will be a significant change for network companies and for the regulatory framework. We also need to be mindful of the need to consider any cross-over with relevant outputs in the reliability and availability and conditions for connection categories.

6.22. As far as possible, we want metrics to be developed that will robustly reflect the performance of the network companies on each of the primary outputs. However, we recognise that it may take time for reliable metrics to be developed which will accurately measure delivery against the primary outputs. To encourage network companies actively to seek out potential sources of information that could be utilised to more effectively measure performance, we may place an incentive on them which will reward them for developing new data sources.

[6] Under Section 3A of the Electricity Act 1989 and 4AA of the Gas Act 1986.
[7] Included in sections 16 and 17 of the Energy Act 2010.

Table 3: Example primary outputs by category and sector

Output category	Electricity Distribution	Gas Distribution	Electricity transmission	Gas Transmission
Customer satisfaction	1. Broad measures of customer satisfaction reflecting experience of consumers and network users 2. Qualitative survey evidence			
Safety	1. Comply with minimum legal requirements as specified by the Health and Safety Executive 2. Additional safety initiatives considered to be in public interest			
Reliability and availability (Network risk dealt with in secondary deliverables, see paragraphs 6.26 to 6.42)	1. Customer interruptions (CI) 2. Customer minutes lost (CML) or energy not supplied (ENS)	1. Supply restoration after an interruption 2. Customer minutes lost (CML) or energy not supplied (ENS)	1. Energy not supplied (ENS) 2. Constraint measure	1. Baseline entry capacity 2. Buy back at entry 3. Baseline flat/flex offtake capacity 4. Buy back at exit
Conditions for connections	1. Time to connect a generation node 2. Time to connect a demand node	1. Time to connect an entry/exit or demand node	1. Time to connect a generation node 2. Time to connect a demand node	1. Time to connect an entry/exit or demand node
Environmental impact	1. Carbon footprint of network including losses 2. Proportion of new low carbon generation 3. Other emissions 4. Visual impacts 5. Role in consumer energy efficiency	1. Carbon footprint of network including shrinkage 2. Proportion of new low carbon energy 3. Other emissions 4. Role in consumer energy efficiency	1. Carbon footprint of network including losses 2. Proportion of new low carbon generation 3. Other emissions 4. Visual impacts	1. Carbon footprint of network including shrinkage 2. Proportion of new low carbon energy 3. Other emissions
Social obligations	1. Targets for vulnerable customers, e.g. PSOs			

* A composite customer satisfaction measure used in electricity distribution consisting of a customer satisfaction survey, a complaints metric and stakeholder engagement.

The level of primary outputs to be delivered

6.23. At each price control review we will set a level of performance for each primary output at which network companies in a sector are expected to operate. For example, we will agree a level of reliability and availability that network companies should achieve. Where relevant we will take account of requirements set by government or the Health and Safety Executive when considering the performance level. We will also take account of interactions across primary outputs, considering issues such as those set out in Box 4 below.

Box 4: Level of primary outputs and interactions

There are many links between the output categories and we will need to take account of these when setting the level of performance that network companies will be incentivised to achieve. For example, when setting the baseline level of performance on reliability and availability, we will need to have regard to Health and Safety requirements and the impacts these requirements will have on the level of reliability and availability that network companies will automatically achieve through compliance with safety standards. This will ensure we have a full understanding of the context in which we are setting performance levels for reliability and availability.

Similar links will also need to be considered between, for example: (a) environmental impacts and conditions for connection; (b) reliability and availability and customer satisfaction; (c) conditions for connection and customer satisfaction; and (d) reliability and availability and environmental impacts.

6.24. We will set a minimum level of performance at which we expect all network companies in a sector to operate, taking account of stakeholder views and the views of network companies. Where companies present a persuasive case that the level of performance they deliver should be incrementally higher or lower than this base level, we can approve this. The network company will need to demonstrate, with evidence, that the alternative level of a primary output is consistent with providing long-term value for money and more generally is consistent with the objectives of the RIIO model. We will not agree to lower performance levels for primary outputs where the minimum level is set by government or the Health and Safety Executive. This is discussed further in Chapter 9.

6.25. The required levels of performance for the sector will be specified early in the price control review to ensure all stakeholders have a clear understanding of the expectations on the network companies. The network companies will set out in their well-justified business plans (see Chapter 7) what primary outputs they will be delivering and what the associated cost of delivery will be. We will set base revenue in the price control to reflect our assessment of what is needed to fund delivery of the primary outputs over time and to deliver long-term value for money.

Secondary deliverables

6.26. Network companies will be responsible for network planning, stewardship of their assets and operational decisions over time, to ensure any risk to delivery of primary outputs is managed and that they deliver long-term value for money for existing and future consumers. Network companies will need to work out how best to deliver primary outputs over time and at long-term value for money, potentially revising their approach during price control periods to reflect technological and political developments, evolving patterns of energy demand and/or new information.

6.27. If price controls were focused only on the delivery of primary outputs, network companies may be encouraged to deliver these at the lowest cost during the eight-year price control period, potentially at the expense of measures that could help reduce the costs of delivering primary outputs over the longer term. To protect against this, we expect the network companies to focus on the longer term and consider whether it is appropriate to include costs in their business plans that are related to delivery of primary outputs in future price control periods and to long-term value for money.

6.28. Assuming the network company presents a well-justified case for including such costs in the price control for the forthcoming period, providing coherent and comprehensive evidence to support the case, we expect to include costs of this type in the price control. The benefits of this expenditure will be observed in future price control periods. In these situations we will require the company to set out the rationale for the expenditure in the context of a long-term strategy for delivery. The network company will also need to provide a clear link between costs in the current period and deliverables or indicators that they can be held to account to during the period. We will not specify what these secondary deliverables should be or the appropriate level of delivery although ideally they will be intermediary outputs rather than inputs. Where appropriate we will work with the industry to develop common metrics for secondary deliverables (e.g. asset health indicators) but we recognise that in some areas company-specific metrics will be most relevant. It is for the company to propose and justify the choice and level of secondary deliverables using evidence, including where relevant the results of stakeholder engagement.

6.29. Secondary deliverables are not the 'ends' relating to consumer experience of network services but are the 'means to the end'. They are needed to ensure delivery of primary outputs over time and that long-term value for money is not put at risk. We expect the network company to continue to seek out better ways of delivering during the price control, changing the proposed approach relative to the plan where this is expected to be better for long-term value for money. In this context, as far as possible, it will be preferable for secondary deliverables to be related to intermediate outputs rather than to a specific way of delivering (e.g. building a particular size transmission line). However, we recognise that it may not always be possible to use secondary deliverables of this type and in some cases it may be appropriate to focus on the details of a specific project (way of delivering).

6.30. There are three main drivers of the need for secondary deliverables:

- **managing network risk** to ensure that delivery of primary outputs in future periods is not put at risk by decisions made in the price control period;
- **projects for delivering primary outputs in future periods** with action taken during the price control period; and
- **technical and commercial innovation projects** or other projects which require upfront costs but have the potential, with some uncertainty, to deliver benefits in terms of long-term value for money in future periods.

6.31. The following sections provide an overview of these drivers and the way that secondary deliverables will be used to encourage network companies to take decisions in the price control period, where appropriate, relating to delivery of primary outputs in future price controls and long-term value for money.

Managing network risk

6.32. The primary outputs are intended to allow us to monitor the performance of the network companies in the delivery of end services to consumers. In some cases, network companies may continue to demonstrate delivery of the primary outputs in the current period but may not be effectively managing network risk. The long-term nature of network investment could mean that it will take time for insufficient levels of investment to manifest in the form of non-delivery of outputs. However, this will create risks in terms of the ability of the network company to deliver the primary outputs in future periods.

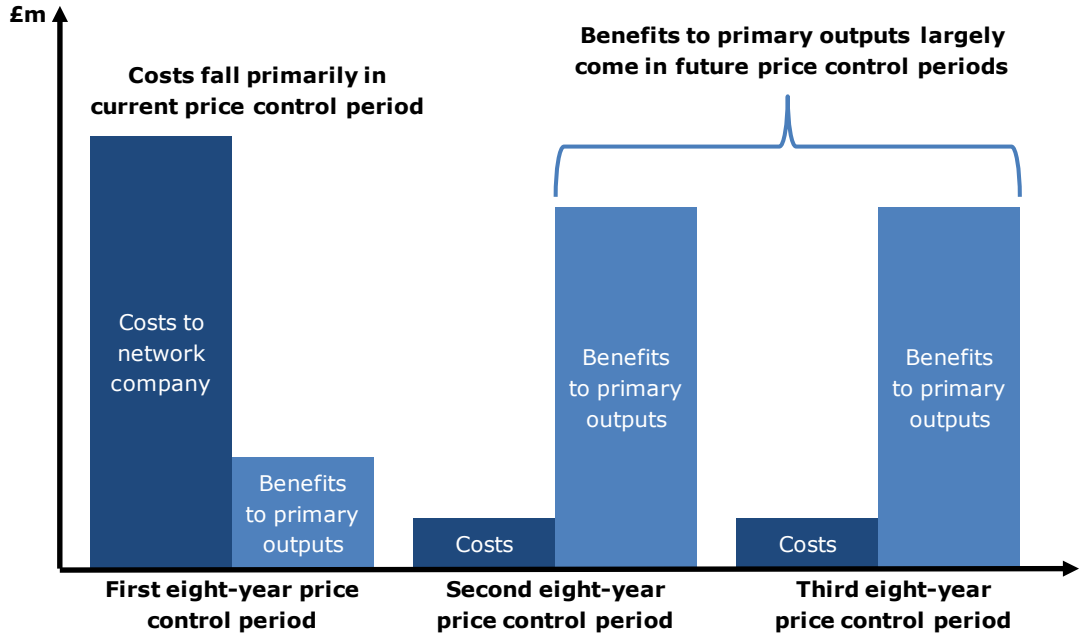
6.33. For example, a network company may undertake the minimum work required to maintain an asset to allow it to deliver a reliable network service in line with its primary outputs in the current price control period. However, in the event that the asset is nearing the end of its useful life, it may need to be replaced. A delay to the replacement of this asset could result in increased network interruptions in future periods, which will compromise the ability of the network company to meet its primary output. It may also require emergency work to be taken forward to replace the asset, which will likely incur higher costs and will not represent long-term value for money for consumers. In this example, it would have been more efficient for the network company to replace the asset in the current period before it began to fail. Although this will require the network company to incur higher costs in the current period it will likely mean that costs in future periods will be reduced.

6.34. Under the RIIO model, network companies will need to identify areas on the network where work may be required to maintain their assets to reduce risks to network operation and delivery of the primary outputs, both during the price control period and in the future. This will help to ensure the network company can continue to provide primary outputs in the future. Network companies will need to set out the expenditure required for this purpose and link it to agreed measures of network risk, which are the secondary deliverables that we will hold them to account on.

Projects to deliver primary outputs in future periods

6.35. If a network company is only focused on delivery of primary outputs in the forthcoming price control period, there is a risk that it will miss opportunities to take action that could improve its delivery of primary outputs in future periods. For example, an electricity transmission network operator may identify an investment project which will reduce the level of constraints in an area of the network over the long term (e.g. at least the next twenty years). However, the lead time needed to complete the project may be so long that any investment will make little contribution to the delivery of primary outputs (e.g. an output related to constraints) during the current price control period. There is a potential risk that a company may decide it is not in its financial interests to carry out the project because the benefits to primary outputs in the current price control period are less than the costs it will incur in the period — even if the likely benefits over the longer term will make the project in consumers' interests. This scenario is illustrated in Figure 16.

Figure 16: Use of secondary deliverables to improve long-term delivery



6.36. We expect the network company to set out the expenditure it will need to incur to ensure that the required capacity is available where and when it is needed. We expect them to link the expenditure to a long-term strategy or plan focused on delivery of primary outputs over time and long-term value for money. We also expect them to link the expenditure in the price control period to secondary deliverables. Where the project is significant in size, and there is uncertainty about the need for the investment to be taken forward, the secondary deliverable could be the achievement of milestones related to delivery of the project. We will work with the network companies at price control reviews to establish clear secondary deliverables related to elements of the plan focused on meeting primary outputs in future periods.

6.37. Where milestones for a project are used as the secondary deliverable we will take decisions on how much revenue to allow the company to raise from consumers only when each milestone is reached rather than including all funding in the price control upfront. This approach will balance the need to provide certainty to network companies that investment will be funded with the need to ensure that consumers' money is used only where there is reasonable certainty that it will deliver benefit in terms of primary output delivery over time and/or long-term value for money. This approach could increase required scrutiny of delivery during the period, imposing burdens on Ofgem and the network company. We therefore expect to use this approach only for projects that are high cost and where there is significant uncertainty about what needs to be delivered and how best to deliver.

Technical and commercial innovation projects

6.38. The RIIO model is designed to encourage network companies to seek out innovative ways of delivering outputs where this is expected to deliver long-term value for money for existing and future consumers (see Chapter 14). As well as using opportunities to bid for funding through the innovation stimulus package, network companies will be encouraged to include expenditure related to innovation projects in their well-justified business plans. By its nature innovation involves investing upfront, with uncertainty about whether benefits will be delivered. Where we allow costs for innovation in the price control we will not make adjustments, after the fact, should the innovation turn out to be ineffective at delivering benefits. This is a reflection of our recognition that even 'failed' investments deliver benefits in terms of lessons learned. We will, however, wish to ensure that consumers are not paying too high a price for innovative activity and we will want to ensure that companies are undertaking the innovative projects effectively.

6.39. In some cases, where a company spends on innovative activity in the forthcoming period the benefits, if they arise, will not be expected to accrue until future periods. In these cases, as for other expenditure that spans price control periods, we will consider whether it is appropriate to link innovative activity to secondary deliverables. For example, we may expect the network company to link the expenditure to milestones for trials relating to a new technology.

Guidance on the use of secondary deliverables

6.40. The case for including secondary deliverables could be initiated by Ofgem, by network companies or by other stakeholders. We will work with network companies to identify the most appropriate measures to use. The balance of primary outputs and secondary deliverables could vary between the four network sectors and over time. The use of secondary deliverables brings potential risks of micro-management and may encourage companies to adopt an approach that turns out not to be in consumers' interests. To reduce these risks, we will follow the process in Table 4.

Table 4: Guidance on the inclusion of secondary deliverables

(1)	**Potential refinement of primary outputs and associated incentives** Before considering potential secondary deliverables, we will examine whether the perceived risk to long-term value for money stems from deficiencies in the specification of primary outputs. For example, a primary output could be missing, or there may be opportunities to address the risk by refining the way existing primary outputs are specified. It may not be necessary to use a secondary deliverable at all. It might also be possible to address the perceived risk by amending the incentive arrangements for primary outputs. For example, greater financial rewards could be set for improvements in delivery during the current price control period.
(2)	**Specification of secondary deliverable** Secondary deliverables should be specified in the least restrictive way possible. For instance, rather than holding a company to the completion of a specific network investment project, it may be more appropriate to require an increase in capacity in a specific area of the network. This could still deliver long-term value for money but will allow the company to retain flexibility as to the best way to increase capacity.
(3)	**Check for potential double-counting** A secondary deliverable may naturally be encouraged under the core incentives of the price control regime. To avoid double-counting it will be important to assess whether the primary outputs and efficiency incentives in the price control will be sufficient to encourage the network company to deliver the secondary deliverable.
(4)	**Funding and incentive arrangements** Funding and incentive arrangements will be considered to encourage delivery of the secondary deliverable. Where there is uncertainty about the need for a secondary deliverable, it may be more appropriate to include an uncertainty mechanism to reduce the risk that consumers pay for a secondary deliverable that does not represent value for money in the long term. This is discussed further in Chapter 11.

6.41. The number of stages in the table highlights that there is a potential administrative burden. For this reason, there will need to be a clear and credible case for a secondary deliverable before we start the process.

Monitoring and incentivising secondary deliverables

6.42. We will collect information on and monitor the secondary deliverables on an ongoing basis. For example, for network risk, network companies could put together an annual reliability report presenting broad evidence on performance and areas of concern on leading indicators of reliability, e.g. asset health. Where a network company does not deliver what was assumed in the price control, we will want to understand why and will consider what, if any, action to take.

6.43. We want to encourage network companies to focus on delivery of primary outputs over time and long-term value for money, which may mean deviating from the course of action (and related secondary deliverables) proposed at the price control review. At the same time we want to ensure that consumers do not overpay for expenditure linked to long-term delivery and in particular that companies take action to deliver the primary outputs over the long term (even if the action is

different to what was originally planned). The appropriate action will depend on how these two aims balance out.

6.44. We may consider, in some cases, using alternative 'non-standard' arrangements for providing funding for expenditure linked to future delivery of primary outputs through specified secondary deliverables.

- For some projects we may allow for the related expenditure in the price control period in full at the price control review but specify penalties that will be incurred if the secondary deliverable is not provided. Penalties are unlikely to be automatically imposed but a review of the circumstances relating to non-delivery of a secondary deliverable will be carried out. For example, where network risk is allowed to deteriorate below the level assumed at the price control review we could set allowances for the next control period assuming network risk remained at the level indicated in the original business plan. We will not fund a network company to bring the network risk back up to the previously assumed level.
- As discussed in paragraph 6.37, we may consider an option of making decisions on how much additional revenue will be provided by consumers in stages, linked to completion of identified key milestones of a project.
- We may provide upfront funding on a 'use it or lose it' basis, whereby we will specify when and how we will 'give' the funding linked to a secondary deliverable back to consumers if the network company does not use it for its intended purpose.
- In some cases, it may not be appropriate to take a decision at the price control review on a specific secondary deliverable and it may be preferable to include, subject to the principles in Chapter 11, an uncertainty mechanism in the price control. This will provide funding for the secondary deliverable if a specific trigger event occurs (e.g. if planning permission for a specific new generation project is obtained) or will allow Ofgem to revisit the question at a specified date when better information is expected.

6.45. In all cases, decisions on whether and how to use alternative funding arrangements for expenditure linked to secondary deliverables will be taken at the time of a price control review. The decision will be based on an assessment of how best to balance the need to incentivise network companies to make decisions for the longer term with the need to ensure that consumers do not overpay for these decisions. Whatever approach is adopted we will provide transparent details at the time of the comprehensive price control review of how specific expenditure and secondary deliverables will be treated.

6.46. It is not our intention to commit the network company to a particular way of delivering but only to ensure that consumer funding is proportionate and effective. It is also important that we continue to recognise that where expenditure is allowed for innovation projects, there are lessons to be learned from failures as well as success and we should not penalise network companies that trial new ways of delivering and decide not to proceed with the idea.

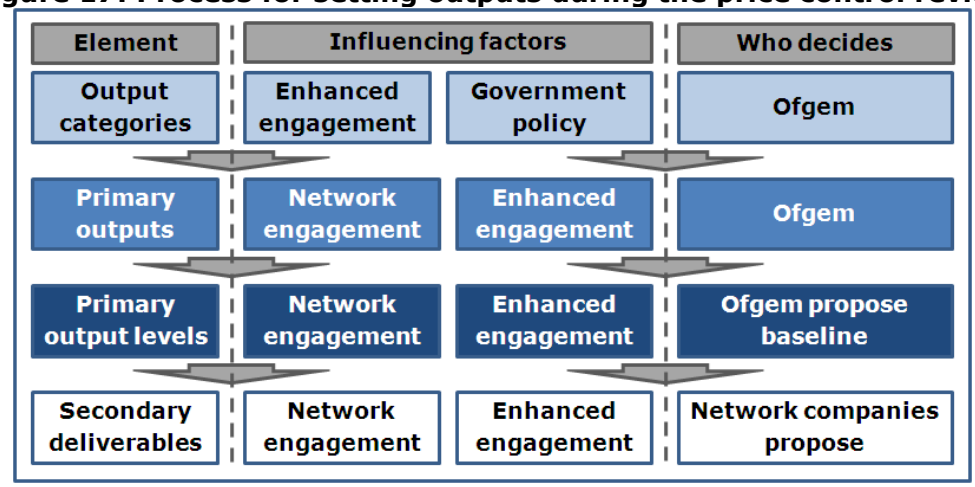
6.47. In cases where a financial penalty is attached to a secondary deliverable, it is unlikely that it will be imposed automatically for non-delivery. Before any financial

penalty is applied, we will establish the reason for the non-delivery. The network company will need to set out actions it was taking to ensure the delivery of primary outputs and long-term value for money were not at risk. We will base any assessment on the reasonableness of decisions at the time they were made. We will also ensure that action was not taken because the network company chose a different way of delivering, so long as similar benefits to long-term value for money and delivery of primary outputs over time were achieved.

6.48. Whatever the arrangements agreed for secondary deliverables, network companies will remain responsible for delivering primary outputs. They will face penalty regimes, including potential licence revocation and potential risk of third parties being given a greater role in delivery in cases of persistent non-delivery.

How outputs will be set at price control reviews

Figure 17: Process for setting outputs during the price control review



6.49. We set out here how output categories, primary outputs, level of performance, and secondary deliverables will be determined at a price control review.

Setting the primary outputs

6.50. We will put forward our view on primary outputs early in the price control review. Our view will be informed by discussions during enhanced engagement as well as discussions with network companies.

6.51. In the price control review we will work with network companies and stakeholders to develop transparent metrics for primary outputs. As far as possible we will seek to ensure common metrics across each of the network sectors to allow comparisons to be made between the performance of network companies. For example, we may signal that customer minutes lost is the appropriate primary output for the reliability and availability output category and during the price control review we will refine the appropriate metric for this.

6.52. As far as possible we will not change our view on primary outputs from what we say in our 'Strategy for the Review' paper (Stage 1 of the review process) but we recognise that some adaptation may be needed as policy develops in the first three stages of the price control review process. Indeed as the RIIO model beds down we generally expect the primary outputs used in the past to be retained, save where the requirements on the network companies change significantly.

Setting the levels of performance for the primary outputs

6.53. We will set a baseline level of performance for each of the primary outputs, at an early stage in the price control, taking account of views expressed during enhanced engagement and performance during the most recent price control period. For example, we will specify that we are looking for reliability to be kept at least at current levels. The precise nature of the performance level will depend on the metric used; it may be a percentage change on existing levels or an absolute measure.

6.54. The network company could propose to deliver a different performance level for a primary output, either higher or lower than the baseline level. This will need to be underpinned by evidence of stakeholder support for the proposed level through consumer research or engagement. The costs of efficiently delivering the alternative performance level will need to be clearly set out in the business plan.

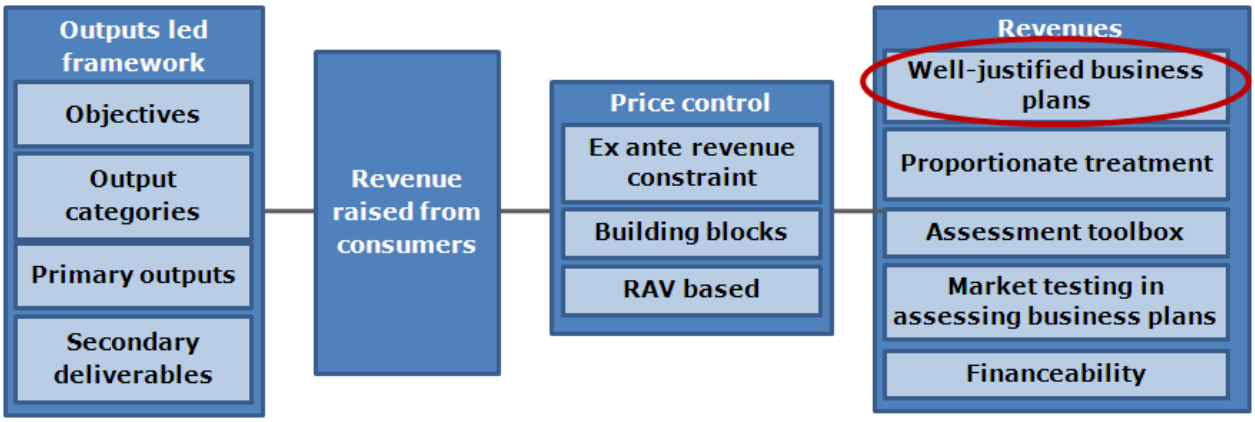
6.55. We will decide the primary output level that network companies should deliver based on the case put forward in their business plans, the views of stakeholders, and our assessment of what represents value for money for existing and future consumers.

Setting secondary deliverables

6.56. In the first instance network companies will put forward the secondary deliverables they will deliver during the control period. We will assess the proposals in their well-justified business plans and potentially propose alternative secondary deliverables where this is appropriate. We will take account of views from stakeholders where relevant. In this sense our final proposals on a company's price control will incorporate our final view on secondary deliverables and associated base revenue, but this will be based on what was proposed by network companies themselves. We expect that stakeholders will have less involvement in discussions on these secondary deliverables, although we will seek views where we consider it appropriate.

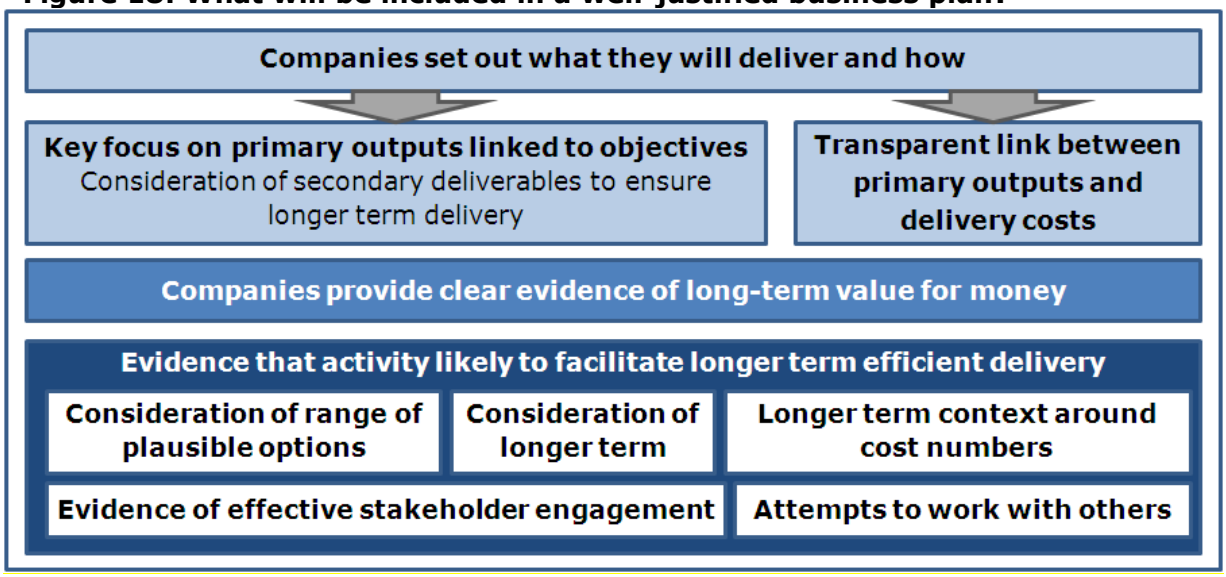
7. Well-justified strategic business plans

Chapter summary
We describe what we expect network companies to include in their price control review business plans. We explain how network companies will be incentivised to provide well-justified business plans.



7.1. Under the RIIO model our assessment of the outputs that network companies are required to deliver and the associated revenue to be earned from consumers will be informed, to a large degree, by the plans put forward by network companies. In the business plans a network company will set out what it intends to deliver for consumers of network services over time and what revenue it needs to earn from existing and future consumers to ensure delivery is financed. The onus is on network companies to justify their view of required expenditure.

Figure 18: What will be included in a well-justified business plan?



7.2. An overview of the information that network companies will be expected to provide in their business plans is provided in Figure 18 above. We discuss in Chapter 8 how we will assess these plans.

What do we mean by 'well-justified'?

7.3. The business plan is the opportunity for network companies to demonstrate how they propose to deliver the objectives of the RIIO model. The outputs and base revenue included in a network company's price control are more likely to be consistent with the company's plans if they provide us with well-justified business plans during the price control process.

7.4. A business plan will be considered well-justified where network companies demonstrate, amongst other things:

- **focus on output delivery**: the company demonstrates that their proposals are relevant and focused on the delivery of primary outputs over time whilst also providing long-term value for money;
- **consideration of secondary deliverables:** the company should provide details of the activities they will be taking forward during the price control to ensure delivery of the primary outputs and value for money over the longer term;
- **a clear and well-evidenced case for their proposals**: the onus will be on network companies to robustly demonstrate to Ofgem that their proposed outputs and proposed approach to delivering outputs provide the best option in terms of meeting the objectives of the RIIO model. For example, they may need to identify the net present value of costs over the long term, the impact on delivery of primary outputs and degree of risk associated with these, and any margin of error in relation to assumed demand for network services;
- **an open minded consideration of available options:** the company will need to show that they have considered alternative ways to deliver outputs, where relevant, and provide credible evidence suggesting that their preferred approach gives long-term value for money. For example, they should consider whether to pursue a capital investment solution or an operating cost solution. They should also identify synergies across projects where these can provide long-term value for money without jeopardising delivery of primary outputs;
- **link between costs and primary outputs:** the company should demonstrate how the revenues it will raise from consumers will allow it to deliver the primary outputs developed through enhanced engagement and defined by us;
- **a consideration of the longer term**: the company should set out how their proposals for the eight-year control period sit within a longer-term strategy for delivery of sustainable network services. They should show that they have considered not only the expenditure they will need for the duration of the eight-year control but also the implications this will have for required investment and associated efficiency beyond the control period. They should also justify expenditure in the eight-year period in the context of a longer-term strategy, particularly where it relates to asset management;
- **value for money**: the company should demonstrate how its proposed approach will ensure value for money for consumers over the long term, having considered all other options available. This may involve seeking to keep options open for

future development of the network where robust option analysis suggests this could deliver value for money for existing and future consumers;
- **effective engagement with a range of stakeholders:** the company should demonstrate how they have taken account of the views of stakeholders in developing their plan, setting out what engagement was undertaken and how the engagement informed the company plan; and
- **working with others:** network companies should show they have considered whether and how to work with others in the industry or in other sectors (e.g. communications companies) to identify potential joint solutions that may provide long-term value for money.

7.5. As part of the business plan, network companies will also need to include their views on the revenues they will require to ensure the delivery of outputs in line with the approach they are intending to adopt over the coming price control. This should include reference to the risks they anticipate they will face and the cost of capital they would require to ensure that the package was financeable.

7.6. We provide further details below of the type of information that should be included in the plan to meet these criteria.

7.7. We expect network companies to take responsibility for providing relevant information and evidence to justify their proposals on what is being delivered, how best to deliver and hence on the revenue they wish to raise from consumers. We expect the network companies to take a proportionate approach to developing their business plans, placing emphasis where it adds most value. The type and level of information required will vary by type of expenditure. For example, we might expect more specific justification and evidence for high value projects, projects where there is uncertainty about what needs to be delivered (or when), activities relating to meeting the needs of future consumers and/or new types of activities. At the other end of the spectrum, we do not expect network companies to justify every pound spend on maintenance separately. It is the overall approach or strategy to maintenance that we expect to be justified, closely linked to network risk.

Outputs at the heart of the business plan

7.8. Consistent with the objectives and structure of the RIIO model, we expect network companies to present business plans that are centred around delivery of primary outputs and, where relevant, secondary deliverables. We expect the network company to set out what performance level they are proposing for the primary outputs. As discussed in paragraphs 6.53 to 6.55, where the network company is proposing a performance level different to Ofgem's baseline level for the sector a clear justification of this variation will be needed, linked to delivery of the objectives of the RIIO model.

7.9. The network company should set out how it will deliver primary outputs and secondary deliverables over the price control period as well as proposals on the efficient costs it needs to raise from consumers to ensure delivery. This will be about making a solid business case for proposed costs. We discuss below (paragraphs 7.18

to 7.22) how we expect network companies to assess different ways of delivering. As far as possible in its business plan the network company should link costs to delivery of primary outputs and secondary deliverables. However, we recognise that this may not always be feasible, particularly where a capital investment or operating decision is intended to deliver a number of outputs simultaneously.

7.10. Network companies will be held to account to deliver primary outputs and secondary deliverables. Where network companies provide evidence in their business plans of the way they will deliver the primary outputs, this will inform our judgment of whether the plan is well-justified and whether it suggests that a company will be able to deliver the required outputs at long-term value for money. This in turn will provide the basis for our confidence in the base revenue sought by the company and inform our decision as to what proportion of this to include in final price control proposals. However, we recognise that circumstances change and we will not hold companies to the specifics of their business plans. Indeed, we expect network companies to update their decisions on how to deliver during the price control period as new information becomes available.

Setting the plan in a longer-term context

7.11. Network companies will need to consider the longer-term context when setting out their plan for an eight-year price control period. They should consider what outputs they will need to deliver over time, taking account of long-term government targets for example, and what the potential demand for network services might be over a long-term horizon (e.g. 25 years). The longer-term strategy will be based on a view of future demand, underpinned by a range of potential scenarios. A company's strategy for delivering outputs and meeting demand over the long term should set the scene for proposals on the eight-year price control period.

7.12. This is not about providing detailed cost and activity data for a long time period. It is about focusing on the long-term implications of today's decisions and thinking about delivery choices focused on long-term value for money. For example, a network company should consider the costs of reinforcing the network in the context of a twenty five year asset management plan rather than in the context of what is needed for the price control period itself. The network company should also use the longer-term context to identify aspects of the business plan where it may be appropriate to keep options open, based on robust option analysis, given uncertainties about the future. The longer-term context may also be used by the company to assess and explain the potential risks associated with their plan, informing their view on the required cost of capital.

7.13. We expect the network company to keep its long-term strategy under review over time, certainly from one price review to another but potentially at other intervals as new information becomes available on what it is expected to deliver and on demand for network services over time. There are areas where we expect consistency over time, for example in the strategy for asset stewardship, but other areas where changes might be expected. Where the long-term strategy varies significantly from previous plans a clear justification should be provided.

7.14. Box 5 sets out the expected effect of this longer-term thinking on the justification provided by network companies for planned expenditure linked to long-term value for money and delivery of primary outputs over time.

Box 5: Well-justified business plans and delivery of longer-term projects

There are a number of challenges currently facing the electricity industry. In particular, the government's target to reduce total UK carbon emissions by 80% by 2050 is likely to require investment in transmission and distribution to accommodate new generating facilities and new ways of operating, both of which will need to be taken forward in innovative ways. It is also likely that the system will need reinforcement, in terms of available capacity, to meet the demands of its users.

To ensure that the capacity to support new facilities is available when it is required, network companies may need to anticipate where and when to invest and consider the appropriate timeframes associated with delivering key projects. When forming a view on future demand for network services, and hence on the need for investment, network companies should take account of information on upcoming projects, the proposed future plans of their current (and future) network users and wider government policy (e.g. on nuclear generation, CCS, feed-in tariffs and renewable heat incentives). In addition, where they demonstrate ongoing effective engagement with stakeholders, and government where relevant, this will help to provide the required justification for the project. Their case may also be strengthened where they have considered other potential delivery solutions, including operational solutions such as demand side management and alternative asset-based solutions. The network operator should set out its strategy for meeting the anticipated need in a long-term context (longer than the length of the price control) and provide details of what is being delivered along the way (e.g. provide details of milestones and/or secondary deliverables). They will be expected to explain how the proposed expenditure links to delivery of these secondary deliverables.

In gas transmission the decision on whether to invest is largely driven by the market mechanisms in place. However, the network company has a reasonable endeavours licence obligation to substitute capacity in a manner consistent with its duty to maintain an efficient and economical pipeline system. Given uncertainties about future system demand, it will be increasingly important that the company explores the potential for substitution of capacity in the most effective way.

Engagement with stakeholders

7.15. Network companies will have to demonstrate effective engagement with their stakeholders on the development of their business plans. As set out in Chapter 3, engagement should take place on an ongoing basis, including at all stages in the development of their price control review business plans. It will be important for network companies to show how engagement has impacted their business plans and, where they have not addressed stakeholder concerns, they will need to have robust reasons for this. Where there is evidence of effective engagement, we will need to assess whether a clear link between primary outputs and costs of delivery has been identified.

7.16. As illustrated in Table 1 in Chapter 3, we will assess the quality of stakeholder engagement demonstrated in network companies' business plans. We will have particular regard to the credibility of the views network companies have obtained through stakeholder engagement given the results of our own enhanced engagement and, where relevant, findings of engagement taken forward by other network companies. We will consider the range of stakeholder views that had been sought, the issues on which their views had been sought and the way the engagement was carried out. Business plans could also be peer reviewed by stakeholder representatives to stress test their quality. For example, the Consumer Challenge Group could undertake a review of the business plans, in their role of 'critical friend', to determine whether the methods used were appropriate given the consumer audience involved.

7.17. Effective engagement with stakeholders should include engagement on the implications for charges. A well-justified business plan will include details of this engagement. In particular, it should outline the information provided to stakeholders to allow them to calculate the effect on their charges of various different scenarios and associated revenues, given the charging structure in place at the time of the price control review. This will provide the means by which a range of different types of consumers could attain an indication of the way their charges may be affected. It may also result in stakeholders encouraging network companies to consider whether and how alternative charging arrangements may contribute to delivery of primary outputs and long-term value for money.

Demonstrating long-term value for money

7.18. The objectives of the RIIO model clearly indicate that we want network companies to focus on delivering long-term value for money for existing and future consumers. This is about delivering primary outputs over time and finding solutions that are lowest cost over the long term (not just during the price control period). We recognise we are asking companies to do this at a time of change where there is uncertainty about how best to deliver and the long-term costs of delivery. Indeed, this uncertainty is driving the need for new ways of thinking about how best to deliver and the need to assess business plans in different ways from the past.

7.19. The RIIO model is designed to encourage and reward open minded, longer-term, innovative thinking by network companies when deciding how best to deliver. With the wider range of choices facing network companies, the best value for consumers now and in the future might be obtained where:

- costs are minimised over a period longer than the control period;
- options are kept open, with changes made to delivery solutions as more information becomes available;
- network companies are incentivised to try different or new approaches to delivery as a means of finding the lowest cost way of delivering particular outputs;
- synergies across projects are identified and capitalised on; and/or
- choices between delivery solutions reflect views from a range of stakeholders.

7.20. We expect network companies to justify their proposals for delivering primary outputs and secondary deliverables by providing a 'needs case' for their proposals. The longer-term strategy developed by network companies, including forecasts of expected demand, and enhanced engagement should provide part of the evidence base. The network company may also identify other evidence to support its case.

7.21. Network companies will need to demonstrate that their proposals are lowest cost over the long term. We expect network companies to consider a range of options for delivering primary outputs and explain why their proposals are the best way forward. When making the case for their preferred proposal we expect network companies to demonstrate that they have considered the long-term costs and benefits of the most viable options. As part of this companies should not only consider financial costs but also the cost to the environment and any social impacts that may result. Primary outputs related to the environmental impacts of network services and meeting social obligations should encourage network companies to do this. If the network companies include proposals in their plan to undertake activity in the eight-year price control period to assist with value for money delivery of primary outputs in the future they will be expected to demonstrate how this approach results in lower long-term costs than the alternative.

7.22. Network companies should determine the evidence required to demonstrate that their proposals deliver long-term value for money. In our business plan guidance we provide indications of the type of information we might expect[8]. This could include, for example, comparisons with past performance, bottom up benchmarking of activities with appropriate comparators (not necessarily in the sector), market testing evidence and assessment of input price trends. We expect the network companies to make reasonable endeavours to obtain the information needed to make their case but to be proportionate and focus effort on where it is expected to add most value. We also expect network companies to provide evidence that is helpful to their case and to present it succinctly and in an accessible format. This will affect our assessment of the quality of the well-justified business plans.

Thinking about keeping options open

7.23. When considering how best to deliver outputs over time, a network company may have to choose between taking a course of action that closes down alternative options for the future or taking a different course of action that keeps options open. For example, a network company could expand the network with additional capacity for the next 40 or 50 years or it could use operational solutions to manage capacity in the short-term and keep expansion options open until better information is available about how much capacity is needed over the long term. The network company will need to undertake robust option analysis, taking account of the long-term benefits, costs and risks of the different approaches, to determine whether the 'keeping options open' route will provide long-term value for money for consumers.

[8] Our Business Plan Initial Guidance for TPCR5 and GDPCR2 was attached as Annex C to 'Open letter consultation on Transmission Price Control Review 5 (TPCR5) – the way forward' available from: http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=1&refer=Networks/Trans/PriceControls/TPCR5/ConRes

7.24. We expect this analysis to be presented in the well-justified business plans for large long-term projects and/or where there is significant uncertainty about what needs to be delivered and when (because of uncertainty about the nature and location of demand for network services for example).

Box 6: Options available to network companies to deliver against outputs

A network company is considering extending and reinforcing its network in part of its area. Three options are being considered.

Options

1. Commit to small upgrade;
2. Commit to large upgrade; and
3. Commit to small upgrade now but combined with preparatory work that retains the possibility of expansion works later in the control period.

The costs over time and the impact on outputs are likely to vary between the options. In addition the 'needs' case for different options will depend on the degree of uncertainty around demand forecasts and the risk to delivery of primary outputs. The well-justified business plan might propose option 3 above, as opposed to closing down options at this time, by comparing the net present value cost and choices in terms of impact on, and risk to, delivery of primary outputs. It will separately need to show how its choice is affected by the degree of uncertainty in its volume forecasts.

7.25. Keeping options open for a time may deliver longer-term value for money; particularly where it allows information to be obtained that reduces uncertainty or enables synergies to be identified. As with other aspects of the business plan the onus will be on network companies to justify their preferred approach. The business case should include, but will not necessarily be limited to:

- evidence on the net present value of costs of delivery of the alternative options including evidence on option value;
- evidence on the impact on delivery of primary outputs including an assessment of the potential risk to delivery; and
- information on the assumed demand for network services (volume) and the confidence interval around this assumption.

Data requirements

7.26. As far as possible we will not set a template for the network companies' business plans. We recognise that different companies will want to take different approaches to making their case and we hope that the absence of a template will encourage them to think for themselves taking account of the views of stakeholders on the best way to deliver and how best to make their case. We have, however, set out in business plan initial guidance what the network company should include in the plan for it to be considered well-justified.

7.27. We discuss in Chapter 8 how we intend to assess base revenue requirements and in Chapter 6 how we intend to form a view on the company performance level for primary outputs. Both will be informed by comparisons of plans from network companies in a given sector. It is therefore important that we collect relevant data in a consistent format and, to facilitate this, we will issue a data template to all companies, for submission at the same time as business plans. The data will need to be consistent with what is included in the business plan. We will aim to limit the scale of the data requirement by making use of information obtained through annual reporting packs and streamlining data requirements necessary for our output, cost assessments and other areas in which we may request data to inform the price control. This may mean we will need to ask for more data at a later stage in the price control review period if we find that required data was not included in the original request.

Encouraging network companies to submit well-justified plans

7.28. There are a number of reasons why a network company will have an incentive to submit a well-justified business plan:

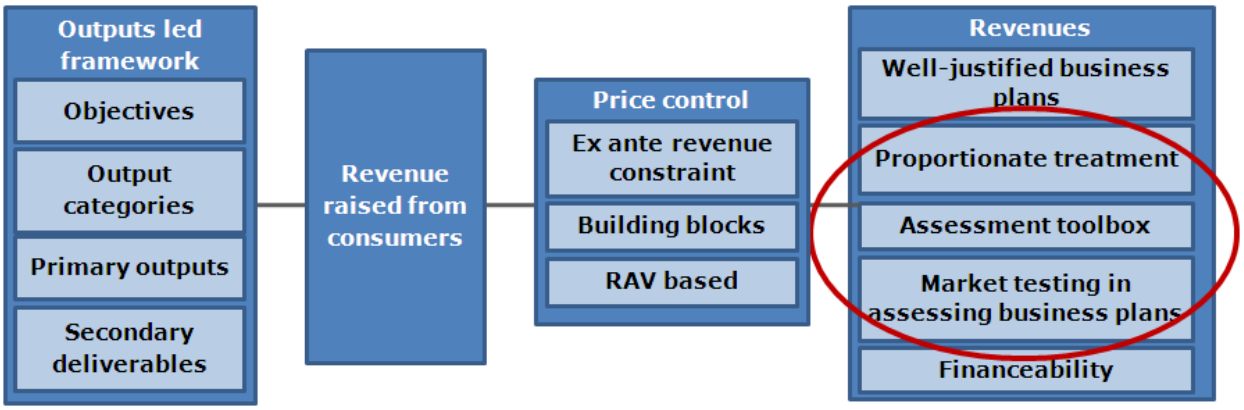
- it is more likely that the final price control will reflect what is in the plan;
- the use of the Information Quality Incentive (IQI) provides a financial incentive for companies to spend the time and resources necessary to produce high quality and well-justified business plans;
- the company is likely to be subject to less intensive scrutiny;
- the company's price control may be set earlier than others, freeing them up to focus on delivery of network services; and
- the company's reputation will be higher with stakeholders and Ofgem.

7.29. The onus is on the network companies to provide a well-justified case to support their proposed plans for the eight-year price control period (in a longer-term context where relevant). We discuss how we will assess plans in Chapter 8. Our starting point will be to focus on the quality of the justification and the process used to make the case. Where we are comfortable with this, our assessment of base revenue is likely to be based on a cost forecast linked to that in the business plan. The nature of the link between Ofgem's view and the company's plan will depend on how the network company responds to our concerns on elements of the plan.

7.30. If a network company fails to provide robust evidence to support its plan the final price control proposal is likely to be informed by a wider range of evidence than the company's own plan, including benchmarking evidence. Hence the base revenue is likely to be different to what the company proposed. The approach we adopt may vary for different aspects of the plan – for example we may undertake a detailed bottom-up assessment for large projects and for other aspects of the plan apply an assumption on the percentage reduction that we think can be applied to the network company's proposed costs to bring them in line with what we consider is efficient over the longer term. With this approach our view of expected efficient costs may be very different from the companies' view. These companies are also more likely than those with a well-justified business plan to be asked to provide more evidence, including (potentially) market testing evidence, to support their proposals.

8. Proportionate assessment of value for money expenditure

Chapter summary
We set out how we will consider what the 'value for money' or 'efficient' level of total costs is for the longer term to feed into our decision on the base revenue required for the price control period.



8.1. Base revenue in a network company's price control will be set to reflect our assessment of expected efficient costs required, during the eight-year control period, to deliver the primary outputs over time and to deliver long-term value for money. The assessment of expected efficient costs required by a network company will be largely based on our assessment of the company's business plan. Other information, for example information in other companies' business plans, international benchmarking evidence and information on historical performance will also be used to inform this assessment.

8.2. We set out here how we will assess expected efficient costs required by a network company in a proportionate way. We describe the range of tools that could be used in the assessment, including market testing, to inform our assessment of efficient costs. We also explain how the assessment of expected efficient costs will feed into final price control proposals.

Basis of assessment

8.3. We set out in Chapter 7 what we will be looking for in a network company's well-justified business plan. This illustrates the type of information that we will be assessing to determine base revenue.

8.4. Ultimately what we are doing is making an assessment of what level of costs is expected to be consistent with delivering primary outputs over time at long-term value for money. This should mean that cost savings are delivered in a price control period, so long as they do not jeopardise delivery of primary outputs over time or result in higher total costs over the long term (i.e. because cost savings today lead to a need for higher expenditure in the future). Long-term value for money should

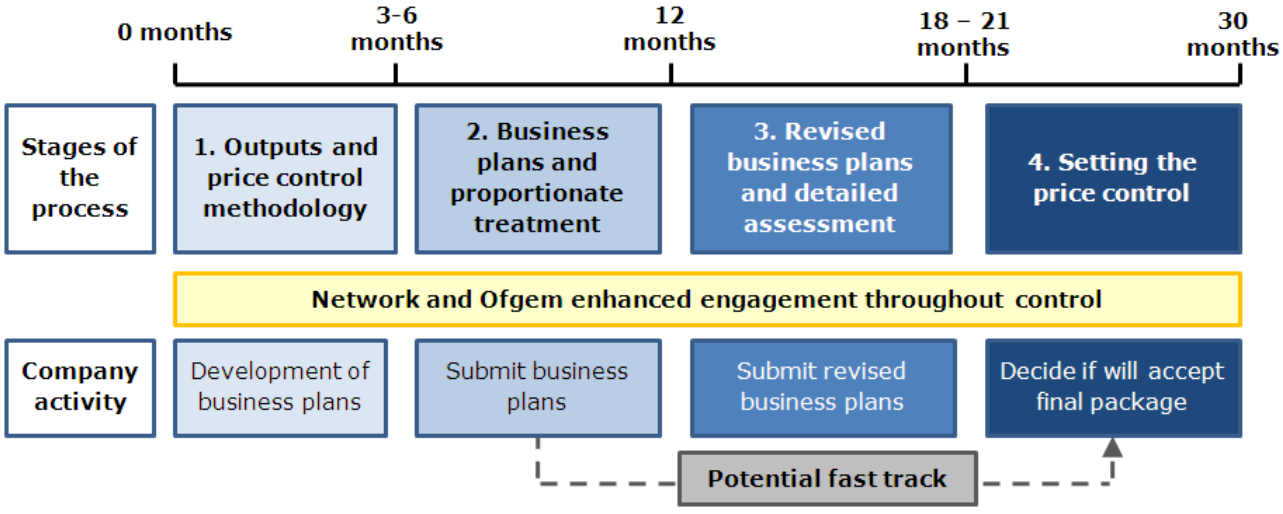
also mean that in some cases companies spend more in one period with an expectation of reducing costs in the future. For example, they may invest in a new technology in one period which they expect to reduce future maintenance costs.

8.5. The focus on long-term value for money may have implications for how we assess base revenue requirements. The focus on total costs of delivery, rather than specific cost categories (notably operating costs and capital costs), also has implications for the decisions that network companies make and for our assessment of the efficient cost of delivering outputs. As part of this we will need to take account of any potential synergies across different projects. Furthermore, when network companies are making decisions to keep options open, in light of robust option analysis, the implication of this decision for value for money over the long term needs to be included in our assessment of base revenue.

Our approach to proportionate assessment

8.6. We will take a proportionate approach to assessing base revenue for the network companies. In particular, our approach to assessing network company plans will vary according to (a) the quality of the business plan submitted and (b) the network company's performance in delivering outputs and value for money in previous periods. We set out below our two-step approach to the assessment. Within this section, a number of references are made to the timings associated with the price control review and therefore the stages of the price control are reproduced here for reference. A more detailed overview of the process is provided in Chapter 2.

Figure 19: Overview of the stages of the price control review process

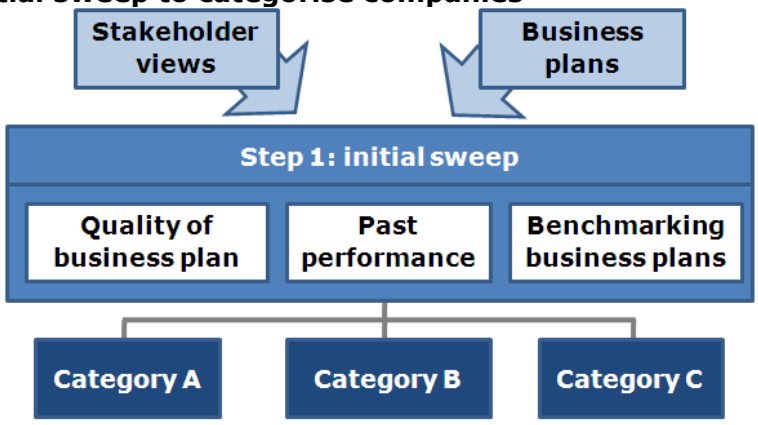


8.7. Proportionate treatment is intended to incentivise network companies to submit well-justified business plans and perform well in the delivery of outputs. It will also allow us to focus effort where it is most needed while allowing those network companies that provide well-justified business plans to spend less time focused on Ofgem's price control review and more time on running their business.

Step 1: Initial sweep and categorisation of companies

8.8. When network companies submit their business plans to us, we will undertake an initial sweep of the information to determine how to take forward our assessment of the expected efficient costs of delivery for each company. The process to be followed is illustrated in Figure 20. We will aim to complete the initial sweep within a short period of time although we will ensure that we take the time necessary to undertake the required analysis.

Figure 20: Initial sweep to categorise companies



Step 2: Implications for assessment			
	Category A	**Category B**	**Category C**
Intensity of scrutiny	Low	Moderate	High
Typical assessment method	➢ Review/follow up questions ➢ Short assessment of business plan	➢ Focus on deficiencies in plan/past performance ➢ Analysis of condition of formerly unreliable assets ➢ Random inspections	➢ Full engineering and policy based analysis ➢ Follow up analysis ➢ May require significant new data from company
Timing of final proposals	Potentially early settlement	Final proposals (stage 4)	Final proposals (stage 4)

8.9. The purpose of the initial sweep is to identify those companies that we might subject to less scrutiny during the price control review (category A) and those that might need to be subject to more intensive scrutiny. The sweep will be based on combined evidence from three sources:

- our review of the quality of the business plans;
- performance during the previous regulatory control; and
- benchmarking of business plans.

8.10. For a network company to achieve initial sweep results that place it in category A, it should demonstrate good performance on the basis of our assessment of these

areas. This will help to avoid the risk that we might erroneously identify good performance based on a single data source. In the first round of reviews where the RIIO model is being implemented (TPCR5/GDPCR2/DPCR6), we will need to take account of historic output delivery performance and will aim to make use of measures that are already used in the sectors. For example, in DPCR6 we will be able to make use of data on customer interruptions and customer minutes lost from the DCPR5 period, among other indicators. In GDPCR2 we can draw on the capacity targets that were put in place at the last gas distribution price control review. While outputs are less developed in transmission, there are some measures which could be drawn upon including the output measures developed in electricity transmission following TPCR4 and the reliability incentive targets established at TPCR4. From a gas transmission perspective, capacity release measures might be used as part of assessment of past performance.

Review of quality of the business plan

8.11. We will assess the business plans to determine if they are well-justified (our interpretation of 'well-justified' is set out in Chapter 7). We will aim to reach a view on the quality of the business plans, and on whether they are on track in terms of meeting our view of what is 'well-justified', in a relatively short period of time.

8.12. We will focus on identifying whether the business plans demonstrate evidence of delivering primary outputs consistent with the views of stakeholders and, more generally, delivering long-term value for money sustainable network services. We do not anticipate undertaking a detailed assessment of the plans at this stage but we will expect to ask clarification questions on the plans during this assessment.

8.13. A balance will need to be reached between adopting a proportionate approach, which will allow us to form a view relatively quickly, and ensuring that sufficient scrutiny has been given to plans to enable us to categorise companies. This is particularly important in the context of putting companies into category A and thereby subjecting them to less scrutiny for the remainder of the price control review. If we have any doubts about the quality of a company's plan at this stage in the process we will be unlikely to place them in category A and will likely proceed on the assumption that further assessment is needed, with the extent of assessment depending on the nature and scale of concerns with the plan (and the updated plan submitted in Phase 3 of the price control review process).

8.14. We will seek to obtain views from network companies and stakeholders on our initial conclusions, potentially through existing engagement activities (outlined in Chapter 3) or through a short formal consultation.

Assessment of past performance

8.15. The assessment of past performance will include a review of performance in delivering outputs and a review of historic cost efficiency. This assessment will look at performance over the current control period. In an eight-year price control we will have about five years of data. We may need to consider data from the immediately

preceding price control review in the first reviews to follow this approach. We will aim to undertake the assessment in Stage 1 of the price control review, presenting our findings in the 'Strategy for the Review' consultation, and we may update it at the time of the initial sweep if an additional year's worth of data is available.

8.16. The review of output performance will relate to both primary outputs and secondary deliverables. The balanced scorecard approach to assessing company's performance in the round in output delivery (outlined in paragraphs 9.29 to 9.33) will provide the main tool for informing this assessment.

8.17. We expect that as information on output delivery performance will be collected on an annual basis during the price control period, this assessment will be completed early on in the review and should not contain surprises for network companies or stakeholders.

8.18. Before taking a view on the overall record of delivery, we will take account of reasons why outputs might have been different to the performance level assumed at the time the price control was set. For example, if we had determined during the price control period it was appropriate for a secondary deliverable to not be met, because this was in the interest of long-term value for money, we would not expect to penalise the company in the sweep for not meeting this deliverable.

8.19. A potential range of options are available to us to undertake a high level assessment of historic cost efficiency during the most recent price control period. These include, but are not necessarily limited to:

- benchmarking of total costs;
- benchmarking of specific categories of costs (e.g. IT costs, network operating costs);
- assessment of trends in productivity improvements over time; and
- international benchmarking.

8.20. We discuss the role of benchmarking in the assessment tool-kit in more detail below. We recognise that the appropriate tool, or set of tools to use, will vary by sector and depend on data availability. In any case, we will form a high level view on the relative efficiency of a company to inform our decision on what category a company should be placed in. The assessment will not be linked, in a direct or mechanistic way, to our assessment of the expected efficient costs, and hence base revenue. However, it will clearly be an important starting point for that assessment.

8.21. Like the assessment of output delivery the assessment of historic cost efficiency will initially be undertaken in Stage 1 of the review, and published in our 'Strategy for the review' consultation paper. It will be updated for the initial sweep with data for another year if available. In some cases the assessment may relate to work undertaken during the price control period. For example, we may undertake spot checks on IT cost efficiency during the price control period. We will also make use of any annual assessment of cost efficiency that we have undertaken during the price control period.

Benchmarking of business plans

8.22. As part of our assessment of the quality of a network company's plan we will benchmark the forecast costs to others in the sector where feasible. We will also compare the costs in the plan to historic cost performance although we recognise that, given the changes that network companies are undergoing, these comparisons may need to be treated with caution.

8.23. The benchmarking of plans will be based on the total costs of delivering the baseline performance level for primary outputs set in Stage 1 of the review. This will be the case even where a company is proposing an output level different from that set by us at Stage 1. The purpose of this exercise is to identify outliers and to provide a starting point for further assessment of plans. There will not be a mechanistic link between relative performance in this benchmarking exercise and base revenue. The assessment will be one piece of evidence used to inform our decisions on how to categorise companies in the initial sweep. The benchmarking of forecast costs is clearly not an exact science and we will treat the results with appropriate caution when making our decisions.

8.24. Further details on how benchmarking of business plans will work is provided below and in the Frontier Economics report. We will set out how we will take forward the benchmarking of plans at each sectoral price review in our 'Strategy for the review' consultation paper at Stage 1.

Step 2: Determine how to take forward assessment for each category

8.25. Our proportionate assessment of the network companies will depend on the category that they are placed in:

- companies in category A will be subject to relatively lower levels of scrutiny of their business plans, with an expectation that our assessment of primary outputs, secondary deliverables and expected efficient costs will be close to the proposals in their business plan. Although less likely, putting a company in category A will not preclude us from considering the option of giving third parties responsibility for delivery of large projects in a network company's plan (see Chapter 13);
- companies in category B will receive relatively higher levels of scrutiny of their business plans, with the level potentially similar to what companies experienced in price reviews in the past; and
- companies in category C will be subject to the most intensive assessment. For example, we might send in engineering experts to consider in detail the justifications that network companies have provided for the asset strategies proposed. Our questions will be likely to focus particularly on areas of failed past delivery and areas of their business plan highlighted as potentially inefficient compared with those of other network companies. This focus will help to highlight material inefficiencies and allow us to implement more significant reductions to the base revenues in such cases.

8.26. Where we are confident that the business plan of a company in category A is well-justified and provides value for money for consumers over the long term we may reach an early decision on the company's final proposal. A company could be 'fast tracked' in this way after the initial sweep and, as illustrated in Figure 19 above, would be fast-tracked from Stage 2 when the initial sweep took place to Stage 4 and its final proposals. If we decide to fast-track a company there will be a consultation on the final proposals for that company during Stage 2.

8.27. We discuss below the range of tools that could be used to assess base revenue for companies in categories B and C. The tools used will vary depending on whether a company is in category B or C. The detailed assessment will be carried out on the revised business plans submitted in Stage 3 of the price control review process. It is this assessment that will inform our initial and final price control proposals. We expect these updated plans to be closely aligned with the business plans submitted in Stage 2 but with updates for new data, changes to take account of updated views from stakeholders where relevant, changes to take account of concerns and clarifications raised by us on the business plans, and corrections for any errors in the original plans.

The assessment tool-kit

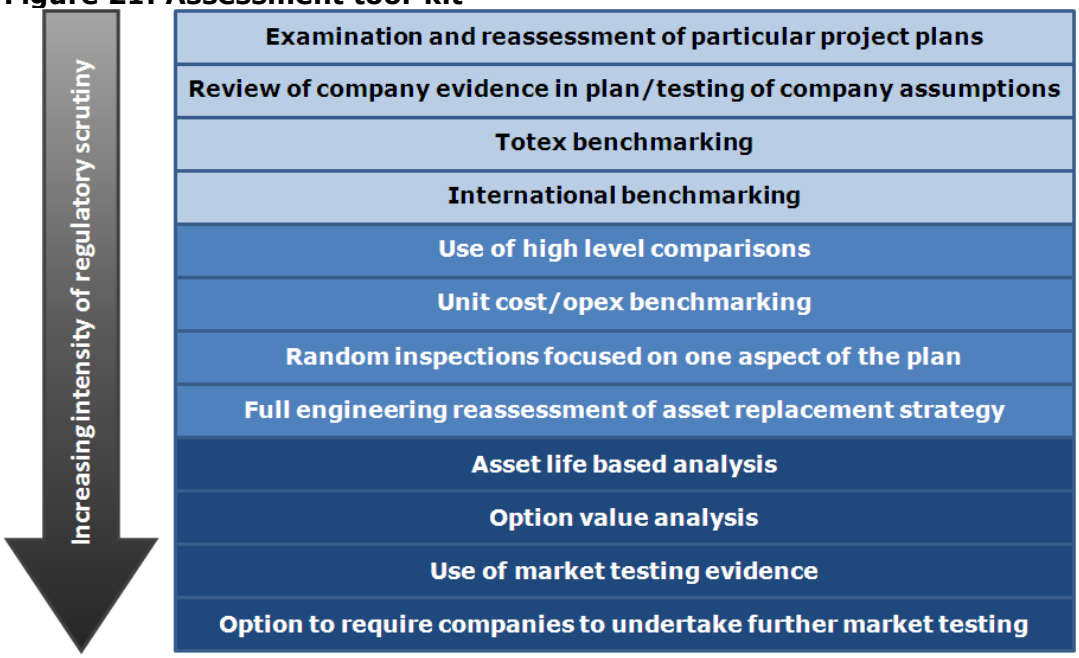
8.28. Our assessment of business plans will be proportionate, both in terms of categorising company plans at the initial sweep and assessing the plans. We will focus on the aspects where most value can be added through regulatory scrutiny. We do not envisage, except where justified by cost or uncertainty reasons, focusing intensive scrutiny on each project or individual programme of activities. However, as explained below we might apply a more detailed level of scrutiny to a random area of the plan. This should act as a discipline to encourage network companies to consider carefully all aspects of their plan.

8.29. We will use a range of different tools to assess the base revenue requirement and elicit information about the expected efficient costs for a company to deliver primary outputs over time and long-term value for money. Our decisions on the tools to use will depend on the quality of the business plans and the specific aspects of the plans that concern us as well as the cost at stake. For example, if we are concerned about telecoms costs we may use benchmarking to get a better view of what efficient telecoms costs might be. In contrast, if we are concerned about the needs case for a particular capital investment, or indeed the design of an investment project, then using experts to assess the proposal from a detailed bottom-up perspective may be appropriate.

8.30. A range of information will be used to inform our assessment of a company's base revenue in the price control. When submitting their business plans companies will know that if proposals are not well-justified and not credible they will be scrutinised at a greater level of detail. However, they will not know the precise form that scrutiny might take. As such, companies will not have an incentive to adjust their plans to perform well in one assessment (e.g. an operating cost benchmarking study). Instead, the approach will encourage companies to ensure the plan as a whole, and all components of it, are well-justified.

8.31. Figure 21 provides some examples of the tools that could be used as part of our assessment tool-kit. We may develop others during the course of price control reviews and some may be used rarely but remain in the tool-kit as an option. There is a mix of familiar methods (e.g. cost comparisons, assessing project plans) and new methods (e.g. option value analysis and random inspections) in the tool-kit. We set out below further details on the option of requiring network companies to undertake further market testing to inform our assessment of base revenue as well as our revised approach to benchmarking.

Figure 21: Assessment tool-kit



8.32. As discussed in Chapter 7, a company may wish to propose delivery solutions that involve keeping options open for the future in their well-justified business plan. We will assess the robustness of the evidence provided by the company in demonstrating that the strategy of keeping options open delivers long-term value for money for consumers. For high value projects we will expect to see evidence that this strategy has been considered alongside others which involved not keeping options open. We may need to develop new tools which enable us to effectively evaluate option value analysis undertaken by the company to support their case.

8.33. Where we are convinced that a strategy involving keeping options open is long-term value for money for consumers we will reflect the associated expected efficient costs in the assessment of base revenue. If a network company chooses to take a different course of action during the price control period, choosing a new strategy and potentially closing down future options, any associated variation in costs relative to what was assumed at the price control review will be shared with consumers through the upfront efficiency incentive rate in the normal way (Chapter 10). In some cases the course of action may be linked to an uncertainty mechanism in which case revenue will be adjusted during the price control period in line with the design of that mechanism. Similarly allowed expenditure may be linked to a secondary

deliverable and the arrangements for dealing with non-delivery will be in accordance with our general approach to secondary deliverables discussed in Chapter 6.

Random inspections

8.34. As part of our proportionate assessment we will include the option to carry out random detailed inspections, involving regulatory scrutiny in one area, of certain aspects of a business plan. The inspections might relate to type of cost (e.g. IT) or to a specific project. Rather than assess all aspects of a plan in detail we will complete spot checks in certain areas to form a view on the credibility of the company's proposals. The results of this assessment might have implications for the plan more widely. This approach is likely to be particularly valuable for category B companies.

8.35. The company will not know what area of its plan might be subject to a random inspection in advance and will therefore have to ensure that all aspects of the plan could stand up to scrutiny.

Role of benchmarking in the tool-kit

8.36. As discussed in the context of our approach to proportionate assessment we will benchmark historic costs and future plans to inform our decisions on what category a company should be placed in, in line with the recommendations of the Frontier report that we commissioned in this area[9].

8.37. When undertaking benchmarking analysis we will consider the following principles:

- total costs should be the basis of assessment given the ambition to avoid biasing the network company into particular solutions (e.g. capex solutions over opex);
- we do not expect to use total cost benchmarking in a mechanistic analysis of the base revenue requirement given potential concerns about the robustness of the analysis; and
- no single measure of total cost is ideal, particularly given the lumpy nature of capital expenditure and variation in the historic capital investment programmes (and hence RAVs) of network companies in a sector, and it may be appropriate to use a number of alternative measures as cross-checks on the analysis.

8.38. When considering benchmarking at price control reviews we will take account of available information and the timescales in which we need to conduct the analysis. In this context, what is feasible may vary by sector and over time. We will provide clarity on our approach for each price control review in our 'Strategy for the Review' consultation paper, published during Stage 1 of the price control review.

[9] The future role of benchmarking in regulatory reviews, Frontier economics (2010) http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=18&refer=NETWORKS/RPIX20/CONSULTREPORTS

8.39. A number of detailed issues will need to be considered and developed as part of the price control reviews. This includes the specific design of any benchmarking model, e.g. the functional form and cost drivers to be used, as well as any new elements to be included in benchmarking to reflect implementation of the RIIO model. For example, it will be important to reflect primary outputs within the benchmarking analysis as far as possible. If, in practice, it is not possible to effectively incorporate performance on primary outputs into benchmarking analysis, we will need to think about other ways in which this could be reflected in the conclusions drawn from this analysis.

8.40. We recognise that work has been done to seek to make use of international comparator information in transmission, but a number of issues still need to be addressed, e.g. in normalising the data so as to inform comparison. It will be important to develop robust information in this area but the approach adopted will need to be considered in the context of each price control review.

8.41. There will not be a mechanistic link between the benchmarking assessment and our view on base revenue for a company. However, the benchmarking assessment at the initial sweep will be one piece of evidence used to inform our view. In particular we expect that for those companies in category B and C we will use the high level benchmarking analysis as the basis for raising questions with companies about their relative efficiency. In addition, it was also provide a means of engaging with them on whether they can provide further evidence to demonstrate that their proposals are relatively better value for consumers than those presented by their peers (including international peers if relevant) in the sector.

8.42. As Figure 21 shows we will retain use of other benchmarking models in the assessment tool-kit and may make use of these as additional evidence to support our assessment, e.g. comparison of specific categories of cost such as business support costs. In general we will be looking for network companies to take more responsibility for undertaking detailed activity-based benchmarking and/or benchmarking of particular cost types and present the evidence to us. However, where we have concerns about the evidence presented we may wish to undertake our own analysis using tools that we are familiar with (e.g. opex benchmarking models used in previous price control reviews). As with the other tools in the tool-kit we do not expect to engage in lengthy and detailed debates on the precise detail of the models used but instead discussions should focus on the extent to which they should inform our assessment of base revenue.

8.43. We will work with network companies and other stakeholders during the price control reviews to ensure we are adopting a proportionate approach to benchmarking. We will aim to balance the need to make the benchmarking analysis as robust as possible with the value to consumers of all parties spending time and effort to refine the analysis over a number of iterations.

8.44. We recognise that benchmarking cannot perfectly reflect all of the principles of the RIIO model, e.g. effective stakeholder engagement and innovation. This is why, where used, it is neither being used mechanistically nor exclusively of other evidence that allows these principles to be reflected.

Purpose of the IQI in the tool-kit

8.45. The Information Quality Incentive (IQI) is used to set the strength of the upfront efficiency incentives each company faces according to differences between its forecast and Ofgem's assessment of its (efficient) expenditure requirements. The aim of the tool is to encourage companies to submit more accurate expenditure forecasts to Ofgem.

8.46. Under the RIIO model, we will use the IQI in all four energy network sectors to provide financial incentives to encourage companies to submit more accurate expenditure forecasts than they would in the absence of the IQI. In particular, the IQI will provide:

- an additional financial motivation for companies to spend the time and resources necessary to produce high-quality and well-justified business plans; and
- a financial deterrent against the submission of inflated expenditure forecasts.

8.47. The use of the IQI will be subject to review in future price control periods. The incremental benefit of using the IQI depends on the contribution that the other tools in the assessment tool-kit can make. For instance, as companies become experienced in developing well-justified long-term business plans, and as we become experienced in assessing those plans, the incremental benefits of the IQI may reduce. At some point in the future, we may decide that the potential benefits of the IQI are not sufficient to justify the additional complexity and administrative burden that it brings.

Box 7: The IQI in theory and practice

In theory the IQI would ensure that profit-seeking network companies submitted an expenditure forecast to Ofgem representing its unbiased forecast of expenditure over the price control period.

However, there are a number of conditions necessary for the IQI to achieve this result. These include: (i) companies must be risk neutral in the sense that they are indifferent between a higher or lower efficiency incentive rate; (ii) the efficiency incentive rate must be implemented in a way that exposes each company to the desired strength of incentives; and (iii) Ofgem must set the price control using an assessment of expenditure requirements that is completely independent of the company's own forecasts.

There is some uncertainty as to how well (i) and (ii) will be met in practice, but this will largely depend on the way in which the IQI is calibrated and on other aspects of the regulatory framework (e.g. how the allowed cost of capital reflects the financial risks that companies face). Condition (iii) is more fundamental. Even if it were possible to set price controls completely independently from companies' forecasts, to do so would deny Ofgem one of the main (arguably only) benefits of the IQI: to deliver improvements to the information that Ofgem can use to set price controls.

Under the RIIO model, there will be an opportunity for each company's forecasts to influence Ofgem's assessment of its expenditure requirements. The extent of influence will depend on how well the company supports these forecasts in its business plan. If a company supports its expenditure forecasts with a sufficiently well-justified plan, our assessment of the company's expenditure requirements may match those submitted by a company. At the other extreme, where a company's business plan is not well-justified, we will be able to put aside the company's forecasts and make our own assessment of the company's expenditure requirements drawing on other sources of data.

Under this approach, the IQI will not guarantee the theoretical results that are sometimes claimed. Instead, the role of the IQI will be to bring incremental benefits to the quality of information that companies submit in their business plans, as compared to that submitted in the absence of the IQI.

8.48. Under the RIIO model there will not be wholesale changes to the mechanics of the IQI compared to the approach taken in DPCR5 – although there may be some adaptation. For example, there will be changes to the way that the IQI is calibrated during the price control process. This is intended to ensure (i) that we retain sufficient control over the strength of the upfront efficiency incentives and (ii) that the way that the IQI is integrated into the price control review process allows the option of fast-tracking a company that provides a sufficiently well-justified business plan. These two aspects are discussed below.

Control over upfront efficiency incentives

8.49. Under the RIIO model, there will be more emphasis on upfront efficiency incentives as set out in Chapter 10. A necessary feature of IQI is that different companies will face different efficiency incentive rates. The efficiency incentive rate for a specific network company will depend on the ratio between its expenditure forecast and Ofgem's assessment of its expenditure requirements as well as the parameters used to calibrate the IQI. The extent to which the efficiency incentive rates vary across companies depends on how the IQI is calibrated.

8.50. Whilst using the IQI means that we cannot apply the same efficiency incentive rate across all companies (e.g. 50 per cent), we can operate the IQI in a way that allows us to control the broad level and spread of the efficiency incentive rate. For instance, we might choose to limit the efficiency incentive rate to a range of 40 to 50 per cent. We could achieve this if we calibrate the IQI in light of information on (i) each company's expenditure forecasts and (ii) our assessment of each company's expenditure requirements.

8.51. Under this approach, we will set out early in the price control review our intentions on the maximum and minimum efficiency incentive rate that companies should face. We will then calibrate the IQI to achieve this. We will use the principles and guidance set out in Chapter 10 to choose the maximum and minimum levels. In doing so, we will recognise that if too narrow a range were chosen, this could dampen the financial incentives from the IQI for companies to submit more reliable expenditure forecasts.

8.52. It may be helpful to provide an indicative calibration of the IQI early in the price control review process, based on assumptions about company forecasts and Ofgem's assessments, and highlight how we will vary the calibration if either of these differed from the assumptions.

8.53. Under this approach, companies will not have clarity over the impact that changes in their forecasts will have on their allowed revenue under the price control. But this is always the case with the IQI if companies submit their forecasts before Ofgem makes it own assessment of expenditure requirements. Our approach will provide companies with more certainty than at present as to the range of efficiency incentive rates that they could face.

Integration of IQI within price control review process

8.54. The use of the IQI is consistent with the option to fast-track a network company during the price control review process if the network company provides a sufficiently well-justified business plan. The process will work as follows:

- we will set out the maximum and minimum incentive rate that companies will face under the IQI, before companies submit their forecasts;
- any fast-tracked companies will face the maximum efficiency incentive rate;

- when the IQI is subsequently calibrated, the fasted-tracked company will not lose out on any financial rewards that it would otherwise have received through the IQI (taking its expenditure forecast and Ofgem's acceptance of this forecast as given)[10]; and
- for each company that is not fast-tracked, we will produce our own view of its expenditure requirements (drawing on the company's plans, and revisions to the plans, where these are well-justified). We will calibrate the IQI so as to achieve the range of efficiency incentive rates committed upfront.

8.55. Early in the review process, we will set out clear rules on how any changes that non-fast-tracked companies make to their expenditure forecasts will feed through to the IQI, following submission of their first substantive business plans. It may be appropriate to distinguish revisions that reflect changes in the scope of work (e.g. changes to output measures) from other changes. For the latter category, we may decide that revisions received from the company will not affect the company forecast which is used as an input to the IQI, but may, if well-justified and received before a specified cut-off date, affect our own assessment of a company's expenditure requirements, which is also an input to the IQI. This will help to address the concern that opportunities for companies to revise their forecasts during the price control review process will render the IQI ineffective in improving the quality of the original expenditure forecasts submitted by a company.

Option to require market testing evidence

8.56. The onus will be on network companies to demonstrate that their proposals deliver value for money for existing and future consumers. This will include, amongst other things, making efficient decisions on which aspects of delivery (if any) should be outsourced. We have not taken a view on the optimal level of market testing or outsourcing and we do not want to suggest that some business models (e.g. with all activities outsourced) are, in principle, better than others.

8.57. However, we recognise that potential benefits can arise from using competitive processes to identify parties best placed to deliver some or all aspects of a project. The benefits may come, for example, from new ideas on how to deliver, lower unit costs of delivery and/or more timely delivery of outputs. We expect network companies to explore and exploit potential opportunities by market testing proposed delivery solutions where this is expected to provide value for money for existing and future consumers. The efficiency incentives in the framework should encourage them to do this.

8.58. We also have an option to require network companies to provide market testing evidence to support their business plan proposals where we have concerns about the level of costs or the design of a proposed delivery solution. Stakeholders and third parties who could potentially be involved with delivery will have

[10] This may require that we commit to providing an additional IQI reward to a fast-tracked company (e.g. reflecting the 'additional income' term from the IQI), the level of which will be finalised at a later stage of the review.

opportunities through enhanced engagement to put forward ideas on where alternative market-tested solutions may offer better value for consumers.

8.59. As discussed in Chapter 13 we also have an option, through a competitive process, to give third parties a greater role in delivery with responsibility for aspects of delivery and subsequent ownership of associated assets. We will identify the projects where this option might be considered as part of the assessment of business plans. The associated costs of delivery will not be included in the existing network company's price control if we make a decision to give the responsibility for the specific aspect of delivery to a third party.

8.60. We will consider requiring network companies to provide further market testing evidence to support their proposals during a comprehensive price control review. We may also consider this option during a mid-period review of outputs in the event that requirements change significantly and hence new or significantly adapted delivery solutions are needed.

8.61. There could be instances in which a network company has failed to deliver primary outputs and where there is concern that it will continue to fail to do so. In these cases we will consider the possibility of requiring the network company to carry out further market testing to identify a better way of ensuring outputs are delivered. We may also consider, in response to the failure of the existing network company to deliver, giving third parties a greater role in delivery where this is expected to better meet the objectives of the RIIO model.

Company decisions on market testing

8.62. When a network company is providing justification for the costs in its plan one piece of evidence provided might be market testing evidence. For example, a network company may include costs associated with running a joint venture to deliver a project or costs derived from running a competitive process to procure services to maintain assets from a third party. Where such information is provided we will evaluate it alongside all other evidence in the business plan to inform our view of required base revenue.

8.63. For significant costs, we expect the network company to demonstrate that an outsourced solution is the best value solution relative to other options. We may decide to evaluate the market testing carried out in more detail but do not expect to undertake such assessments on a regular basis. For example, we could ask the company to provide clarification that the process followed was consistent with ensuring that the solution provides value for money over the long term. Similarly, where the network company has chosen to use in-house resources to deliver a project we expect, for significant cost areas, the company to demonstrate in its plan that this is the approach that represents value for money over the long term. In both cases, our assessment could include comparisons against the past delivery performance of the network company and against the plans of other network companies.

8.64. When seeking out ways of involving third parties and competitive processes in efficiently delivering outputs network companies may, depending on the nature or scope of the project, be required to comply with the relevant EU procurement rules, as implemented in the UK by the Utilities Contracts Regulations 2006.

Ofgem-required market testing

8.65. We will consider requiring companies to undertake further market testing with respect to certain aspects of their business plan where the following apply:

- we have concerns that the costs in the business plan do not provide value for money over the long term and/or that the proposals may result in problems with timely delivery of outputs;
- justification provided by the company in response to our concerns is not sufficiently robust, including evidence supporting any claims from the network company that further market testing will not provide value for money;
- other tools (e.g. benchmarking) are not sufficient to provide us with information about the expected efficient costs of delivery in the relevant context;
- the scale of costs involved are sufficiently large to ensure that the potential cost savings from market testing will outweigh the administrative costs and additional complexity that may be involved;
- we are confident that requiring the company to undertake further market testing will not threaten timely delivery of primary outputs; and
- we are confident that requiring further market testing will not pose significant risks to the safety, security, integrity or quality of energy services.

8.66. We expect the presence of the option in the tool-kit to encourage network companies to identify opportunities for working with third parties and outsourcing aspects of delivery where this is expected to provide value for money over the long term. The option should also encourage them to provide a robust case to support decisions where they choose not to involve third parties in delivery.

8.67. If we ask a company to provide market testing evidence to support their business plan, the network company will be responsible for designing and running any process to support this market testing[11]. The network company will be responsible for determining what information to provide to third parties to ensure that the process is open and competitive. We expect that third parties will be looking for information relating to non-confidential aspects of the company's well-justified business plans, our concerns on the company business plan, and our approach to using the information from market testing in our assessment of base revenue.

[11] In the case of transmission market testing, we might consider whether it is appropriate for the National Electricity Transmission System Operator (NETS SO) or the gas National Transmission System (NTS) SO to take on the role of running the process as required by Ofgem, recognising there may be benefits in having the national co-ordinator perform this role. We will, however, need to take account of the current industry structure in considering whether this will be appropriate.

8.68. Licensees, including the NETS SO and gas National Transmission System (NTS) SO, will retain responsibility for all existing obligations relating to the transmission/distribution system including pertaining, for instance, to quality of service and security of supply as well as continued asset stewardship.

8.69. We note that in undertaking market testing, whether of their own initiative or as required by Ofgem, network companies may, depending on the nature or scope of the relevant project, be subject to EU procurement rules (implemented in the UK by the Utilities Contract Regulations 2006). We will expect network companies to cover any additional administrative costs incurred in running further market testing required by Ofgem.

8.70. We expect that when considering how best to obtain market testing evidence, the network company will take account of the concerns that we have raised with the proposals in its business plan. For example, if our concerns were about how best to deliver a project, rather than the unit costs of the project, the network company might be expected to seek ideas from third parties in any competitive processes on the design and build of a project rather than just the build. We do not expect market testing undertaken by the network company to extend to asset ownership unless the network company decides this is appropriate and consistent with its continuing obligations under statute and licence.

Reflecting the results of Ofgem-required market testing in base revenue

8.71. Our assessment of business plans will start during Stage 2 of the price control review process. Where possible, we will signal at this stage any projects or activities where we may require the company to provide market testing evidence but we expect that final decisions on this will only be made in relation to the revised business plan submitted in Stage 3. This is to ensure network companies have adequate opportunity to present revised plans and associated justifications. We will also use enhanced engagement processes to elicit views from stakeholders and third parties that might be involved with aspects of delivery on areas where they think market testing evidence might be expected to add value for existing and future consumers.

8.72. Where we decide to require a network company to provide further market testing evidence, we will set out, at the price control review, how the outcome of this market testing will affect base revenue. We recognise that clarity will be needed, not only for the network company itself but also for third parties that may submit bids to any competitive process run by the network company.

8.73. It is possible to arrange for the price control to adjust automatically to reflect the prices revealed through the market testing, when they are known, and to pass this through to consumers in full. We also recognise that a network company's actions could have a significant impact on the success of the market testing in achieving value for money. These actions relate, for example, to the design of the process (e.g. lead times given to potential suppliers and risk-sharing arrangements between the network company and the supplier) and to the assessment process. If

the company is 'fully insured' against the level of costs resulting from the process, it may not do enough to run the process in a way that achieves value for money.

8.74. We will therefore provide the network company with a clear stake in the success of the market testing. We could do this in two ways, each of which can be seen as involving a type of uncertainty mechanism[12] to adjust the price control for information revealed during the price control period according to pre-specified rules:

- we could include an adjustment mechanism in the licence such that the price control will be updated to pass through the resultant market testing price to consumers, subject to a review that the network company has used an effective process. If we found that market testing had not been run effectively, we could consider the appropriate level of costs to be passed through to consumers; and
- we could directly expose the network company to a proportion of the resultant market testing price. For example, at the price control review, we could make an upfront forecast of the costs of delivering the activities (e.g. drawing, where appropriate, from the company's business plan). We will include an adjustment mechanism in the licence so that the base revenue the company is allowed to collect is adjusted upwards or downwards to reflect a proportion (e.g. 50 per cent) of any difference between the forecast and resultant market testing price. This adjustment will apply in addition to the general risk-sharing around actual expenditure under the upfront efficiency incentives (discussed in Chapter 10).

8.75. We will ensure that any adjustment to revenue only relates to costs associated with the aspect of delivery that we asked the network company to provide market testing evidence on. For example, if a network company chooses to run a broader procurement process, combining the delivery of a specific project where we sought market testing evidence with other projects, we would only make adjustments to revenue for the costs associated with the former.

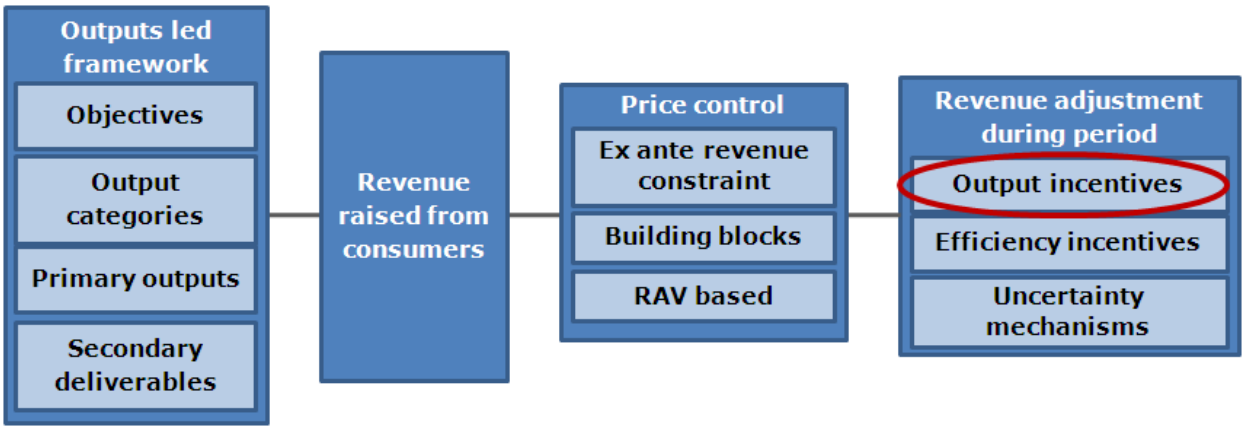
Determining base revenue

8.76. Our assessment of expected efficient costs, using the proportionate approach and range of tools described here, will be one of the building blocks used, to set the amount of base revenue for each year of the eight-year price control. Our approach to assessing the other building blocks (depreciation and return on the RAV) is discussed in Chapter 12. The price control will specify what primary outputs the network company is expected to deliver in return for this revenue. It will also, where necessary, make clear what proportion of base revenue is linked to specific secondary deliverables.

[12] Further information on uncertainty mechanisms is set out in Chapter 11.

9. Incentivising delivery of outputs

Chapter summary
We set out the principles that we will consider when designing and implementing incentives to encourage network companies to deliver primary outputs and secondary deliverables over the long term.



9.1. Under the RIIO model network companies will be provided with incentives to deliver the primary outputs discussed in Chapter 6. Revenue and hence the return earned during the price control period will vary according to delivery performance. We will also publish information on delivery performance on an annual basis, introducing reputational incentives.

9.2. In the event of persistent failure to deliver outputs we will have at our disposal the backstop threat of using our existing powers to revoke a company licence where a licensee fails to comply with an enforcement order and/or financial penalty procedure. However, this will likely only be used in exceptional circumstances.

9.3. We describe here the principles we will use when determining how best to encourage companies to deliver outputs. We discuss the principles for setting efficiency incentives in Chapter 10. Decisions on the incentive schemes, underpinned by these principles, will be made at price control reviews.

9.4. The principles discussed here take account of the fact that the type of incentive scheme that is appropriate will depend on:

- the nature of the primary output and associated performance level;
- whether the output is a mandatory requirement (e.g. safety or social);
- the quality of the data underpinning the output measure; and
- the relative importance of outputs from the perspective of consumers of network services.

9.5. A range of issues need to be considered when designing output incentives including, but not limited to, the following:

- **Symmetric incentives or not:** for some primary outputs there will be penalties for delivering less but no reward for delivering more. For other outputs it will be appropriate to have symmetric rewards/penalties for variation above or below the performance level in the price control;
- **Marginal incentives or not:** for some primary outputs it will be appropriate to have marginal incentives, with rewards/penalties varying according to the size of any incremental variation from the performance level in the price control. For others it will be appropriate to have a fixed reward/penalty amount for any variation below the performance level;
- **Financial and/or reputational incentives:** for some primary outputs it will be appropriate to have financial incentives, while for others it may be more appropriate to make use of reputational incentives; and
- **Automatic revenue adjustment or not:** for some primary outputs it may be appropriate to have incentives working automatically, so that there is no review of whether the reward or penalty should be passed through into revenue. For others we may need to assess whether decisions relating to delivery of outputs at a performance level different to that assumed in the price control (or not) are consistent with long-term value for money before making any potential changes to revenue.

9.6. At each price control review we will consider the appropriate tools to use to encourage efficient delivery from the network companies and to penalise companies that fail to deliver. The circumstances in which different tools may be used are discussed in turn below.

What tools are available to incentivise delivery?

9.7. We set out below high-level principles that will be used to determine the appropriate mix of incentives for encouraging network companies to deliver primary outputs. The principles set out the types of incentive mechanisms available and the circumstances in which they may be most suited. We discuss incentive arrangements relating to secondary deliverables in Chapter 6.

9.8. In most cases it will be appropriate to determine the incentive mechanisms that are most likely to facilitate the effective delivery of individual primary outputs. However, we will also need to consider how the package of outputs worked holistically, taking account of how primary outputs interact with each other and the relative importance of outputs discussed above.

9.9. While some of the primary outputs may be complementary, the delivery of other primary outputs may require network companies to make trade-offs. When setting incentives, we will take account of these relationships. We will also sense check the incentive mechanisms to identify any potential unintended consequences for the individual outputs and also across the outputs (both primary and secondary deliverables).

9.10. More generally, we will need to ensure that the package of incentives expose network companies and their investors to an appropriate package of risk and return. The calibration of the incentive package with the assessment of the allowed return is discussed further in Chapter 12.

Financial incentives

9.11. Financial incentives allow revenue adjustments to be made in line with network company performance in delivering primary outputs. When determining the form that financial incentives should take a number of decisions will need to be reached. These include decisions on the way adjustments to revenue will be made, the timing of any adjustments and the magnitude of potential changes to revenue. This section looks at each of these areas in turn.

When will we use financial incentives?

9.12. We will use financial incentives when:

- there is clarity on the primary outputs to be delivered;
- there is confidence in the data used to measure performance;
- we consider delivery of the primary output to be important; and
- there are not already incentives in place on the network company through other schemes or obligations[13].

Types of financial incentives

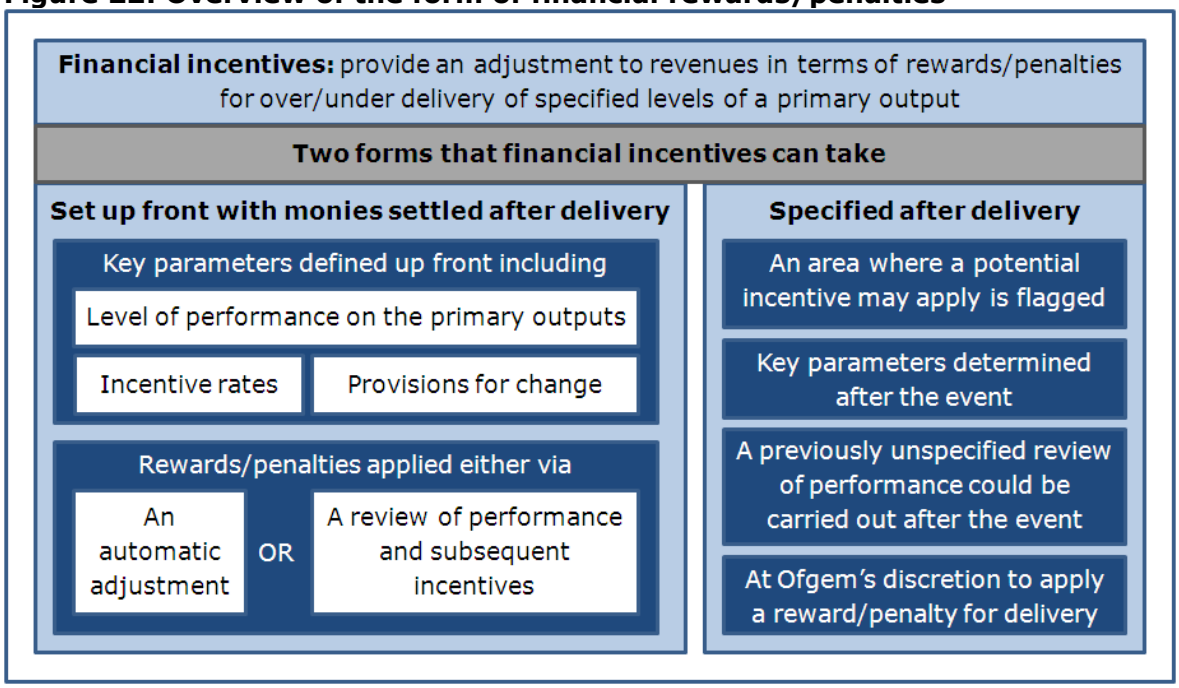
9.13. Figure 22 below provides an overview of financial incentives and the various forms that they could take.

9.14. In the price control review we will specify target levels for performance, the incentive rates that will apply and the provisions for changing allowed revenue. In this way we will provide transparency on the treatment that will apply in the event of successful delivery/non-delivery. We aim to limit the use of incentives set wholly after the event (with no indication of the parameters for assessment prior to commencement of the period) as this could lead to regulatory uncertainty and reduce transparency for the network companies.

9.15. We will also consider making use of upper and/or lower limits on the revenue adjustment depending on the extent to which we think it is appropriate for consumers to pay for more or less of an output relative to what was assumed when the price control was set. Where we use such 'caps and collars' we will design them to limit any risk of creating perverse incentives at the margins and aim to make them as simple as possible. We also intend, as far as possible, to base decisions with respect to the design of the incentive mechanism on information regarding consumer willingness to pay for varying levels of 'service' (or similar information).

[13] For example, RIIO will include an output category related to safe network services but the incentives for this have already been established through the HSE regime.

Figure 22: Overview of the form of financial rewards/penalties



9.16. For some primary outputs the incentive mechanism may be asymmetric, with no reward for doing more and a penalty for doing less. They could take the form of a specified amount of penalty/reward that the company will be fined/receive depending on performance or a percentage change in revenues (either up or down) that will be made to reflect performance on the primary output. The decision on how to design the incentive will depend on the relevant circumstances at the time of the price control review.

Timing of financial incentives

9.17. In some cases the financial incentive will comprise an automatic adjustment that will take effect where certain predefined conditions are fulfilled. In other cases, we will undertake a review of performance and consider, as part of this, how best to apply a financial incentive.

9.18. It will be important to provide clarity to network companies on the timing of any financial adjustment resulting from incentives put in place. The timing of any financial adjustments will depend on the time at which relevant information becomes available (and the reliability of that information) as well as the inclusion of provisions to allow these adjustments to be made during the price control period.

Strength of financial incentives

9.19. Incentives will be calibrated to ensure they provide long-term value for money and that the package is consistent with our financeability principles. We will consider the strength of financial incentives holistically as well as considering the individual

priorities assigned to each primary output. In particular, we will be keen to ensure that those companies that deliver for consumers earn good rates of return, whilst those that demonstrably do not deliver, earn low returns. This should be considered in the round in terms of the output incentives, efficiency incentives and cost of capital as well as the implications this will have in terms of the ability of the network companies to earn returns. This is discussed further in Chapter 12.

9.20. The strength of any financial incentives will depend on:

- confidence in the clarity of the primary output;
- confidence in the accuracy and reliability of the information used to measure performance against the primary output; and
- the importance that we and stakeholders place on achievement of the primary output.

9.21. We will consider a range of issues when considering the strength of incentives including but not limited to the following:

- **estimates of the value of delivering the primary output:** in some cases, there may be evidence associated with the potential 'value' that could be provided through delivery of different levels of performance against the primary output. For example, the social cost of carbon associated with a business carbon footprint or willingness to pay evidence for a particular aspect of service quality;
- **preferences expressed during enhanced engagement:** a key area that stakeholders may discuss during enhanced engagement is the primary outputs. Through this process stakeholders will be able to provide an indication of the importance they place on the primary outputs and this will help to ensure that incentives are aligned with value for money as far as possible;
- **historical performance of the energy network companies:** if poor performance by a network company was identified, we may want to consider stronger incentives to encourage changes in behaviour in this area. This means that the incentives could vary by company;
- **external policy drivers:** even where a network company had demonstrated relatively good performance on a primary output, it may be identified as an area in which incentive strength should be increased where a step change in requirements is implemented or the ongoing importance of the issue is emphasised; and
- **high level guidance from government:** any such guidance will, for the most part, take the form of energy policy or related initiatives determined by government. It may include additional guidance given through existing tools such as the social and environmental guidance. In both cases, we will need to ensure the provision of guidance is consistent with legislation under the third package.

9.22. In determining the priorities attached to the primary outputs, a balance should be struck between these factors.

Reputational incentives

9.23. Reputational incentives are non-financial incentives that leverage off the value companies place on establishing or maintaining a good track record for delivery with their stakeholders. They will usually involve the measurement of network company performance on delivery of primary outputs which will then be publicised to groups of interested stakeholders. In this instance, stakeholders might include:

- the consumers and users of network services with whom network company reputation will be important from a corporate social responsibility point of view. This may increase over time if consumer awareness improves as a result of enhanced engagement by us and network companies;
- Ofgem with whom their reputation will be important given the role we play in determining the levels of their revenue allowances during the price control. This will likely be reinforced by the application of proportionate treatment;
- Government with whom reputation is important to ensure network company credibility in discussions regarding energy policy; and
- investors with whom reputation is important to continue to attract finance.

9.24. Where primary outputs are developed and it is not appropriate to use financial incentives we will encourage network companies to deliver using reputational incentives. This type of incentive is unlikely to influence network company decisions as strongly as financial rewards/penalties but may motivate the companies to behave in certain ways where they are designed and used effectively. This is particularly the case where we signal that we will take into account performance on these primary outputs when considering our proportionate approach to assessing companies at the next price control review (See Chapter 8).

9.25. In some cases we may use reputational incentives for an interim period while a primary output 'beds down' and we obtain confidence in the metrics used. In these cases, we will provide a strong signal of our intention to move to financial incentives in time. In other cases we may not be using a financial incentive because network companies are incentivised by other organisations (e.g. the HSE for safety) or other mechanisms (e.g. enforcement powers, legal obligations). However, in these cases we may consider adding an extra reputational effect through the price control to influence network company decisions.

9.26. Reputational incentives are likely to be of most use where:

- there are comparator companies as this could facilitate competitive pressures between counterparts; or
- it is possible to monitor and compare the performance of individual network companies over time to determine improvements/deteriorations in performance.

9.27. Reputational incentives can be combined with financial incentives or can be considered in isolation.

Monitoring performance

9.28. To facilitate application of the incentives developed for primary outputs, it will be important for us to have a clear understanding of the performance of the network companies in delivering against the primary outputs and secondary deliverables throughout the course of the price control period. Arrangements will need to be implemented to facilitate this monitoring. As far as possible, we will build on the existing information provisions in place for regulatory reporting packs (RRPs) and regulatory instructions and guidance (RIGs). To ensure we have a clear understanding of the additional information requirements, we will review the information already collected during the period at each price control review.

A scorecard for outputs

9.29. To facilitate a meaningful comparison of network company performance, we will develop a balanced score card for output delivery in each of the network sectors. This will enable comparisons to be made across companies, so long as performance in delivering primary outputs is measured relative to a normalised baseline. The use of a balanced scorecard should facilitate reputational incentives and the information could be used to inform our approach to proportionate assessment (detailed in Chapter 8).

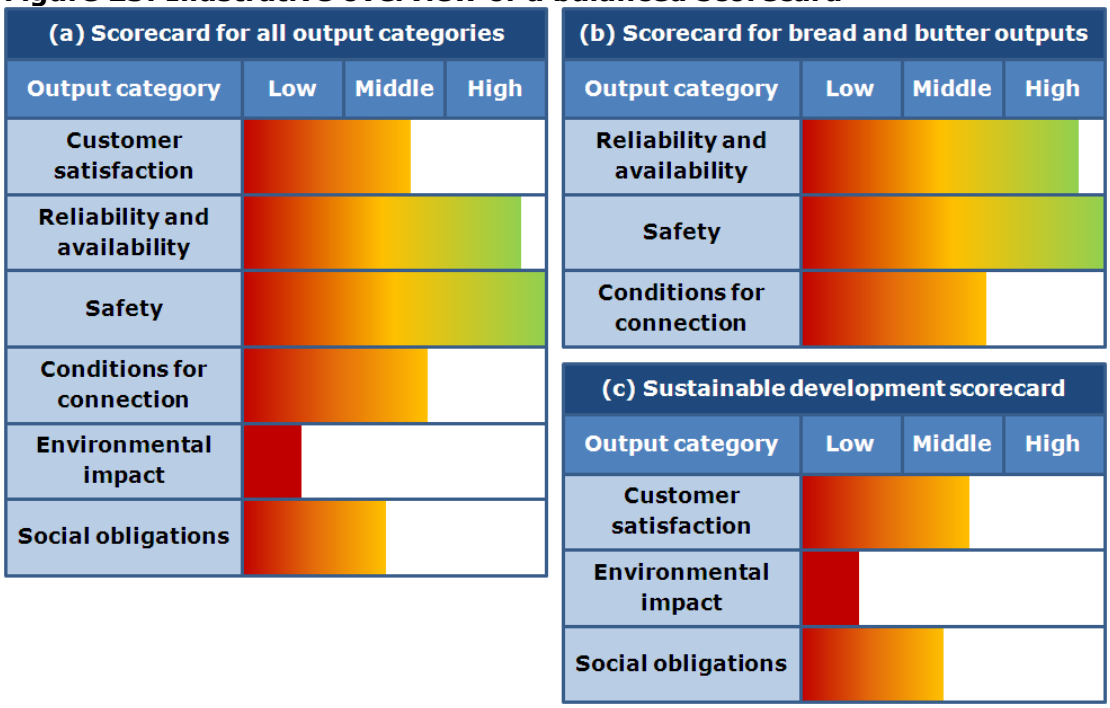
9.30. As the scorecard will provide a summary of information, performance relative to individual primary outputs will need to be aggregated. The primary outputs should be weighted with, for example, greater weight given to areas identified by stakeholders as priorities during enhanced engagement. Indeed, the scorecard could be used as a tool to facilitate discussion during enhanced engagement. The scorecard could also be used to inform our approach to proportionate assessment. Although financial incentives will be focused on individual primary outputs, there will also be some scope to attach incentives to overall performance with respect to the scorecard.

9.31. Recognising that a network company may demonstrate differential levels of performance in certain areas, the score card could be presented in each of the three following formats:

- performance of the network companies in each of the output categories;
- performance of the networks companies in areas that are 'bread and butter' to them, e.g. conditions for connection, reliability and availability, and safety; and
- performance of the network companies in areas particularly relevant to sustainable development, e.g. environmental impacts, customer satisfaction and social obligations.

9.32. Figure 23 provides an illustrative overview of the way that these scorecards could look in practice. It highlights that the scorecard could be used as a clear and simple way to convey information about network company performance.

Figure 23: Illustrative overview of a balanced scorecard



9.33. If certain secondary deliverables were deemed particularly useful in illustrating network company performance, there may also be scope to include these within the balanced scorecard.

9.34. The detail of the design and implementation of the scorecards will be developed at each price control review. The scorecards may develop from one review to the next as we learn lessons from their use.

Last resort responses for failure to deliver

9.35. The primary outputs will be agreed as part of the price control process and inserted as a condition in network company licences. We will seek to extend network company licence conditions to include an explicit requirement to deliver primary outputs and this will be subject to existing enforcement arrangements. The associated detail on the primary outputs will either be specified as part of the relevant licence condition or in a direction issued by the Authority.

9.36. If a network company fails to deliver against its primary outputs, the company will be penalised according to the incentive arrangements in place. In the event that a network company persistently failed to deliver against one or more of its primary outputs, there are two tools that we could use:

- we could take enforcement action on the basis that the network company is non-compliant, or likely to contravene, the provisions of its licence relating to its

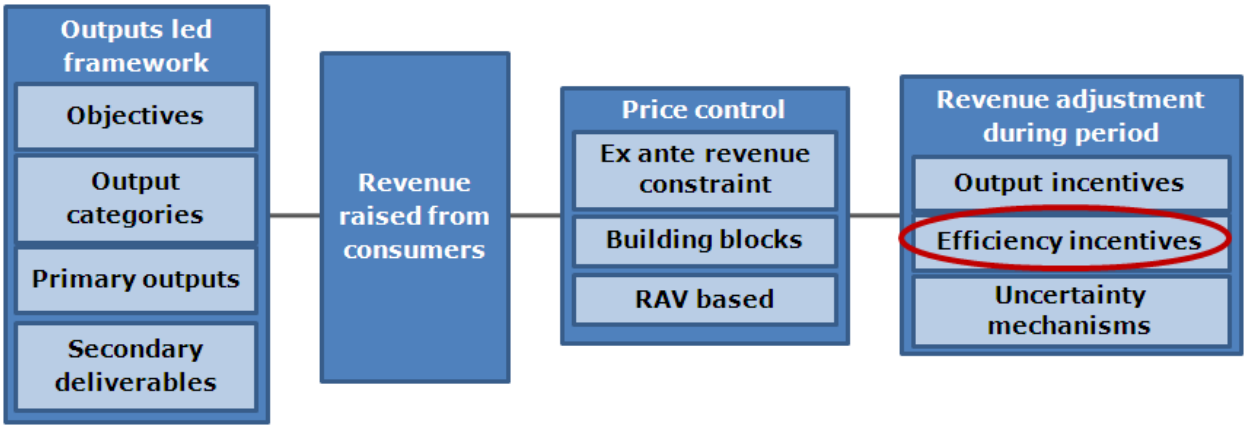
delivery of primary outputs. The first step in this process will be to issue a warning notice, where a network company appears to be contravening, or is likely to contravene, the relevant licence condition. In appropriate cases, this may be by way of a provisional order. If, following this warning notice or provisional order, the network company takes steps to facilitate compliance with the licence condition; we will inform the company that we are satisfied with the action it is taking. If the network company remains non-compliant with the licence condition, we will have the ability to issue a final order requiring the network company to take steps to ensure compliance in the future; and

- upon failure to comply with an order (and/or upon failure to pay a penalty) we could use our existing powers to revoke a network company licence for failure to deliver against the primary outputs in line with the obligations set out in their licence. If we revoked a network company licence, we would need to consider how best to take forward the ongoing management and operation of the network. The arrangements put in place will need to be tailored to the specific situation.

9.37. These tools should act as a useful backstop deterrent against persistent failure to deliver the primary outputs and thereby provide additional incentives on network companies to meet their obligations.

10. Efficiency incentives

Chapter summary
We set out how we will encourage network companies to seek out delivery solutions that are value for money for existing and future consumers on an ongoing basis. We describe the principles that we will consider when setting an efficiency incentive rate at a price control review. We also explain why and how we will avoid making adjustments to revenue for variation in costs from the expected level (often called ex post efficiency adjustments), save through the symmetric efficiency incentive rate, if outputs are delivered.



10.1. The business planning process and our assessment of base revenue in the price control are key parts of the framework designed to encourage network companies to seek out delivery solutions that are lowest cost over the longer term. The plan provides a helpful and reasonable basis on which to make assessments of forecast efficient costs. However we do not expect a network company to deliver against the detail of its plan for the eight-year price control period.

10.2. Network companies should evaluate the best way of delivering on an ongoing basis, taking account of new information, learning and potential changes in circumstances. It is in this context that we will provide them with specific incentives to seek out, on an ongoing basis, delivery solutions that provide better value for existing and future consumers.

10.3. Two elements of the RIIO model are designed to encourage network companies to seek out value for money delivery solutions:

- at a price control review we will commit to a fixed and symmetric efficiency incentive rate for each company. We describe below the issues we will consider when setting that rate. The spread of efficiency incentive rates within a sector will be determined according to the principles set out here; and
- we will commit to not making retrospective adjustments to revenue in the event that costs turn out to be different to what was assumed in the price control itself, save through the application of the efficiency incentive rate. We will only

consider using such 'ex post adjustments' if outputs are not delivered or if we have a concern that a company has manifestly wasted money.

10.4. We discuss both of these aspects of our efficiency incentive package below.

Upfront efficiency incentives

10.5. The efficiency incentive rate represents a commitment to the way that the revenue that the company is allowed to collect adjusts upwards or downwards in light of what it actually spends during the price control period. If the efficiency incentive rate is set at 40 per cent, the company's investors will earn £40 profit (before tax) for each £100 that the company saves during the price control period and bear £40 of each additional £100 the company spends. The remainder will be passed on to consumers through lower or higher network charges.

10.6. The efficiency incentives are about risk-sharing. Investors and consumers will share the benefits when the company delivers outputs for less money than Ofgem envisaged when setting the price control. Similarly, investors and consumers will share the additional costs if the company spends more money than envisaged. These arrangements will be specified at the price control review, through the 'efficiency incentive rate'. This has sometimes been called the 'sharing factor'.

10.7. The network company will face the same efficiency incentive rate for the duration of the price control period regardless of whether it has spent more or less than envisaged. The same efficiency incentive rate will also apply to operating expenditure and capital expenditure. This will reduce the risk that expenditure decisions may be distorted in favour of capital expenditure solutions.

The level of the efficiency incentive rate

10.8. The efficiency incentive rates will be set at each price control review. As set out in Chapter 8, the incentive rate will vary across companies according to the IQI. There is no exact science to determining 'optimal' efficiency incentive rates and there are a number of issues to consider when determining the appropriate rates. We discuss the factors that should be considered below. For simplicity, we talk about factors affecting the appropriate level of the efficiency incentive rate, although in practice we will be deciding on a range (e.g. 40 to 50 per cent), with the exact rate for each company determined through the IQI mechanism.

10.9. We will undertake preliminary analysis to determine a lower bound for the incentive rate. The range of efficiency incentive rate will not be below this lower bound, but it could be above it (e.g. we might decide that the lower bound is 30 per cent, but set a range of efficiency incentive rates of 40 to 50 per cent). It is important that the lower bound is set appropriately as if the incentive rate is set too low, a company may not face exposure to the costs that result from overspend and could spend money unnecessarily to increase its regulatory asset value (RAV). This will not be in consumers' interests and is explained in more detail in Box 8 below.

10.10. We will carry out analysis at each price control review to understand where the lower bound for the incentive rate should lie. The position of the lower bound will depend on other aspects of the price control framework that affect the income stream a company can expect from additions to the RAV, such as the depreciation period and the way allowed return is set. Further details on these elements are set out in Chapter 12). This analysis could be carried out by modelling the impact of additional expenditure on future cash-flows over the full depreciation period applied to expenditure funded through the RAV.

10.11. Subject to the lower bound, we will take account of a range of issues when forming a view on the efficiency incentive rate for the sector. We will consider the relative merits of setting a higher or lower incentive rate as well as the benefits of having consistency in the incentive rate between price control reviews and also across companies/energy network sectors.

Box 8: Potential perverse incentives from a low efficiency incentive rate

If a regulated network company incurs additional expenditure today, it will be entitled to a greater stream of income in future years, through an upward adjustment to its regulatory asset value (RAV). This efficiency incentive rate is intended to reflect the percentage of additional spend to be shared with consumers and provide some compensation and protection to the company in cases where it needs to spend more money than was envisaged when the price control was set. As described above, the upfront efficiency incentives are intended to have 'risk-sharing' characteristics.

A network company may place greater value on the future cash-flows it will receive through the RAV, as a result of additional expenditure, at more than the immediate costs associated with that expenditure. If so, there is a risk that a company may incur additional expenditure not because it contributes to the efficient delivery of outputs, but because it will achieve a higher future income stream from an enlarged RAV.

This risk arises because the company may be able to finance this additional expenditure at a rate that is lower than the return it expects to earn on (additions to) the RAV. This is for two main reasons. First, Ofgem faces uncertainty in setting an appropriate allowed return and it is possible that a company may be able to finance its activities at a lower rate. Second, the allowed return should reflect the cash-flow risks from the overall price control. However, some cashflows may be very low risk, for example, the future income streams from the opening RAV will have low financing costs and this could reduce the level of the overall cost of capital.

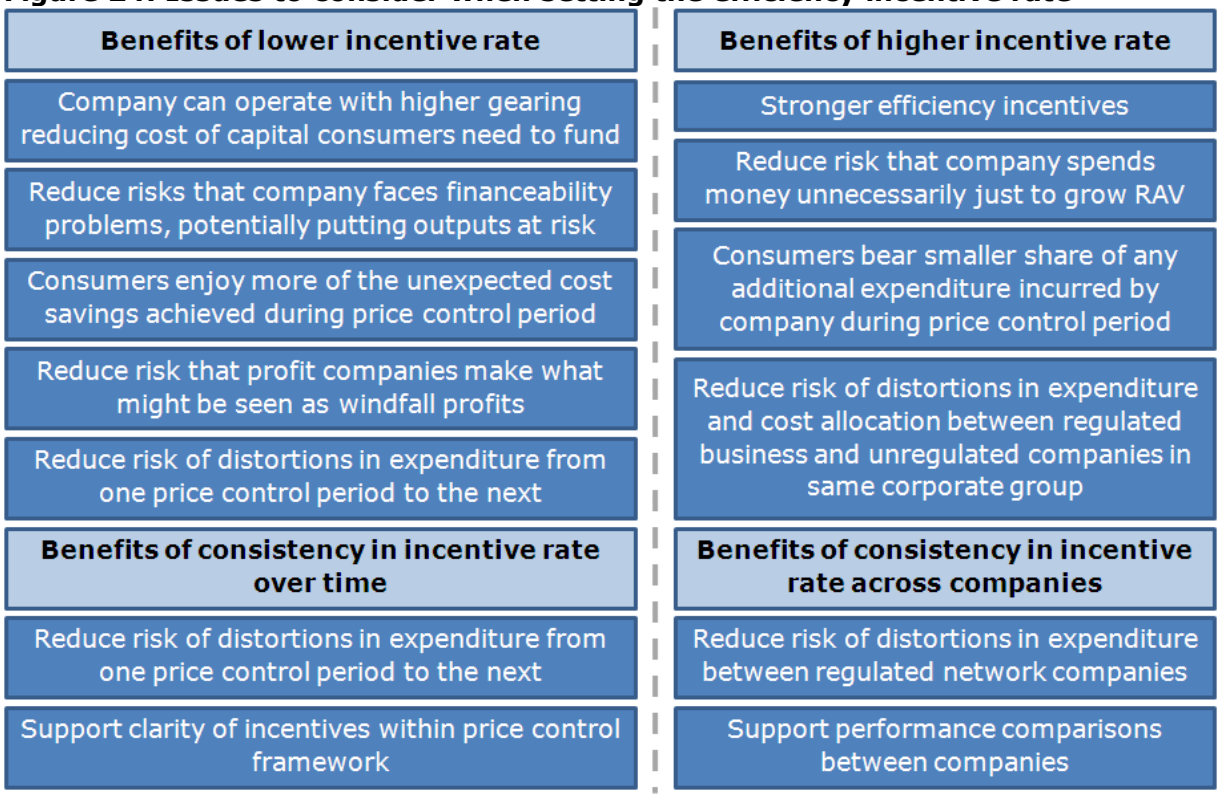
We will assess this impact when considering the level of the efficiency incentive rate. It is expected that the higher the efficiency incentive rate, the lower the risk of companies seeking to increase spend in this way as they will be exposed to a greater

10.12. We will set out our view on the appropriate range for the efficiency incentive rate toward the start of the price control review and retain the option to adjust the incentive rate as part of the risk-reward calibration exercise which will be updated as new information comes to light during the price control process. We will take

particular account of the interactions between the incentive rate and the appropriate allowed return. Further details on calibrating incentives are set out in Chapter 12.

10.13. Figure 24 below sets out a range of considerations that we will take into account when determining the efficiency incentive rate. The range of issues illustrated may not be exhaustive and other factors may be considered during a price control review. The importance attached to each of these considerations will be dependent on other aspects of the price control. For instance, the need to provide stronger efficiency incentives through the efficiency incentive rate depends, in part, on the length of the price control period. Similarly, the required allowed return depends, in part, on the uncertainty mechanisms to be included in the price control.

Figure 24: Issues to consider when setting the efficiency incentive rate



10.14. It may be appropriate to exclude specific categories of expenditure from the main efficiency incentive rate arrangements and instead apply a 100 per cent efficiency incentive rate to them. For instance, where a regulated network company is part of a wider corporate group, there are risks that an efficiency incentive rate below 100 per cent could encourage it to distort its allocation of certain overhead costs, to the detriment of network customers. If the main efficiency incentive rate is, say, 50 per cent, there might be case for applying an incentive rate of 100 per cent to a well-defined set of overheads costs. An approach along these lines was taken for 'business support costs' in DPCR5[14]. There will need to be a clear

[14] See our website for DPCR5 documents:
http://www.ofgem.gov.uk/Networks/ElecDist/PriceCntrls/DPCR5/Pages/DPCR5.aspx

justification for such a differential treatment, and we will expect it to apply to only to small proportion of a network company's expenditure.

Implementation of the incentive rate

10.15. We will develop transparent rules for application of the efficiency incentive rate at the price control review, specifying how differences between expenditure assumed in the price control and actual expenditure will feed through to changes in revenues that companies are allowed to collect from customers. These rules will provide a way to adjust the revenues the company is allowed to collect in future years to expose the company as accurately as possible to the intended incentive rate and will likely be based on a spreadsheet model. The adjustments to the price control to implement the incentive rate will be applied annually during the price control period. Adjustments will be made with a time lag to ensure they are based on audited expenditure data and to avoid the need to make two adjustments (one based on forecast spend and another based on actual audited data).

10.16. The rules will give equal treatment to different types of expenditure. For example, the breakdown of over-spend (or under-spend) between operating and capital expenditure will not affect the amount, or timing, of money the company is allowed to collect from customers. A fixed proportion of any over-spend (or under-spend) will feed through to the revenue the company can collect in the subsequent year. The remainder will feed through to the RAV and, in turn, affect the revenue the company can collect in future years. Within the price control period we will make revenue adjustments reflecting this change to the RAV.

10.17. The level of the incentive rate will determine the extent to which the RAV is adjusted in light of a given over-spend or under-spend. For instance, in the case of an over-spend in a given year, there will be an upward adjustment to the RAV but, as the incentive rate will be above zero, the adjustment will be smaller than the overspend itself. The higher the incentive rate, the larger the adjustment. As such, the RAV will not track actual expenditure but reflect a combination of expenditure forecast by Ofgem at the price control review and the actual expenditure incurred.

No discretionary adjustments for over- or under-spends

10.18. For the upfront efficiency incentives to work as intended, we need to make a firm commitment that the incentive rate set at the price control review will be honoured. We recognise that this will require a commitment not to make discretionary adjustments to the revenues that companies are allowed to collect, based on comparisons between what a company actually spent and the expenditure forecast at the price control review. We will provide this commitment save in the exceptional circumstances outlined in paragraphs 10.21 to 10.25.

10.19. Provided that a company delivered the outputs agreed at the price control review, it will enjoy the benefit of any under-spend relative to the expenditure assumed in the price control, in line with the specified incentive rate. We will not make discretionary adjustments to 'claw back' differences between the base revenue

allowances set at the price control review and what a company actually spent. Indeed, we will not undertake any detailed assessment of the expenditure level as long as outputs were being delivered.

10.20. If a company spends more than envisaged at the price control review it will receive additional revenue, in line with the commitment given by the incentive rate (e.g. 40 per cent of the value of the over-spend). We will not provide additional funding on a discretionary basis to compensate for unexpectedly high expenditure.

Clarity on limited role for ex post efficiency assessments

10.21. Consumers will share the risks, through the efficiency incentive rate, of the expenditure decisions that companies take during the price control period. This approach towards upfront efficiency incentives should provide clear and strong financial incentives to avoid wasteful expenditure.

10.22. As discussed above, application of the incentive rate will not be conditional on judgements by Ofgem about the efficiency of network company decisions. During the price control, companies will decide on the best value delivery approaches, driven by the efficiency and output incentives in the framework. As discussed in Chapter 8, when assessing expected efficiency savings for the next price control review we will consider information on historical costs alongside other data to form our view. As such, decisions taken during one period will affect future price controls. In general, we will not make changes to revenue during the current period, save through the application of the efficiency incentive rate.

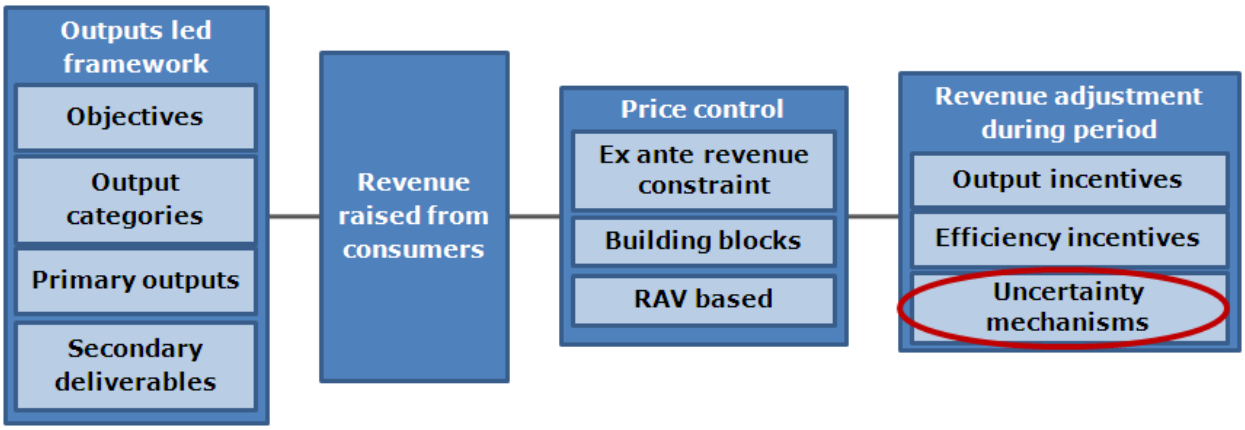
10.23. We reserve the option, in exceptional circumstances, to make an adjustment to over-ride the mechanistic sharing of actual expenditure through the efficiency incentive rate. For example, if we can demonstrate that a network company has wasted money we may need to make an adjustment to prevent consumers from bearing a proportion of that waste.

10.24. We envisage there will be a reasonably high hurdle for such an adjustment although we will be mindful at all times of our duty to promote efficiency and economy on the part of the network companies, and the duty of the network companies to develop and maintain efficient, co-ordinated and economical networks. We will need to show that expenditure decisions taken by the company were unreasonable at the time they were made, in light of the information available at that time. We will not use this option to penalise companies that took reasonable decisions to anticipate future customer needs or to experiment with new delivery approaches, even if these turned out to be unsuccessful with the benefit of hindsight.

10.25. In considering potential adjustments of this nature, we will need to take account of the context in which a company has taken expenditure decisions. There are conceivable circumstances in which it will be unwise to rely on the upfront efficiency incentives. For instance, if a company was owned by an organisation that did not pursue profit objectives, we may need to take a more active role in assessing whether it had wasted money during a price control period.

11. Managing uncertainty within the price control period

Chapter summary
We set out how uncertainty will be managed during the eight-year price control period. We provide a set of principles that will underpin decisions on the role of specific uncertainty mechanisms at future price control reviews.



11.1. Under the RIIO model the price control will be based on forecasts of: output requirements; demand for network services over time; cost of delivery (including input prices) and financing costs. The ex ante nature of the regime will mean there will always be uncertainty about the reasonableness of the forecasts. As a result, several risks could arise, including the possibility that:

- revenues raised from consumers could be higher/lower than necessary to cover the costs of providing network services, with consumers paying more/less for network services than was required; and
- the primary outputs (and potentially secondary deliverables) that we agree with network companies may turn out to be insufficient or inappropriate.

11.2. Under The RIIO model, the price control will be set for eight years and network companies will need to make decisions about the longer term, including taking action in the current price control period to deliver primary outputs and value for money in future periods.

11.3. Recognising these issues, as set out in Chapter 5, provisions will need to be in place to allow revenue to adjust during the price control period in response to changes in operating conditions. We intend to limit the number and complexity of uncertainty mechanisms whilst ensuring efficient delivery is financeable and long-term value for money is delivered. We will expect network companies to bear their own business risk and therefore uncertainty mechanisms should only be used where action is required due to changes outside of network company control which could significantly impact cost.

11.4. In this chapter we explain the options available under the RIIO model to manage uncertainty during the price control period under the RIIO model. The options will be the same whatever the length of the price control period. It is the extent to which the options are used, and the choice of option, that is potentially influenced by the length of the period. We focus on the principles that will be used to make choices between different uncertainty mechanisms at a price control review. We elaborate on two important areas: (i) price uncertainty and (ii) general indexation, and volume uncertainty.

Options for managing uncertainty

11.5. The main sources of uncertainty during a price control period relate to outputs, input prices and volumes of activity required as well as combinations of these. Under the RIIO model, there are a number of options to deal with uncertainties arising in these areas. These include, but are not limited to:

- risk sharing through the efficiency incentive rate;
- uncertainty mechanisms;
- a mid-period review of output requirements; and
- our general financing duty.

11.6. We explain each of these below.

11.7. Whatever the arrangements in place to manage uncertainty, we need to set the allowed return to reflect cash-flow risks faced by the network company as set out in Chapter 12. We will take account of potential implications for the cost of capital in deciding how best to manage uncertainty. For example, although we may be concerned about the downsides of using a wide set of uncertainty mechanisms due to the associated complexity and administrative burden, the benefit from having a lower cost of capital may justify these downsides.

Risk-sharing through the efficiency incentive rate

11.8. The lower the efficiency incentive rate, the less financial exposure a network company has to the risks of its actual expenditure being higher or lower than Ofgem envisaged. As discussed in Chapter 10, the upfront symmetric efficiency incentive rate will share the risks of actual costs being different to what was assumed in the price control. As such, this will provide network companies with some protection against the risks associated with uncertainties related to the price control.

Uncertainty mechanisms

11.9. Uncertainty mechanisms allow changes to the revenue allowance to be made (upward or downward) during the price control period. They may be used to protect network companies from cost changes outside of their control. The form that uncertainty mechanisms take may depend on the outputs companies need to deliver. Uncertainty mechanisms might be triggered by, for example, changes in prices,

volumes, primary outputs or secondary deliverables. There may also be mechanisms in place to adjust revenue for key financial parameters such a pension funding deficit.

11.10. Figure 25 provides an overview of the types of uncertainty mechanisms, split into three categories based on their design. These three categories are:

- **uncertainty mechanisms fully-calibrated at the price control review**: the magnitude of associated revenue adjustments will also be set at the price control review and the precise numbers (e.g. in £m per unit) are written in the licence. The use of such mechanisms will be triggered automatically. As such, we will not carry out a review to adjust revenue but rather revenue will adjust automatically in line with an agreed formula/rule specified at the price control review;
- **forward-looking revenue adjustment determined by Ofgem during the price control:** Where an updated assessment of the companies expected expenditure requirements reveals that additional revenue will be required, the magnitude of the revenue adjustment can be set during the price control period; and
- **revenue allowance determined after the company incurs the relevant expenditure:** once data on actual expenditure is available, the magnitude of the revenue adjustment is set.

11.11. Examples of the types of uncertainty mechanisms available in each of these categories are explained further in Figure 25 and Table 5.

Figure 25: Different types of uncertainty mechanism

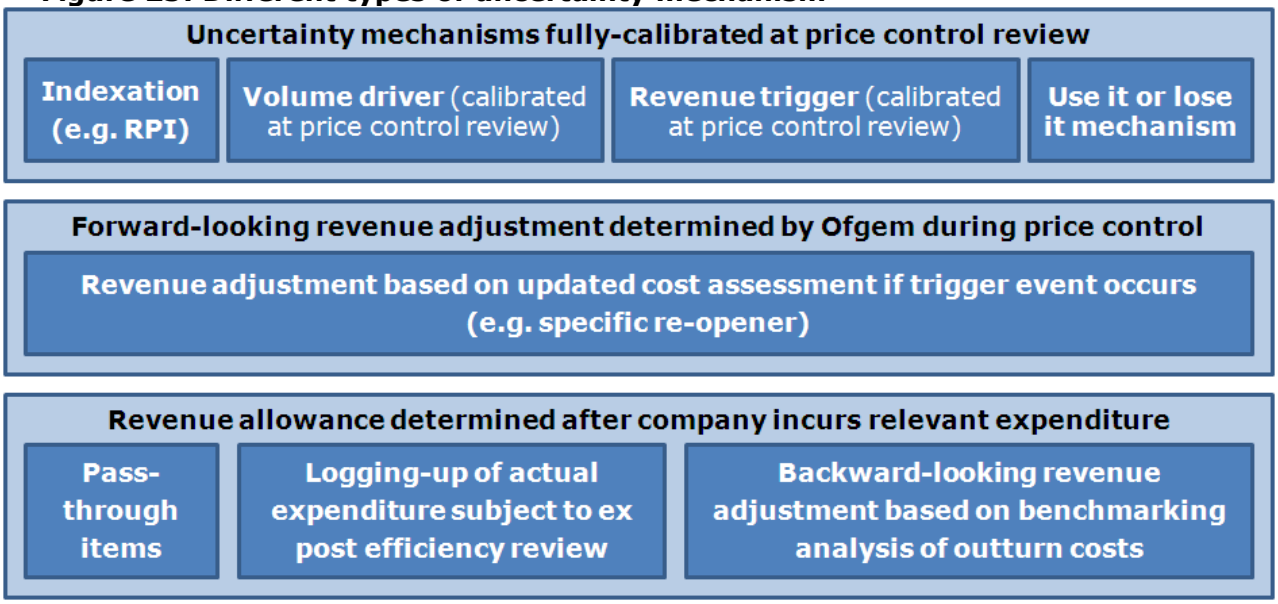


Table 5: Description of types of uncertainty mechanism

Tool	Summary of provision in price control licence
Indexation	Provision that adjusts the revenue the company is allowed to collect from customers according to changes in a specified price index (e.g. the RPI or a published input price index).
Volume driver calibrated at price control review	Provision allowing revenue to vary as a function of a volume measure (e.g. number of new connections).
Revenue trigger calibrated at price control review	Provision allowing revenue to increase/decrease by a specified amount (or in a specified way) if and when certain trigger events occur during the price control period.
Use it or lose it mechanism	If revenue set aside for a specified activity or purpose is not used as intended, revenue can be adjusted to remove this allowance.
Revenue adjustment based on updated cost assessment if trigger event occurs (e.g. specific re-opener)	Provision allowing for a specific part of the company's revenue allowance to be reviewed and potentially adjusted by Ofgem during the price control period, on a forward-looking basis, if and when specified conditions are met (e.g. if a measure of customer demand exceeds a specified thresholds).
Pass-through items	Provides that the company will be fully or partially compensated for costs incurred in specified areas or on specified items (e.g. Ofgem licence fees).
Logging up of actual expenditure subject to ex post efficiency review	Provides that a company will be fully compensated for actual expenditure on a certain activity, through the revenue allowance set at the next price control review, at least insofar as Ofgem determines the relevant expenditure was efficiently incurred.
Backward-looking revenue adjustment based on benchmarking analysis of outturn costs	A company will receive an amount of revenue, in respect of a particular activity or output, which Ofgem will determine based on benchmarking analysis of other companies' actual expenditure on that activity or output. This mechanism may be considered where the activity or output is new and there is no historical expenditure data to use for benchmarking at the time the price control is set.

11.12. Details of how and when we will use uncertainty mechanisms and the design options are set out in paragraphs 11.24 to 11.33. Under the RIIO model, a set of uncertainty mechanisms will be developed during the price control review. These will allow revenue to flex during the price control period to deliver value for money for existing and future consumers while protecting the ability of networks to finance efficient delivery. We expect the use of uncertainty mechanisms to be fully justified to limit, as far as possible, the number that are developed.

Mid-period review of output requirements

11.13. As discussed in Chapters 5 and 11 we will include provisions for a review of the primary outputs that network companies are required to deliver mid-way through the eight-year period. The review may be particularly important when the outputs-led framework is first implemented and in periods of significant change (for example, the transition to a low carbon economy in electricity). This review will be conducted in the fourth year of the eight-year price control and will have effect from the start of the fifth year. We expect that the six output categories will remain valid but, within

an eight year period, there may be a need to change the primary outputs, for example, to introduce measures to reflect new government targets on connections for electric vehicles or tighter renewable targets.

11.14. Details of how the review will work as well as details of what will be included within scope will be signalled early in the price control review process. These aspects of the mid-period review will subsequently be specified in final proposals, and in licences. We will provide commitment that any mid-period review will not extend to other aspects of the control. Other elements of the framework will be used to manage issues that are outside the scope of the mid-period review. These include but are not limited to uncertainty mechanisms, updates to cost of debt based on a ten-year trailing average, adjustment for the efficiency incentive rate within period, and rewards/penalties for output delivery. The tightly defined scope of the review will be necessary to manage any risk of undermining the incentive benefits of the longer price control period.

11.15. When considering a mid-period review, we will first assess whether output requirements need to change. If we decide that a material change is needed we will review whether and to what extent the revenue in the price control will need to change. The review may be limited to a short consultation process if we decide that we do not need to change the outputs set at the price control review.

11.16. We will need to have a clear case that the existing set of outputs does not deliver what customers need before making any changes at the mid-period review. We do not envisage that this provision will be used to address minor issues, for example, whether a particular output target is set at 98 per cent or 99 per cent. In taking any decisions on a mid-period review we will need to consider the risks from introducing instability to the outputs and distracting network companies as well as the administrative costs.

11.17. If we decide that we need to change the primary outputs, we may need to adjust the revenues allowed under the price control to compensate companies (if the requirements are increased) or to compensate consumers (if the requirements are reduced). Any changes to allowed revenues will focus on the incremental impact on expenditure requirements from the specific change to outputs, without re-opening the whole price control. The adjustments will represent the minimum necessary change to compensate network companies/consumers for changes in requirements. The review of outputs will not provide an opportunity to adjust revenues for any other reason (e.g. unexpectedly high input prices). We will make this clear to stakeholders and provide a firm commitment to this at the price control review.

11.18. This process will work in line with the arrangements specified in the licence conditions agreed with the company at the end of the price control review. To compensate for any changes to outputs following the mid-period review, Ofgem will need to determine an appropriate revenue adjustment. Before making such a determination, we will engage with stakeholders and publish a draft adjustment alongside supporting analysis, for consultation.

11.19. The mid-period review will provide an opportunity to change the primary outputs in the remaining years of the price control period. It will not apply retrospectively. Even if primary outputs were changed, companies would still be held to account for their performance to that point in delivering the original set of outputs.

Our general financing duty

11.20. During a price control review Ofgem seeks to provide a licensee with a revenue stream that is expected to be sufficient to enable it to finance efficient delivery of its obligations. We set out in Chapter 12 our principles for assessing financeability.

11.21. Our statutory duties (including the financing duty[15]) do not only apply at the time that a price control is set. If circumstances arise during the control period which mean that the revenue allowance set at the price control review is insufficient to enable an efficiently managed company to finance its regulated activities we will consider requests from companies for amendments to their price control. If there is sufficient justification to do so, the price control will be re-opened.

11.22. Ofgem has recently issued a guidance document setting out the arrangements for responding in the event that a network company experiences deteriorating financial health[16]. This document, when taken alongside our general financing duty, makes this duty more explicit by providing greater transparency and clarity on the types of circumstances under which a price control will re-opened and the likely process it will involve. These circumstances include situations in which:

- it can be demonstrated that adequate provision is not provided by the existing price control settlement;
- the cause of financial distress was beyond the company's control; and
- re-opening the settlement could reasonably be expected to relieve the financial distress in a timely manner.

11.23. Our general financing duty means that network companies are able to request changes to be made to the price control in the event that financeability is put at risk and can be seen as a way of managing the impact of highly significant uncertain events which could occur during the price control period. As such, invoking our general financing duty will be expected to be rare.

[15] The Authority's principal objective is to protect the interests of existing and future consumers in relation to gas conveyed through pipes and electricity conveyed by distribution or transmission systems. The interests of such consumers are their interests taken as a whole, including their interests in the reduction of greenhouse gases and in the security of the supply of gas and electricity to them. Ofgem also has a range of secondary duties including its duty to have regard to the need to secure that licence holders are able to finance the activities which are subject of obligations imposed on them (See section 3A(2)(b) of the Electricity Act 1989 & section 4AA(2)(b) of the Gas Act 1986).

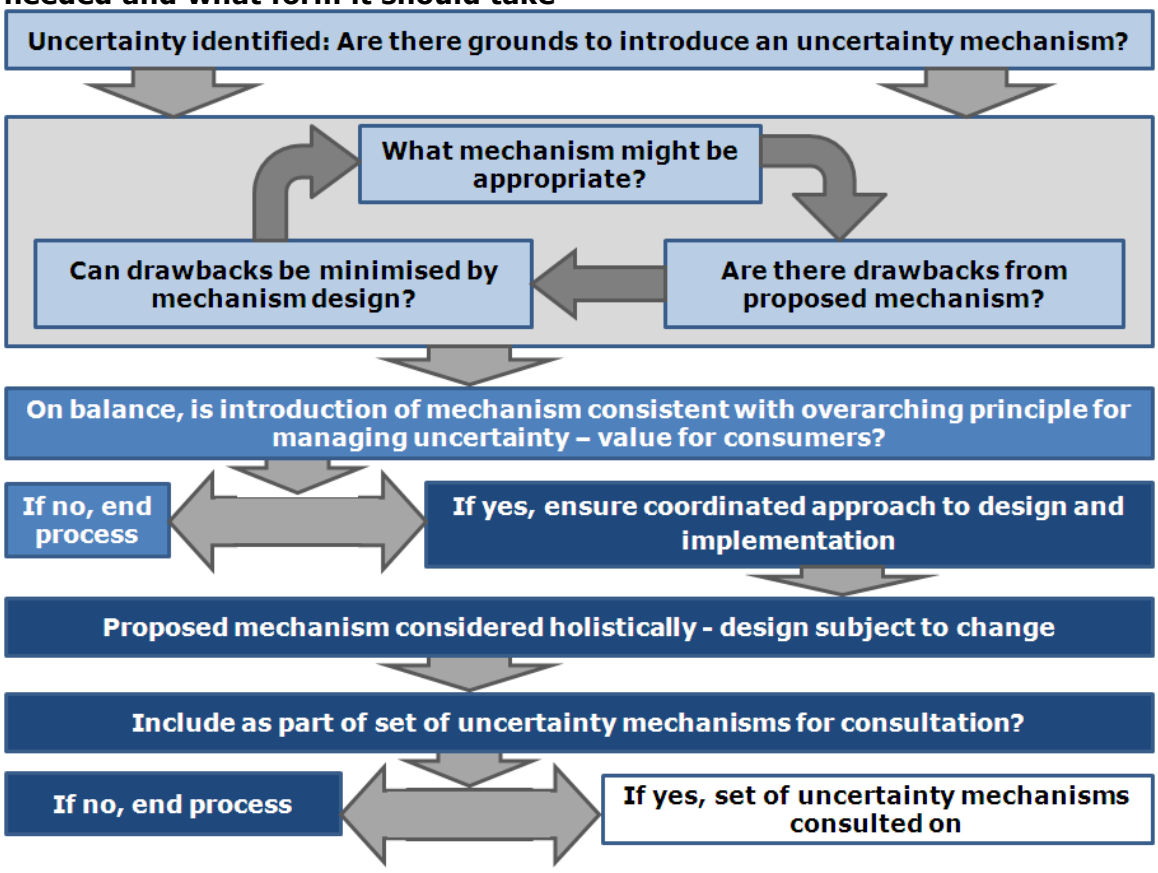
[16] Arrangements for responding in the event that a network company experiences deteriorating financial health – Guidance document. See chapter 4 - http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=259&refer=Networks/Policy

Using uncertainty mechanisms

11.24. Decisions on whether and how to implement an uncertainty mechanism will be made at a price control review, taking account of the specific circumstances facing the sector at the time and other elements of the price control package.

11.25. We set out here the range of issues we will consider when deciding whether to implement or remove an uncertainty mechanism as well as outlining the options that we will consider in their design. The nature of the process involved is illustrated in Figure 26.

Figure 26: Process to determine whether an uncertainty mechanism is needed and what form it should take



11.26. Under the RIIO model, uncertainty mechanisms will be agreed during the price control review with the rules governing their operation specified in the licence. To ensure that the decision to implement an uncertainty mechanism is consistent with the principles set out here, there will be clear responsibility within the price control team for monitoring the design and implementation of the potential range of proposed uncertainty mechanisms. There are a number of potential advantages to having a coordinated approach. In particular, it will help to:

- ensure there is a clear rationale for inclusion of every uncertainty mechanism introduced at the price control. The decision to include an uncertainty mechanism will need to be based on clear grounds and take account of the potential drawbacks of the mechanism;
- avoid undue complexity and provide greater transparency on the rationale for proposed changes to the regime, consistent with better regulation principles;
- prioritise resources during the price control review process to focus on areas that will offer the greatest benefits to consumers. We will need to identify areas where uncertainty mechanisms may be required or removed at an early stage in the price control, alongside potential design options. We will seek to avoid, save in exceptional circumstance, adding new uncertainty mechanisms at a late stage in the review process;
- ensure every uncertainty mechanism is considered holistically in light of other mechanisms and the wider price control package. This will promote greater consistency and simplicity in the design of uncertainty mechanisms. For example, holistic consideration of proposed mechanisms could present opportunities to 'bundle' those with similar aims. This might be seen as a way of reducing complexity; and
- limit opportunities for network companies to 'game' mechanisms off each other by ensuring more formal consideration of how the mechanisms work together in the package.

11.27. The process for determining whether to implement uncertainty mechanisms and the design of any such mechanisms will vary according to the type of mechanism being considered as well as other elements of the price control package, and the precise circumstances of the sector. The process of determining the case for a mechanism and associated decisions on the design of that mechanism will be intrinsically linked. Design changes will be likely to enhance/reduce the grounds for the use of any mechanism and vice versa. For simplicity, we look at the aspects of the discussion discretely below, recognising that they will need to be considered together when the principles are being implemented in a price control review. Figure 26 above highlights this.

Deciding whether or not to introduce an uncertainty mechanism

11.28. Our overarching principle for using uncertainty mechanisms is set out in Box 9 below.

Box 9: Overarching principle for uncertainty mechanisms

We expect network companies to manage the uncertainty they face. The regulatory regime should not protect network companies against all forms of uncertainty. The use of uncertainty mechanisms should be limited to instances in which they will deliver value for money for existing and future consumers while also protecting the ability of networks to finance efficient delivery.

11.29. Under the RIIO model there will be provisions, as part of the mid-period review, to allow changes in primary outputs to be made. Table 6 provides an overview of the other uncertainty mechanisms available under the framework and

the potential benefits associated with each. We will need to have regard to these potential benefits, as well as the overarching principle for uncertainty mechanisms set out in Box 9, when making a decision about whether or not to introduce an uncertainty mechanism at a price control review. The list may not be exhaustive and other issues may be considered at the time. It may be that more than one of the potential benefits applies. Where this is the case, it will be likely to increase the rationale for the introduction of a specific mechanism to manage uncertainty.

Table 6: Potential grounds for introducing an uncertainty mechanism

Reason	Explanation
To lower the cost of capital	May reduce the financing costs faced by network companies and, in turn, the allowed return Ofgem should allow in setting the price control. This lower allowed return will feed in to lower consumer prices. Chapter 12 discusses further the risk-return calibration.
Reduce financeability concerns	May reduce the risk of the network company facing financeability problems and, in turn, reduce the risk that Ofgem needs to re-open a price control (which could be costly[17]) to provide additional revenue to the network company.
Reduce consumers' exposure to forecasting uncertainty at price control review	There may be reasons to employ an uncertainty mechanism where forecasting cost/demand is challenging due to the uncertainty involved. In some cases it may be beneficial to, for example, introduce an uncertainty mechanism and re-investigate the costs/demand with the benefit of more relevant information, e.g. once prices from market testing are known. One reason for this might be to minimise the potential for network companies to achieve windfall gains as a result of good luck rather than good management.

11.30. The potential benefits need to be considered alongside the potential drawbacks, outlined in Table 7 below. This will ensure that we are taking an 'on balance' decision, recognising the implications (both upsides and downsides) of introducing a mechanism or not. When evaluating the benefits and downsides of implementing an uncertainty mechanism it will be important to consider these relative to the potential benefits of using a different approach to managing uncertainty. It will also be important to consider the balance for alternative designs of uncertainty mechanisms.

11.31. The importance of taking this balanced approach can be demonstrated by a stylised example. A key factor driving the potential introduction of an uncertainty mechanism might be to reduce network companies' cost of capital - lowering prices for consumers. However, its introduction may also dampen efficiency incentives, making costs higher and therefore countering the reduction in the cost of capital. This is discussed further in table 7 below. We would therefore need to be sure that

[17] Potential costs include: Possible introduction of instability and undermine regulatory commitment to the regime; expectation that the control will be re-opened can change the behaviour of network companies and may undermine incentives for cost efficiency; and if additional funding is provided to encourage a network to provide specific outputs, there is a risk of consumers 'paying twice' for those outputs where it is unclear whether or not the original revenue allowance was intended to cover them.

introducing the mechanism would lead to benefits from reducing the cost of capital that are greater than the consumer benefits associated with incentives that encourage network companies to drive down costs.

Table 7: Potential drawbacks of introducing an uncertainty mechanism

Reason	Explanation
Can undermine incentives for efficiency	Options to mitigate or remove uncertainties facing network companies need to be considered against the incentives they may create. For example, uncertainty mechanisms that enable companies to pass more of their costs through to customers will provide protection to the company, but may also reduce or eliminate their incentive to manage costs and uncertainties efficiently.[18]
Price volatility	Changes to the allowed revenue during the price control may contribute to volatility in charges for end users. As discussed in Chapter 5, during the price control we will allow companies to make applications to re-profile revenue collection to address price volatility where this is in consumers' interests, but this process will bring its own administrative burden.
Risk of unintended consequences	Uncertainty mechanisms may provide the regulated companies with opportunities to obtain money for things they were not intended to allow. The risk may be exacerbated where there are multiple uncertainty mechanisms in operation which may interact with each other and with the wider regulatory regime. This could provide opportunities for network companies to 'game' mechanisms off each other.
Increase complexity of regime	Uncertainty mechanisms can add to the complexity and may reduce transparency of the regulatory regime. On the grounds of better regulation it may be desirable to limit the use of these tools.
Resource costs	Designing, implementing and managing uncertainty mechanisms carries a cost for Ofgem and network companies. This should be recognised with steps taken to ensure resources are appropriately targeted such that mechanisms are designed consistently and holistically, based on the uncertainty they are addressing.

Options on the design of an uncertainty mechanism

11.32. The uncertainty mechanisms outlined in Figure 25 and Table 5 above have been given discrete descriptions, but in reality there are numerous forms that the design of an uncertainty mechanism could take. For example, there could be design differences in the timings associated with when a network company receives a revenue adjustment and the way the mechanism is triggered. The design of the mechanism will likely play a crucial role in delivering benefits and mitigating against any drawbacks of an uncertainty mechanism (set out in tables 7 above). Table 8 below sets out some of the design options which could be considered when developing an uncertainty mechanism. The options should not necessarily be seen

[18] The potential to undermine efficiency incentives was recognised by the Competition Commission in their recent provisional findings report on Bristol Water's price control. Competition Commission (June 2010), 'Bristol Water plc: A reference under Section 12(3) of the Water Industry Act 1991 – Provisional Findings.' http://www.competition-commission.org.uk/inquiries/ref2010/bristol/pdf/pfs_for_publication.PDF

as independent of each other. We will take account of the potential grounds and drawbacks (outlined above) of these design options, on a case-by-case basis, when reaching a balanced decision on the appropriate design. We will also ensure that we learn from experiences of using similar designs and mechanisms in the past.

11.33. Where possible, we will seek to design uncertainty mechanisms to provide transparency over when and how we will adjust revenue during the control period. This will benefit investors and consumers of network services by allowing them to better understand and make assumptions about how revenue might evolve during the period.

Table 8: Aspects of design that we need to consider

Aspect of design	Explanation
Mechanistic trigger to adjust revenue	Some mechanisms can be entirely automatic, based on a trigger, whereas others require companies/Ofgem to justify the need for a change in revenues. Where a trigger is based on judgement clear guidance is required. The trigger event itself might be linked to: a particular time (e.g. within clearly defined 'windows', a project milestone, cost threshold or some measure of volume).
Timings of payment to a network company	The timings of a change to allowed revenue can vary based on the choice and design of the specific tool. Payment could be received when the price control is set, during the price control (if triggered in-period) or after the price control. As such, the timing of the payment will impact areas such as the volatility of network charges. For highly material costs, the timing of the payments should, in general, be quick and may make the use of certain mechanisms (e.g. logging up) less appropriate.
Calculation of addition to/reduction in payment level	This may be determined when the price control is set, during the price control (if triggered in-period) or after the price control. Where revised revenue allowances are calculated later, this can benefit from more up-to-date information, but can require more resource to manage; be more complex; and may be a source of uncertainty itself.
Symmetric vs. Asymmetric	It may be desirable to design mechanisms that flex revenue both up and down in response to uncertainty. Symmetric mechanisms may be regarded as being consistent with the interests of both consumers and investors.

Inflation

11.34. The purpose of indexing the price control is to provide investors in network companies with protection against general price inflation which is outside their control. Protecting them in this way benefits customers through a lower cost of capital. The indexation of price controls therefore represents a form of uncertainty mechanism. Indexation does not take away companies' responsibility for efficient delivery of outputs and for efficiently financing their activities. Companies remain exposed to the impacts of their decisions in these areas.

11.35. Under the RIIO model, we will continue to adjust expenditure in the price control for real price effects (RPEs) which reflect our forecasts of expected increases (or decreases) in input prices relative to the retail prices index (RPI)[19]. As outlined in Chapter 7, as part of their well-justified business plans, we will ask network companies to provide their estimates of the expected costs of delivering outputs. We will also ask them to include an assumed adjustment for input price inflation (RPEs) and we will tell them which inflation index to use to base the calculation on. This approach will provide us with useful information on which to make our own assessment of the RPEs to be used for the sector as whole.

11.36. The allowed return on the RAV will be set at levels that we expect to provide a fair return to investors, in light of potential growth in RPI over the price control period.

11.37. While we recognise that there may be a case for moving to indexation using the consumer prices index (CPI), there are significant practical problems with a wholesale move to CPI as corporate and government index-linked bonds continue to use RPI as the relevant index. If a market in sterling CPI indexed bonds were to develop we would revisit this issue at future price control reviews. However, for TPCR5 and GDPCR2 we will continue to index the price control using the RPI.

Volume uncertainty

11.38. The way the regulatory regime allocates volume risk between customers and network companies is an important decision in all four of the regulated energy network sectors. The price control could shield a network company entirely from the effects of rising and falling volume. However, as we have made clear in our overarching principle for uncertainty mechanisms (see Box 9) protecting network companies against all forms of uncertainty is unlikely to be desirable.

11.39. In each of the energy sectors a material proportion of costs vary with volume. There is also no simple relationship between measures of volume and costs. For example, the relationship between costs and volumes is not necessarily linear and this is important to consider when looking at whether, and how, to manage volume uncertainty. Table 9 sets out the main uncertainty mechanisms which are likely to be relevant for addressing volume uncertainty.

[19] For example, if we thought that the input prices that network companies face will grow (on average) at 1 per cent more than the RPI, we will build in an adjustment of 1 per cent per year to the expenditure forecasts made assuming constant input prices. These forecasts are difficult and somewhat subjective and discussions on the appropriate level of the RPE may be influenced by the index of general inflation used (i.e. currently the RPI).

Table 9: Design options for mechanisms for managing volume uncertainty

No.	Mechanism for volume uncertainty	Description
1	Volume driver calibrated at price control review	The price control includes a mechanism such that the revenue the company is allowed to collect from customers is set to vary as a function of a volume measure. For example, a volume driver may be set at the price control review so that an electricity distribution company is allowed an additional £X for each new connection to the network that is made during the price control period above some baseline number of connections. Conversely, the company will be allowed £X less per connection if the number of connections is below the baseline level.
2	Revenue trigger calibrated at the price control review	The price control includes a mechanism, such that the revenue the company is allowed to collect from customers is set to increase by a specified amount if and when certain trigger events occur during the price control period. For example, the price control for an electricity transmission company may include a provision to allow the company an additional £100m of revenue if a specific wind generation project is given planning permission, to help fund network reinforcement expenditure needed to accommodate the increase in network demand associated with this generation project.
3	Revenue adjustment based on updated cost assessment if trigger event occurs	If a trigger event occurs during the price control period, Ofgem makes an up-to-date forward-looking assessment of the company's upcoming expenditure requirements for a specified output or activity, and adjusts the revenue that the company is allowed to collect for the remainder of the price control period to reflect this. For example, the price control for a gas transmission company may include a provision that there will be a revenue adjustment if there is a need (demonstrated via auction) for new entry capacity at a network location that was not anticipated at the price control review. We will review a submission from the company, to decide how much additional revenue the company should be allowed to fund the additional capacity. The revenue adjustment is made before the company starts this work.
4	Logging-up of actual expenditure subject to ex post efficiency assessment	The price control for a company could include a provision that if the company faces greater demand or volumes of activity than expected at the price control review (e.g. if volumes are greater than a threshold) the company will be compensated for that additional expenditure at the end of the price control period, at least insofar as we determine that the additional expenditure was efficiently incurred.

11.40. We recognised in paragraph 11.32 that uncertainty mechanisms need to be developed on a case-by-case basis. However, given the potential significance of volume uncertainty in each of the sectors and the complexity of the relationships between volume changes and cost changes, we expand here on some of the

mechanisms available and their design. This is not intended to usurp the previous sections on when and how to design uncertainty mechanism, rather to add more detail to certain areas. Decisions on how best to manage volume uncertainty in each sector will be made at the price control reviews. We recognise that in some cases it may not be in consumers' interests to include uncertainty mechanisms to protect companies against volume uncertainty. For example, it may be better to address concerns about companies' exposure to the financial risks associated with volume uncertainty by including a lower efficiency incentive rate within the price control package rather than including a specific uncertainty mechanism.

11.41. The two key issues to be considered when choosing a design for a volume uncertainty mechanism are:

- when is the magnitude of the revenue adjustment determined?; and
- how is the revenue adjustment triggered?

11.42. We discuss both below.

When is the magnitude of the revenue adjustment determined?

11.43. There are three main options for when the magnitude of the revenue adjustment is determined:

- **at the price control review:** the magnitude of revenue adjustments can be set upfront (or calibrated) at the price control review, in which case the precise number (e.g. in £m per unit) can be written into the licence. Mechanisms one and two in Table 9 fall in this category;
- **during price control period:** the magnitude of the revenue adjustment can be set on a forward-looking basis by Ofgem during the price control period in light of an updated assessment of the company's expenditure requirements. For the adjustment to be on a forward-looking basis, it needs to be set before the company starts to incur expenditure on that output/activity (e.g. set using a forecast of expenditure). The third mechanism in Table 9 falls into this category; and
- **after expenditure has occurred:** the magnitude of the revenue adjustment can be set in light of data on the actual expenditure incurred by the company. This is the final option in Table 9.

11.44. When making choices between these options we will consider the following:

- **impact on efficiency incentives:** the first of the three options is least likely to damage efficiency incentives during the price control period, because the difference between the expenditure that the company incurs and revenue that the company is allowed will be lower under this option. The third of these raises substantial risks of damaging efficiency incentives: companies may have little incentive to control their expenditure if they expect that the revenue they will be allowed will adjust to reflect the money that they actually spend. As such, additional design considerations, such as benchmarking, will be needed. The

second approach may fall between the two, depending on the precise design of the mechanism;

- **information availability**: at the time of the price control review there might be limited information on the potential costs of certain load-related expenditure and this could make it difficult to set the magnitude of adjustments upfront. Setting the magnitude of adjustments at a later date allows for more up-to-date information to be used. The information deficiencies may be more acute if volume and costs do not to follow a reasonably simple relationship (e.g. there might be substantial variations in unit cost by location due to geographical differences such as terrain); and
- **administrative burden**: setting revenue adjustments on a case-by-case basis during a price control period, or at the end of a price control period, may increase the administrative burden and lead to a stream of regulatory interventions during the price control period, potentially increasing complexity.

How is the revenue adjustment triggered?

11.45. Where a network company has some influence on the potential to reach a particular volume or target, it will be appropriate to consider whether the changes in revenue that may result from a trigger being hit should automatically be triggered.

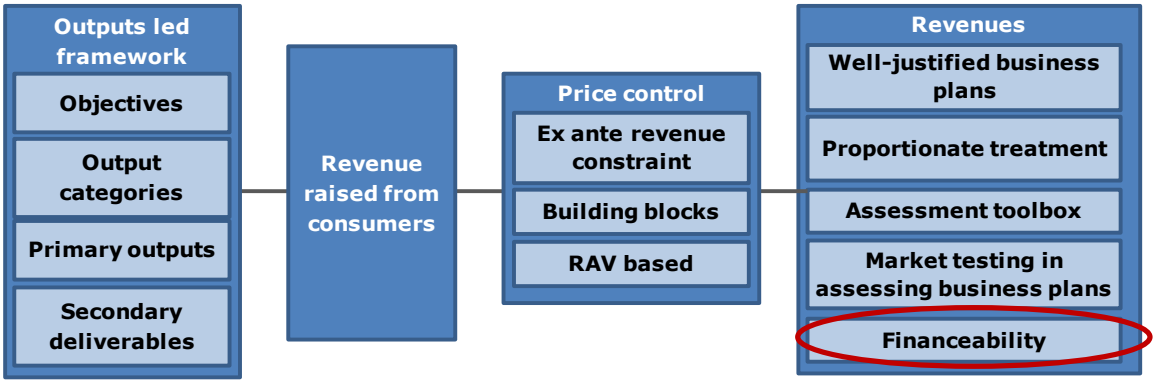
11.46. Uncertainty mechanisms may create perverse incentives, particularly where the mechanism is contingent on an explicit trigger that the network company can influence. For example, the removal of the units distributed volume driver in DPCR4 was, in part, because network companies have some influence on the volume of units distributed. This volume driver may have discouraged companies from using demand side management schemes to defer reinforcement because increasing units distributed they could increase their revenue.

11.47. Similarly, a mechanistic revenue trigger could be set that will allow the company more revenue when it reaches a particular milestone in a proposed infrastructure project. But this could encourage the company to focus on reaching that milestone even if it becomes apparent that the most efficient way to deliver primary outputs will be to take a different delivery approach altogether.

11.48. The alternative option is that the trigger should inform us that a sufficient change in volume has occurred, but that we will then assess whether and on how to change the price control based on a balanced assessment at the time. However, having a non-mechanistic approach to determine a change in revenue needs to be balanced against drawbacks including adding complexity, it being a potential additional source of uncertainty and greater control period intervention by us.

12. Financing efficient delivery

Chapter summary
We set out how we will fulfil our financeability duty under the RIIO model.



Introduction

12.1. Our principal objective is to protect the interests of existing and future consumers. We also have a duty 'to have regard to the need to secure that licence holders are able to finance the activities which are the subject of obligations on them'. This means that efficient network companies should be able to secure financing in a timely way and at a reasonable cost in order to facilitate the delivery of their regulatory obligations. This is also in the interests of consumers. However, it is important that the regulatory framework does not provide excessive returns, reward inefficiency or 'bail-out' a company that has encountered financial distress as a result of its own behaviour.

12.2. The RIIO model provides clear, ex ante rules and principles for various components of financeability – see Box 10. This is intended to provide as much certainty as possible to investors, companies, ratings agencies and consumers while ensuring that our ability to react to future events is not unduly constrained.

12.3. These principles will simplify and improve our existing approach to financeability and increase transparency. They will also help to balance the interests of existing and future consumers. In addition, they help to improve regulatory commitment to companies and their investors by providing a strong set of principles for the various components of financeability. This will help efficient network companies to raise the equity and debt they need to finance their regulatory obligations. It may also result in lower financing costs for companies and thus lower bills for consumers than would be the case in the absence of these principles.

12.4. The RIIO model will promote efficient decision making by setting clear outputs that the networks companies must deliver and strong incentives for delivery. Our principles for establishing the notional gearing and for the cost of debt within the allowed return will then deliver the benefits associated with recognising the low risk nature of the RAV. This will be achieved by taking account of the risks that

companies face under the price control package and by updating the cost of debt element of allowed returns annually.

Box 10: Summary of financeability principles

The principles are summarised below:

- a longer-term view of financeability - reinforced by regulatory commitment;
- risks to be allocated appropriately between companies and consumers - depending on who is the best placed to manage them;
- a principles-based approach to the calculation of notional gearing, with the size of the notional equity wedge reflecting the company's risk exposure and potentially varying within and between sectors;
- a real, weighted average cost of capital (WACC) based approach to setting allowed return;
- the cost of debt assumed in the WACC to be based on a long-term trailing average and updated annually within a price control;
- CAPM, supported by other approaches, to be used to determine the cost of equity;
- a capitalisation policy that equalises incentives but is also based on companies' business plans and so is closely aligned with actual opex/capex split;
- assumed asset lives underpinning the depreciation policy to reflect expected economic life, with potential to weight the depreciation profile to reflect uncertainty in the future consumption of assets;
- financeability assessment to be informed by a number of sources, including relevant equity and credit rating considered over the long term;
- an onus on companies to manage short-term requirements and to provide equity where necessary, and
- Return on regulated equity (RORE) analysis used to check the package fits together appropriately.

12.5. Under the RIIO model the regulatory package will be calibrated in such a way that those companies that deliver for consumers earn good rates of return, whilst those that demonstrably do not deliver, earn low returns on regulated equity - potentially below the cost of debt.

12.6. We will determine an appropriate degree of risk exposure for regulated companies based on the overall impact on consumers. In making this assessment, we will consider the potential benefit of a company being exposed to risk and the financial implications of that decision. In some cases, it may be that a company is able to manage a particular risk but that the implications for their cost of capital will make it an unattractive proposition. The following elements of the price control have a particularly close relationship with a network company's cost of capital and therefore required allowed return:

- the efficiency incentive rate (discussed in Chapter 10): The higher the efficiency incentive rate, the more investors are exposed to the risk that a

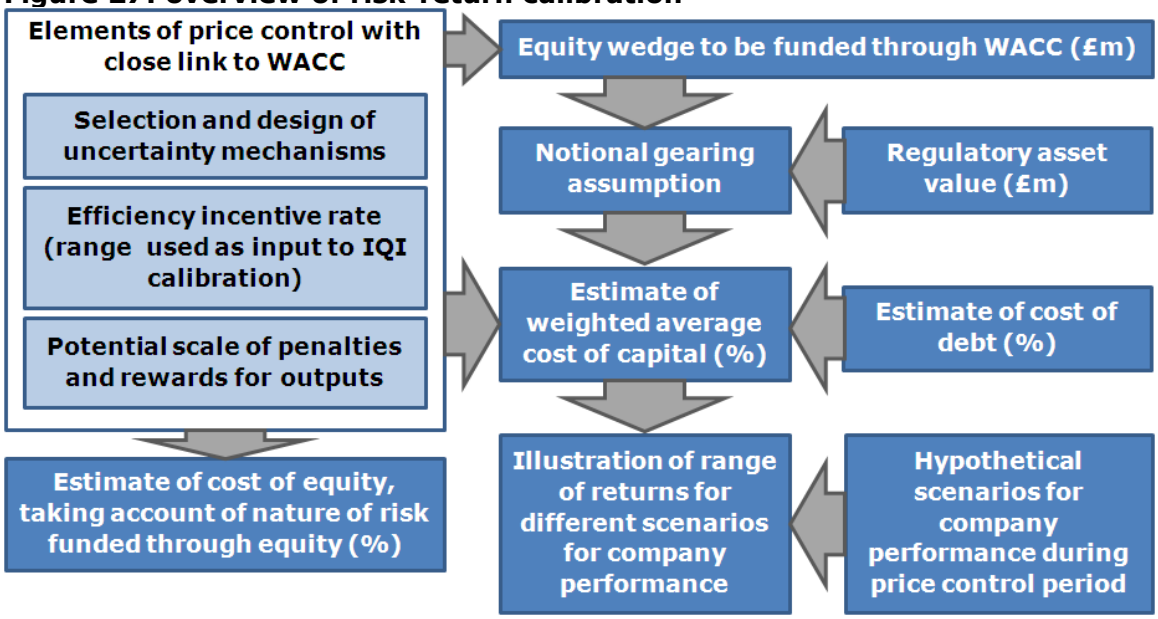
company needs to spend more than envisaged at the price control review to deliver outputs. In setting the efficiency incentive rate, we will take account of the impact of variation in the incentive rate on the cost of capital.

- the use of uncertainty mechanisms (discussed in Chapter 11): Uncertainty mechanisms can be used to reduce investors' exposure to the risk that a network company needs to spend more than envisaged at the price control review to deliver outputs. The justification for including a specific uncertainty mechanism within the price control may be to reduce the cost of capital that consumers will need to fund; and
- the potential scale of penalties and rewards for output delivery (discussed in Chapter 9): The greater the penalties and rewards, the greater is investors' exposure to a company's performance in delivering outputs. Where possible, we will set the levels of penalties and rewards upfront at the price control review. In other cases, we will provide guidance at the price control review on how penalties will be determined in the event of under-delivery. In setting the levels and guidance on penalties and rewards, we will take account of the potential scale of penalties and rewards and their impact on the cost of capital that consumers will need to fund. It will be important to recognise that, for some output incentive arrangements, the appropriate levels of penalties and rewards are based on estimates of the value of these outputs. For instance, an output incentive scheme might be calibrated based on data regarding the willingness of consumers to pay for marginal improvements in a particular output measure. In these cases, the link between the output incentive and the cost of capital is one-way: we will need to set the allowed return at a level that fairly compensates investors for the risks from that incentive scheme. It is unlikely to be appropriate to scale up or scale down an incentive scheme based on willingness to pay data in order to address concerns that the implied cost of capital will be too high or too low.

12.7. Once the efficiency incentive rate, uncertainty mechanisms and potential penalties and rewards for output delivery have been set, we will estimate a notional gearing that reflects the cash-flow risks from the overall package. Figure 27 provides an illustration of the process and interactions, which we discuss in more detail below.

12.8. Once we have determined the level of risk, we will use this information to derive how much equity is required in the notional capital structure of an efficient company. In this way, a company's risk exposure will directly relate to their notional gearing and thus the calculation of their allowed return. The greater the potential variance in financial returns, the greater the cash flow risk that companies bear, and hence the greater the requirement for equity finance within their capital structure. Equity will thus be acting as a buffer to absorb any variance in the baseline allowed return.

Figure 27: overview of risk-return calibration



12.9. To the extent that the risk allocation and regulatory framework are common across a sector, the derived notional gearing will likely be the same for all companies within that sector. However, under this approach, there is scope for companies within the same sector to have different levels of notional gearing where there is a significant difference in the risks facing them, for example, as a result of the size of their investment programme relative to their existing RAV. This may well be the case for the electricity transmission operators in particular.

12.10. At each price control review we will determine the appropriate level of notional gearing and, as far as possible, the methodology for calculating it will be retained in future price controls to reinforce the concept of regulatory commitment. We will also seek to avoid significantly changing the risk profile of a particular sector from one price control to the next without good reason. Where any change is made to the level of notional gearing between price controls, we will ensure that this is achievable on a notional balance sheet, at value for money.

12.11. It is for the network companies themselves to choose their actual financial structure and they (and their investors) bear the risks associated with the choice made. The regulatory framework is about identifying an appropriate allowed return, reflecting an assumed notional gearing. [20]

[20] Consistent with the recent report on Bristol Water from the Competition Commission we expect a network company to take a range of factors into account when choosing their financial structure including the scale of future capital expenditure requirements and the expected risks that the business faces. Competition Commission (September 2010), 'Bristol Water plc: A reference under Section 12(3) of the Water Industry Act 1991 – Final Price Determination.' http://www.competition-commission.org.uk/rep_pub/reports/2010/fulltext/558_final_report.pdf

A WACC-based allowed return

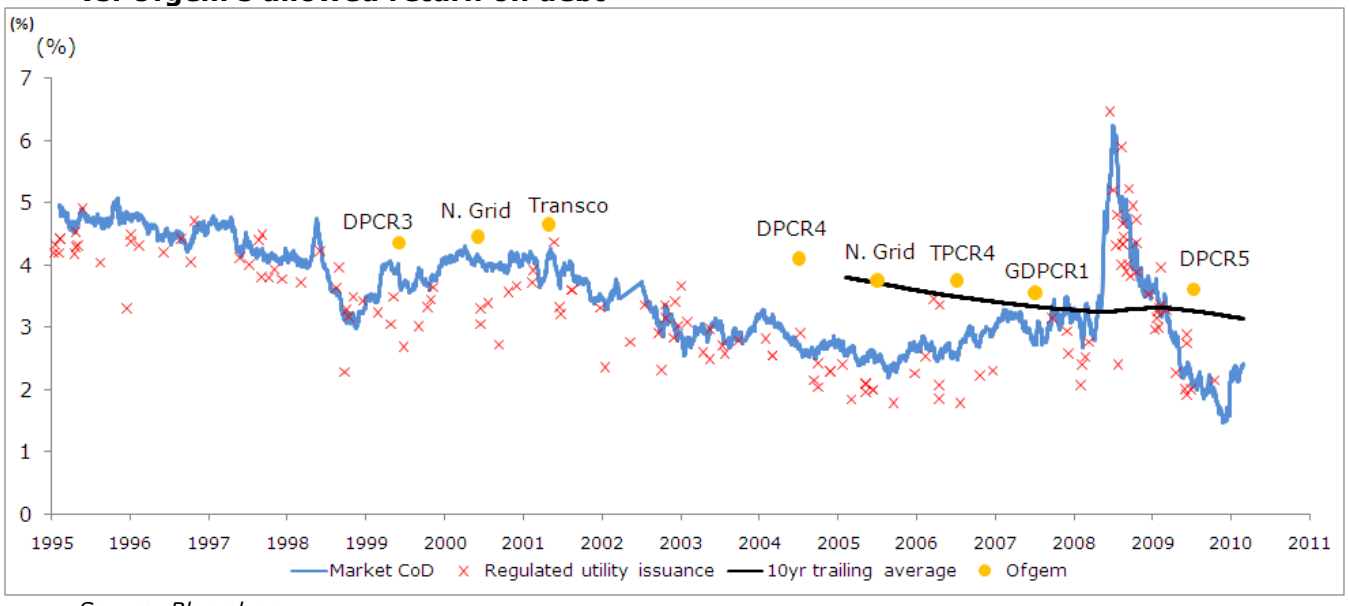
12.12. The allowed return has two main roles in the regulatory framework. First, it provides a fair return to existing investors in network companies and second it is the value which facilitates investment in new infrastructure. Under the RIIO model, we will continue to set an allowed return on the basis of a single weighted average cost of capital (WACC).

The cost of debt

12.13. Our approach, under the RIIO model, is to extend the concept of regulatory commitment to the estimation of the cost of debt. We believe that if there is a commitment to remunerating efficiently incurred debt costs, it will facilitate a greater role for equity in the capital structure of regulated companies going forward. We also believe that such an approach will mean a higher likelihood of getting the WACC 'right' thus leading to better investment decisions by companies.

12.14. The allowed return on debt in previous price controls has closely tracked the long-term cost of debt average rather than current rates, as Figure 28 shows. We believe that a strong emphasis on long-term averages remains an appropriate basis for calculating the cost of debt going forward - irrespective of current (or indeed forecast) market rates.

Figure 28: The forward cost of debt (real) vs. regulated utility bond issuance vs. Ofgem's allowed return on debt



Source: Bloomberg

12.15. Under the RIIO model the cost of debt embedded in the allowed return will be based on a long-term trailing average of forward interest rates, and the revenues allowed under the price control will be adjusted each year for changes in this trailing

average. This annual adjustment for changes in the cost of debt will be entirely mechanistic, with the rules determined at the price control review. This will represent a type of uncertainty mechanism. Estimating the cost of debt on this basis should provide comfort that new debt, financed at efficient rates – even at levels higher than the allowed return - will be fully funded in the future.

12.16. As part of the next price controls we will evaluate a number of options for the actual index; for example, looking at a mixture of maturities and length of time for the trailing average. At subsequent price controls we envisage retaining the same index subject to a check that the index still provides a reasonable estimate of the cost of debt.

The cost of equity

12.17. In estimating the cost of equity parameter within the WACC, many regulators – including Ofgem - have relied primarily on the capital asset pricing model (CAPM) but sense checked the result with other methods, e.g. dividend growth model (DGM) and market to asset ratios (MAR).

12.18. This approach to calculating an appropriate cost of equity remains valid under the RIIO model.

Capitalisation

12.19. Network companies' expenditure in each price control period is funded, in part, from revenues raised from consumers during that price control period and, in part, from revenues to be raised from future consumers during subsequent price control periods. The RAV provides a commitment on the revenues to be raised from future consumers during subsequent price control periods.

12.20. In DPCR5, we modified our approach to capitalisation, with all companies having a fixed percentage of their total network costs capitalised into the RAV and the rest being expensed in year. This was intended to equalise the incentives on capex and opex and avoid distorting decision making.

12.21. Going forward we believe that to help equalise incentives we should set a fixed percentage of total expenditure to be capitalised during the price control period. We will set the percentage at the price control review, seeking to strike a fair balance between existing and future consumers in light of the nature of the expenditure expected over the price control period (e.g. drawing on the amount of capex like costs submitted in a company's business plans).

Depreciation

12.22. In both electricity distribution and electricity transmission, we have previously adopted policies that 'accelerate depreciation' – to improve a company's near-term

cash flow ratios and improve their perceived financeability. For these sectors, the assumed regulatory life was reduced to 20 years for assets that are likely to have a physical life of more than 40 years. In gas distribution and gas transmission, the problem is arguably reversed with the regulatory depreciation period being 45 years for new investment. In contrast to electricity, there is much more uncertainty about the outlook for gas. It is therefore possible that an economic depreciation period could result in a shorter depreciation profile than currently.

12.23. Under the RIIO model the depreciation rate will reflect the average expected economic life of the asset base. In this way, the interests of existing and future consumers will be fairly balanced. We recognise that assessing the appropriate rate of economic depreciation for assets is not straightforward. However, we have commenced a full review of economic life as part of the price control reviews for transmission and gas distribution.

12.24. For some sectors, we are aware that changing the methodology may mean a slowing down in the return of capital. While this may not imply a financeability issue, we recognise that RAV depreciation represents a significant component of allowed revenue for companies and any sudden reduction could increase perceived regulatory risk, which would be undesirable. Under these circumstances, we will consider whether it is appropriate to have some period of transition, as discussed in the following section. We also recognise that there are arguments that lengthening / reducing the time over which capital is remunerated (taken in isolation) could raise / reduce the riskiness of cash flows and therefore the cost of capital. Where this is the case, we will reflect this in the allowed return.

Assessing financeability

12.25. As long as the allowed return, depreciation profile and capitalisation policy are set appropriately and there is consistency in their respective future determinations, the notional company should be financeable[21].

12.26. Under the RIIO model we will continue to assess financeability in the round, considering evidence from a broad range of sources. This will include but will not be limited to - consideration of relevant equity metrics and the metrics that the credit ratings agencies look at in determining a company's credit rating.

12.27. Under the RIIO model, we will not advance cash flow in light of apparent short-term dips in cash flow metrics. We will seek to understand the reason behind such failures (e.g. high capital expenditure relative to RAV) but the onus will be on the company to resolve the situation, including by injecting equity and/or reducing dividend payments as they see fit. In contrast, when relative expenditure levels decrease, the company may choose to remove equity if it considers this appropriate, e.g. through the payment of special dividends.

[21] In its recent report on Bristol Water the Competition Commission took a similar approach, '...the duty...to secure that companies can finance ...their functions is fulfilled by ensuring that opex and capex projections and the cost of debt and equity (and therefore WACC) are reasonable.'

12.28. By placing a greater onus on companies to take action to maintain their investment grade credit ratings, it reduces the requirement for Ofgem to make adjustments to other areas of the price control.

Financeability ratios

12.29. In assessing financeability we will take into consideration both the relevant equity and cash flow metrics for the notional company to ensure that the overall package is financeable for an efficient company. In addition, the Authority will review (as outlined in paragraph 12.24) a company's case should it be financeable but nevertheless have a negative impact on cashflows caused by the implementation of RIIO.

12.30. In terms of equity metrics, we will take into consideration the impact of our price determination proposals on such ratios as the notional RAV/ EBITDA and Regulated Equity/Earnings for the regulated company.

12.31. There are many ratios calculated by the ratings agencies, some are more relevant for the assessment of regulated networks than others. Historically, we have focused mainly on the results of the following ratios:

- funds from operations (FFO)/ interest cover;
- retained cash flow/net debt; and
- net debt/RAV;
- each calculated for the notional regulated company.

12.32. Under the RIIO model, we think that net debt/RAV and the adjusted interest coverage ratio or post maintenance interest cover ratio (PMICR) are the most appropriate ratios to consider. PMICR is a variation on the FFO/interest cover but eliminates the effect of regulatory depreciation's contribution to the calculation of FFO. This view is shared by Moody's in their Special Comment on RPI-X@20[22].

Transitional arrangements

12.33. Given the large amount of investment required in the sector going forward, we do not want to make it difficult for companies to raise the necessary finance. Indeed, our approach to financeability under the RIIO model is designed to do the opposite. Providing greater transparency and predictability about the way we approach each element of financeability should provide comfort to investors and make the sector more attractive to both equity and debt investors.

12.34. Our approach to financeability is value neutral in cash flow terms. However, application of the principles in this chapter may have implications for the timing of a company's cash flows. The precise impact will not be clear until companies have

[22] RPI-X@20: A Welcome Review of the UK Regulatory Framework but a Step Change Could Raise Credit Risk, 8 June 2010.

submitted their well-justified business plans as part of the price control review process.

12.35. Where application of these financeability principles in a single step could cause excessive disruption to capital markets and/or raise concerns about financeability, we will adopt appropriate transition arrangements at price control reviews to ensure efficient delivery of regulatory obligations is financeable. The focus will be on ensuring that the principles are applied but over a period of time, which we expect to be no longer than a single control period (eight years). In seeking to identify whether transition arrangements are necessary, the types of factors that we will have regard to include:

- the length of the price control and options for phasing within the control period;
- the effects of the proposals on allowed revenue;
- the impact on the notional company's ability to raise necessary finance, both debt and equity; and
- the impact on relevant equity metrics and key cash flow ratios, similar to those calculated by credit ratings agencies.

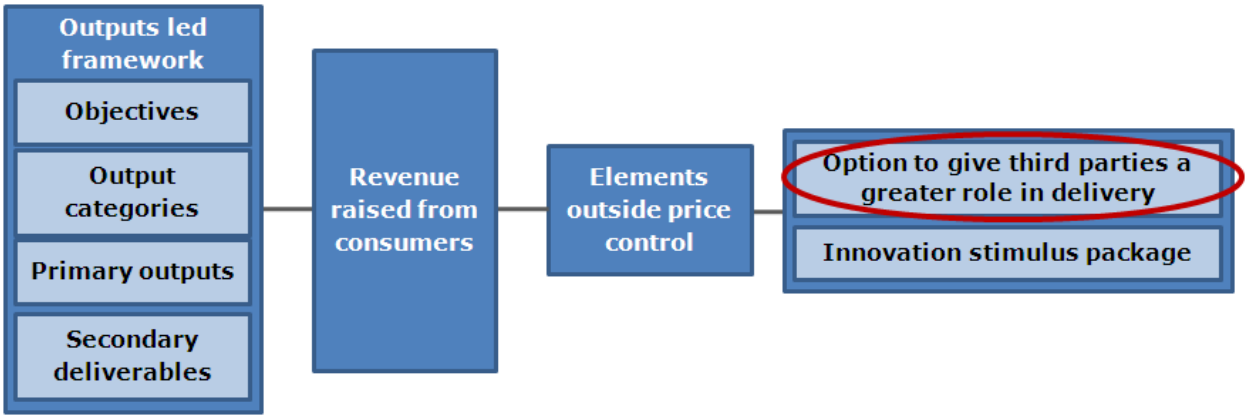
12.36. There are many factors (including depreciation) that influence the timing of a company's cash flow. Where transition arrangements are necessary, the precise nature of these will be consulted on at price control reviews, reflecting the specific circumstances of a given sector at the time. There is a range of approaches that we could adopt to ensure appropriate transition.

12.37. The onus will be on the network companies to demonstrate to us in their well justified business plans why transition arrangements are necessary and to propose a suitable methodology. Where a company does demonstrate that application of the financeability principles in a single step would cause an efficient company financing difficulties, we will implement transition arrangements to ensure financeability.

Part 3 – Other elements of the RIIO model

13. Greater role for third parties in delivery

Chapter summary
Under the RIIO model we will have the option of providing licensed third parties with a greater role in delivery by giving them responsibility for delivering key projects following a competitive process. The third party would be responsible for operating and owning the associated assets. We set out here the principles that we will consider when deciding whether to use this option. We also set out the range of issues that will need to be worked out if we choose to use the option of Ofgem giving third parties a greater role in delivery.



13.1. As discussed in Chapters 7 and 8, under the RIIO model companies will be expected to consider, alongside other delivery options, the case for outsourcing aspects of their business plan where this is expected to provide long-term value for money for existing and future consumers. In addition, where we have concerns about the network company's proposals on how to deliver outputs (e.g. there is insufficient evidence of innovative thinking) or on the long-term costs of delivery, we may require them to provide market testing evidence with respect to certain aspects of the plan. With these tools, the processes and decisions around market testing rest with the network company. Existing and future consumers will reap any benefits where we encourage or indeed require the network company to make choices about how best to involve third parties in value for money and timely delivery solutions.

13.2. Under the RIIO model we will also have the option, following a competitive process, to allow a third party the revenue for delivering key projects. The third party will be an existing or new licensed network operator (this could in future include companies other than the existing operators). We expect the third party would be involved with the design, build, operation and ownership of the related assets. Where we are considering whether third parties might have a greater role in delivery for a project proposed by an existing network company, the project would be taken outside of the core price control. Subject to third package implementation, the National Electricity Transmission System Operator (NETS SO) and the System Operator for the gas National Transmission System (NTS) will remain responsible for ensuring system integrity, in accordance with existing Codes and licence conditions.

13.3. We will consider the option of allowing a third party the revenue and associated responsibility for delivery of key projects where we expect it to provide greater value for consumers than the option of Ofgem-required market testing. The option of giving a new operator a greater role in delivery should bring additional benefits due to the fact that the third party will have more direct responsibilities and obligations, as a licence holder, and the third party will own the assets and derive an income stream from them. There are potential additional costs related to running a competitive process and introducing new fringe operators in the system. As set out below, we will pursue the option where we expect the potential benefits to outweigh any potential costs.

13.4. We set out in this chapter the principles under which we will consider using the option of giving third parties a greater role in delivery. We only expect to use the option for large-scale projects that are separable from other network assets and where the nature of the project is such that the existing network operator may not necessarily be best placed to deliver it at best value for consumers. This may be, for example, because the project is to some extent new or untested from the perspective of the existing network service provider. We recognise that focusing on large projects could create incentives for the network companies to restrict the size of their projects to guard against the potential that we may open up delivery to competition. It will be important that we implement a framework which safeguards against this.

Potential benefits of having the option in the tool-kit

13.5. Having the option in the tool-kit will impose disciplines on existing network companies that will encourage them to strive for timely delivery, be more innovative and seek out lower long-term cost delivery solutions. This could be finding new ways of delivering in-house so as to be as efficient as, or more efficient than, alternative third party delivery approaches. This could also include new financing opportunities arising from third parties being responsible for delivery and ownership of related assets. Having the option will also encourage companies to think about how they take forward market testing of aspects of delivery themselves, including potential opportunities to look for input from third parties on the 'design' of delivery solutions rather than just the unit costs of building. Similarly, it may provide incentives for them to consider more carefully the contractual sharing of risks associated with costs and volume when outsourcing projects or activities.

13.6. It is possible for us to give licensed third parties a greater role in delivery through competitive processes under our existing powers and duties, although there are a number of changes that will need to be made to existing licences and possibly Codes to facilitate this. For example, changes may need to be made to the System Operator - Transmission Code (STC) that currently governs interactions between the three electricity transmission owners (TOs) and the NETS SO. We will propose to initiate such changes shortly.

When in the regulatory process will we consider giving third parties a greater role in delivery?

13.7. There are two main circumstances in which the question of whether we should give third parties a greater role in delivery could arise:

- **during the comprehensive price control review** potential projects may be identified as part of the assessment of a company's business plan. Where we are familiar with the major projects envisioned in a sector or company region, we may be able to give an early signal, in our 'Strategy for the Review' consultation paper (Stage 1 of the price control review process), of the projects that might be considered relevant. The decisions on whether to consider, in detail, the case for giving third parties a greater role in delivery will happen after the business plan has been submitted at Stage 2 of the price control review process (details of which are provided in Chapter 2). We will make decisions to take projects out of the price control at this point, so that a network company's revised business plan (Stage 3 of the price control review process) will be finalised knowing that the project is to be treated differently; and
- **upon receipt of requests for funding for specific projects throughout the price control or at the mid-period review.** The outputs that a network company is required to deliver may change resulting in the need for adapted or new delivery solutions. Funding requests for specific projects are likely to be received throughout the price control period. Upon receipt of such additional funding requests we will consider the option of giving third parties greater responsibility for aspects of delivery where the new project meets the principles set out in paragraphs 13.8 to 13.11.

When will we expect to use the option of giving third parties a greater role in delivery?

13.8. We will consider giving third parties a greater role in delivery where the following conditions apply:

- the project is significant in scale and/or cost;
- the project involves assets required for expansion of the network that are not meshed with existing assets, or can be defined in such a way that they are not meshed with existing assets;
- giving third parties a greater role in delivery will not pose significant risks to timely delivery, including constraints on the delivery of emission reduction or renewable targets;
- giving third parties a greater role in delivery will not pose significant risks to the safety, security, integrity and quality of energy services;
- we can demonstrate that the expected potential long-term net benefits (in terms of delivery of the objectives of the RIIO model are significant. We discuss below the factors that we will need to consider when undertaking our assessment of the expected long-term net benefit;

- we are confident that giving third parties ownership of relevant assets will not compromise the legitimate expectations of existing licensees when making investments without knowledge of the possibility of assets potentially being transferred to a third party at a later date; and
- giving third parties a greater role in delivery will be compliant with domestic and relevant EU legislation, including the third package.

13.9. When undertaking our assessment of the expected long-term net benefit of giving third parties a greater role in delivery, we will need to consider a number of factors, including, but not limited to, the following:

- the administrative and resource costs associated with running a competitive process to identify the most appropriate third party to be involved (being costs incurred by Ofgem, the NETS SO or gas NTS SO, the existing network company and potentially third parties);
- the potential costs of delivering the project over the life of the project or assets and the potential profiling of such costs;
- the timing and potential scale of the impact on delivery of outputs;
- the likelihood of third parties being interested in participating, recognising that this will be influenced by the process adopted, the design of the process and the conditions (including regulatory arrangements) that the winner will face;
- the likelihood of other companies or consortia being able to offer lower financing costs in building, owning and operating the asset;
- the likelihood of third parties having better access to relevant specialist technical knowledge, experience and skills;
- the risk of non-delivery of the project, delay to delivery of the project and/or cost overruns and the likelihood of these being better managed by a third party;
- potential barriers to effective competition among interested licensees, for instance due to distorted competition in other related markets that could provide a pool of participants (e.g. if there is a limited number of suppliers of a particular technology needed to deliver the project);
- potential implications for, and interactions and synergies with, existing network company activities and the NETS SO or gas NTS SO, taking account of our engagement with these parties and decisions on how to ensure these interactions are carefully and effectively managed; and
- impacts on sustainable development, such as potential impacts on emissions and generation sources, in line with our statutory duties and obligations.

13.10. When considering the principles set out above we expect that benefits could be higher in cases where the project involves new processes, technologies or delivery of new outputs, and hence where the existing network operator does not necessarily have experience in delivery.

13.11. To inform our assessment of potential costs and benefits we will consider seeking views from relevant third parties on how they might contribute to more timely delivery and to delivery of value for money through new approaches or lower long-term cost solutions. For example, we may seek views through inviting expressions of interest.

Ideas on how third parties may do things differently may also be forthcoming from stakeholders through enhanced engagement.

How will we deal with transfers of existing asset?

13.12. When third parties are granted responsibility to develop and own network assets we will need to consider carefully how best to specify and separate the relevant assets. We recognise that in some cases a network company may have already started work on the project (e.g. pre-construction work) prior to us making the decision to give third parties a greater role in delivery. In these cases the transfer of existing assets held by the existing network company may avoid duplication of effort and thereby lead to lower costs in total.

13.13. We recognise that there are limits on the extent to which we can require network companies to transfer assets that they have invested in particularly where there was a legitimate expectation, when they invested, that they would retain ownership of these assets for the foreseeable future. In these cases our decisions on giving third parties a greater role in delivery will need to be consistent with protecting the legitimate expectations of companies with regards to investments and regulatory returns related to those investments.

13.14. When considering allowances for costs related to pre-construction or construction of assets we will signal the possibility that new assets being developed may need to be transferred to another licensee at a later stage as a result of opening up aspects of delivery to competition. In addition, we will retain the option to consider giving a third party revenue and responsibility for any future expansion works. In this way we will manage expectations about the future treatment of these assets.

What will happen if we give third parties a greater role in delivery?

13.15. If we decide that there is net benefit for consumers from allowing a third party the revenue and responsibility for delivering key projects, we will be responsible for designing and running any process to identify the most appropriate third party to take on the role. Decisions on how funding requests for such projects will be evaluated, the nature of the revenue stream granted to the licensee, whether and how assets developed by one licensee can be built upon or developed in future by another, and the roles and responsibilities of licensees will be made through consultation on a sector specific basis.

Getting the process underway

13.16. Prior to initiating any selection process all parties will need to be certified by Ofgem under third package unbundling requirements. We will also make any changes

required to the relevant Codes and other frameworks to ensure that the enabling regulatory arrangements are in place.

13.17. Where we have identified a large, separable project with potential merit in giving third parties a greater role in delivery, we expect the focus of our early stages in considering the option to be on establishing the need for the project. We expect to publish the company proposals and our assessment of the benefits of opening the build and design of the project to competition. This will be followed by a cost benefit analysis to inform our decision on whether we will give third parties a greater role in delivery. As noted elsewhere we will consider using expressions of interest, and our enhanced engagement processes, to elicit levels of interest and ideas on what benefits third parties might bring before moving ahead with any formal selection process.

Designing and running the process

13.18. Where we decide to give licensed third parties a greater role in delivery we will be responsible for designing and running the process to identify the most appropriate third party. We will develop guidance documents, pre-conditions with which participants will need to demonstrate compliance, and the criteria we expect to use to assess bids.

13.19. In designing the process and putting in place the enabling regulatory framework we will consult on a number of key elements of the design. In addition to those already identified these will include how the end to end selection process will work and the responsibilities of the selected party. When making our decisions on each aspect of the design we will take account of relevant lessons learned from the UK offshore transmission regime, and from other comparable regimes in GB or elsewhere. Our decisions on design of the process will aim to encourage bidders to participate and ensure an effective selection procedure. We will also consider the costs and timing associated with running the process when choosing between different design options.

Evaluating bids and choosing the winner

13.20. We will be responsible for evaluating bids and ultimately choosing the preferred third party. We expect to have an evaluation panel comprising, for example, technical, regulatory and financial experts who will make recommendations for the Authority to consider. As part of the guidance for prospective bidders, we will clearly specify upfront how we will evaluate bids and how we will make decisions. In some cases, long-term costs may be the key element driving our decision but in others we may be balancing a wider range of factors including, for example, impact on security of supply and delivery of environmental targets. The evaluation criteria are likely to vary to some extent according to the specific project being opened up to competition.

13.21. When making a decision, the Authority will be guided by an assessment of the proposals, and relevant supporting material submitted by interested third parties, against the criteria set out in the process. This could include evidence demonstrating that they can access appropriately experienced, qualified, and trained staff with a good

track record of timely and effective delivery as well as evidence of the robustness of risk sharing arrangements.

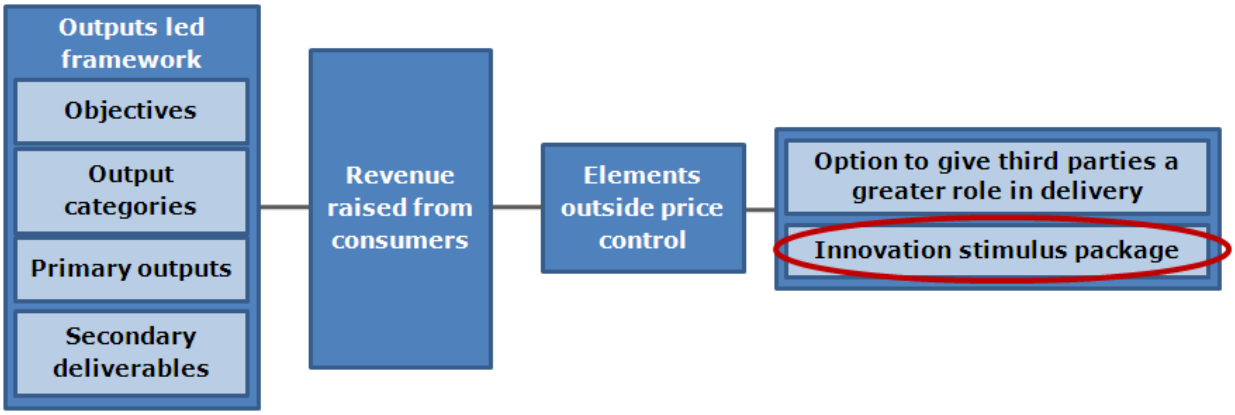
Regulating the third party given a greater role in delivery

13.22. As noted earlier, any third party given greater responsibility for delivery of key projects will hold a relevant licence for delivery of network services. Consistent with prevailing domestic and EU legislation (including the third package), responsibility and accountability for obligations relating to the relevant transmission or distribution assets will sit with this party. All other licensees, including the NETS SO and gas NTS SO, will retain their existing obligations. At the start of any process, we will set out any specific licence conditions (in addition to common standard licence conditions) that we expect the third party to operate under. Licensees will be required to comply with industry Codes which will be adapted, wherever necessary, to accommodate any new organisations.

13.23. Any decision on whether and how to regulate the third party responsible for delivery of a key project will be made prior to the process being initiated as it will directly affect the likely interest of third parties. When considering any form of regulation we will be mindful of the need to consider interactions with the regulatory arrangements for existing network companies and the system operator.

14. Innovation stimulus package

Chapter summary
We explain how the innovation stimulus package will be designed and operate under the RIIO model.



14.1. Innovation is key to enabling network companies to deliver the objectives of the RIIO model, namely to play their role in the delivery of a sustainable energy sector and to deliver long-term value for money for existing and future consumers. This innovation could take many forms, including deployment of new technologies or the implementation of new operational processes and commercial arrangements.

14.2. Under an incentives-based regime, network companies will innovate where they have confidence that they will achieve commercial benefits from doing so (the profit motive and reputational motive will be relevant here). In the context of delivering innovation related to meeting the requirements of the wider sustainable energy sector, where the commercial benefit of the innovation may not be as clear, network companies may be slow to deliver the level of innovation in the timescales required.

14.3. In these circumstances the regulatory framework needs to provide the encouragement or stimulus to enable innovation on energy networks that stakeholders agree is needed for a sustainable energy sector but that the network companies might otherwise have little incentive to pursue. Under the RIIO model we will provide this encouragement using a two-pronged approach:

- the longer-term, outputs-led, incentive-based, ex ante price controls will provide their own incentives to innovate, by giving companies commitment around the potential rewards that they could earn from successful innovations and committing not to penalise them for unsuccessful innovations; and
- providing partial financing for innovation related to delivery of a sustainable energy sector through an electricity networks innovation stimulus and a gas networks innovation stimulus.

14.4. We discuss both aspects here.

Stimulating innovation with the price control framework

14.5. We describe in Chapters 5 to 12 how price controls will be set under the RIIO model. Taken together as a package the framework is expected to encourage network companies to think differently about how best to deliver outputs and long-term value for money for existing and future consumers.

14.6. The package is intended to incentivise the network companies to find delivery solutions that are lower cost over the long term. This may include the use of new technologies, new operational practices, new business structures, new financing arrangements and new commercial arrangements with users of the networks and potentially with other parties (e.g. communications providers). Where there is a strong commercial incentive to innovate and clear benefits from doing so, we anticipate that the network companies will respond to this. The key aspects of the framework that will encourage innovation are:

- the retention of ex ante incentive based price controls (discussed in Chapter 5);
- the extension of the price control period to eight years (discussed in Chapter 5);
- the efficiency incentive rate (discussed in Chapter 10);
- the focus on primary outputs and the use of secondary deliverables (discussed in Chapter 6) and output incentives (discussed in Chapter 9);
- our commitment not to make retrospective adjustments to revenue for variations between costs assumed in the price control and actual costs if outputs are delivered (discussed in paragraphs 10.21 to 10.25);
- clarity that investment included in the RAV will not be at risk (so long as outputs are delivered) even where an investment decision that was considered to be efficient in light of the information available at the time it was made, turns out, with the benefit of hindsight, to be less efficient than initially thought (discussed in Chapter 12);
- incentives to consider delivery in a longer-term context (longer than the price control length) and as part of this to take action to respond to anticipated future demand for network services where appropriate (discussed in Chapter 7);
- commitment to financial principles (discussed in Chapter 12);
- the increased focus on delivering against the needs of stakeholders (discussed in Chapter 3);
- the emphasis on the development of well-justified business plans (discussed in Chapter 7); and
- the potential for increased levels of competition in delivery which may inject new ideas on delivery into the networks (discussed in Chapter 13).

14.7. Where these elements of the framework provide the network companies with incentives to innovate and seek out new ways to deliver the primary outputs, we expect the companies to include details of this in their well-justified business plans. We anticipate that the incentives to explore these new innovative solutions will be strengthened given the signal that we have provided that network companies should consider a range of options in determining the best way to deliver. If network

companies are able to demonstrate that an alternative way of delivering, which may involve research and development (R&D) or trials, might result in lower costs over the longer term and that this approach had support from their stakeholders, this may be agreed as part of their final price control settlement.

14.8. We recognise however that the incentives in the price control may not be sufficient to deliver the type and scale of innovation needed to deliver a sustainable energy sector and value for money for existing and future consumers[23].

14.9. As such, the RIIO model has been designed to include a time-limited innovation stimulus for electricity networks and a time-limited innovation stimulus for gas networks. The aim is to encourage innovation in the provision of network-services related to delivery of a sustainable energy sector that may not develop in the absence of the innovation stimulus package. Save for the sectors in which they operate, both stimuli will work in the same way.

The Innovation Stimulus package

14.10. The innovation stimulus package will provide partial funding for innovation projects that relate to the provision of network services and have as their intent delivery of a sustainable energy sector. There will be two separate 'pots' of money available under the innovation stimulus package; one related to innovation on the gas networks; and the other related to innovation on the electricity networks. Under the package, network and non-network parties will be eligible to apply for funding to progress projects at any stage of innovation, from R&D to trials and pilot schemes. Partial funding will be awarded through a competitive process. An independent panel will be appointed to evaluate the bids submitted and the Authority will take the final decisions on the awarding of funding[24]. We will seek to facilitate sharing of intellectual property and lessons learned to ensure that the benefits attained through the innovation stimulus package are shared within the industry, and ultimately with consumers.

14.11. We are currently putting together a proposed process for development and implementation of the innovation stimulus package to enable us to implement the mechanism alongside TPCR5 and GDPCR2 price controls. This handbook will be updated to reflect these arrangements once they have been agreed. In any transition to the innovation stimulus package, we will ensure that we do not unduly disrupt the operation of the LCN Fund and this will be considered as part of any consultation on the implementation arrangements.

[23] These are discussed in further detail in our working paper 'Regulating Energy Networks for the future: RPI-X@20, Innovation in energy networks: Is more needed and how can this be stimulated?', available from:http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=4&refer=Networks/rpix20/WorkingPapers and our consultation document 'Regulating energy networks for the future: RPI-X@20 Emerging Thinking'.
[24] Network companies will also be able to raise money from consumers under the price control by including innovation projects in their well-justified business plans. These projects may be akin to small scale projects that could be progressed under tier 1 of the LCN Fund.

Raising money from consumers for the innovation stimulus package

14.12. Financing for the innovation stimulus package will be raised from use of system charges which are recouped from consumers and the money raised will be transferred between licensees. Where third parties are awarded funding under the stimulus package, money will also be raised from consumers through use of system charges and network companies will transfer the required money to third parties. The amount raised from consumers will be a pass-through cost in the price controls of the regulated network companies. Network companies awarded partial funding for an innovation project may wish to include provision for the outstanding required financing in their price control business plan. The decision on whether to allow this cost in the price control will depend on whether the requirements on the business plan have been met (as set out in Chapter 7) and on our assessment of the plan in the round (set out in Chapter 8).

14.13. As part of each sectoral price control review, we will set a cap on available funding for the innovation stimulus package and therefore determine the maximum amount of revenue that may be raised from consumers. As the next price control reviews are being conducted in parallel (TPCR5 and GDPCR2) for April 2013 we will consider the appropriate amount to raise through gas transportation charges and gas distribution charges for the gas network stimulus in parallel. When making decisions on the maximum amount of funding that may be raised from electricity transmission charges we will take account of the amount of money already being raised from electricity consumers, through distribution system charges, for the LCN Fund. Going forward, we will continue to consider the appropriate amount to raise from different network charges in the round, recognising that ultimately it is the same end consumer paying the cost.

14.14. As we begin to better understand the level of interest in the innovation stimulus package in each network sector, the funding levels set will evolve. At all times, but particularly in the early years of the innovation stimulus package, we will review the level of funding if any of the following trigger conditions are observed:

- the volume of funding is consistently less than necessary to support projects that the independent panel consider likely to have a high chance of success; or
- the volume of funding is consistently more than that required to support the projects that are successful in receiving approval.

14.15. If these conditions are observed during the price control period we will need to decide whether to accommodate a change in the level of funding available. Aside from the volume of financial support available, decisions on the scope and form of the innovation stimulus package will be taken outside of the price control.

Proportion of funding for projects

14.16. Under the innovation stimulus package a percentage of funding will be provided to projects that achieve approval from the Authority. This will represent the maximum proportion of funding available but there may be scope to award less funding, where

appropriate. Although the maximum proportion of funding available will be fixed at first, we anticipate that the percentage of funding available will evolve over time as we obtain a better understanding of the proportion of funding that will be needed to facilitate network projects. We will need to take decisions on the appropriate percentage of funding that should be provided to support these projects. In taking such a decision, consideration will be given to the following issues and other considerations that appear relevant at the time:

- the percentage of funding provided under other innovation schemes, including the LCN Fund and government sponsored funds. We will need to assess the extent to which they are comparable and whether the level of funding available is considered appropriate in terms of stimulating required levels of innovation;
- parties progressing innovation should be exposed to some level of risk associated with the project. While it will be preferable for the level of funding provided to be proportionate to the level of risk associated with individual projects this will be a complicated approach. The fixed funding available for projects should reflect the level of risk that we determine to be appropriate for parties to be exposed to in progressing network projects; and
- evidence of take up, projects progressed, and lessons from the Innovation Funding Incentive (IFI) – a funding mechanism that has been introduced in all four sectors to provide support for qualifying research and development projects. In electricity distribution, this evidence suggests that companies have been generally successful in spending their IFI allocations, with funding used to support projects ranging from improvements in asset management techniques to investigations into the potential effects of climate change on electricity distribution networks[25].

14.17. We also expect further consideration to be given to the role of rewards in the package. We focus below on setting out details of how the package will be used to provide rewards for commercial innovation.

Participation by non-network parties

14.18. As noted above, under the innovation stimulus package it will be possible for non-network parties to lead on projects financed under the stimulus. This will represent a departure from the LCN Fund where third parties are only involved in projects led by network companies.

Designating a new class of 'Innovation Licence'

14.19. For non-network parties to be able to participate in the innovation stimulus package, under existing legislation, they will need to hold a relevant licence. This is

[25] For more information, please see: http://www.ofgem.gov.uk/Networks/ElecDist/PriceCntrls/DPCR5/Documents1/Initial%20Proposals_2_Incentives%20and%20Obligations.pdf and http://www.ofgem.gov.uk/Networks/Techn/NetwrkSupp/Innovat/ifi/Pages/ifi.aspx for summaries of Electricity Distribution IFI projects.

because money raised from consumers for the innovation stimulus can only be transferred between licence-holders. To facilitate this we intend to designate a new licence class that is directly linked to the innovation stimulus package.

14.20. Section 7(3A)(b) of the Electricity Act 1989 and 7B(5)(b)(ii) of the Gas Act 1986 include provisions to allow payments to be made to parties that are licensed under the relevant sections of the respective acts. Section 56A of the Electricity Act and 41C of the Gas Act allow the Secretary of State to designate a new class of licensee. Under these provisions, we need to make an application to the Secretary of State for an order to designate a new licensable activity. Approval of this application will be subject to consultation. In the event of an objection from an interested party, the matter will need to be referred to the Competition Commission for review.

14.21. The combination of these provisions could allow a new class of licensee to be designated in both gas and electricity and any such licensee would be able to receive funds from network companies. This would provide for licensed non-network parties to progress innovation with funding agreed under the innovation stimulus package by providing a route for network parties to transfer funds to them. The approach would also allow us to more easily regulate non-network companies that received support under the innovation stimulus package as they would be licensed.

14.22. In the interests of simplicity and uniformity, we expect that the stimulus package will be designed so that participation in the scheme by network and non-network parties alike would be contingent on holding an 'Innovation Licence'. This licence would:

- authorise the holder to receive and, in the case of network companies, disburse monies under the scheme;
- provide Ofgem with powers necessary to ensure the scheme is effectively administered, including through monitoring and assessing results; and
- contain provisions for information to be provided to Ofgem, on request.

14.23. The licence would not have any application to activities outside the scheme including any other innovation projects the company or other parties may wish to pursue.

Eligibility criteria for non-network parties

14.24. In addition to holding the new licence, a non-network party will have to demonstrate that it is well placed to undertake innovation related to network services. The following list includes some of the skills and experience that the non-network parties may need to demonstrate in order to be eligible to participate in the innovation stimulus:

- an understanding of the way that the network operates generally and more specifically of the potential impacts of the innovative project on the network;

- the inclusion of certain qualified specialists in their teams that have skills in certain areas;
- previous experience of working on relevant projects;
- a fully worked up proposal for an innovative project which adequately considers all of the prerequisite areas required by Ofgem as part of the innovation stimulus package as well as considering any other unintended consequences;
- ongoing proactive discussions with the network company about the interactions and potential impacts; and
- a provisional contract with the network company that sets out the relative responsibilities of the parties, the conditions for allowing access to the network and the arrangements to ensure ongoing quality of the network. Where non-network parties are unable to achieve this, we will have a role in arbitrating.

14.25. To ensure the stimulus package does not crowd out innovation that would have taken place anyway, we will develop assessment and eligibility criteria requiring network companies and non-network parties to demonstrate the factors associated with the outcomes of the project which mean that additional support is needed. This will place an onus on parties seeking financial support to demonstrate they have considered other sources of funding but decided that these were inappropriate to pursue further, citing the reasons why. The assessment panel should have a broad understanding of the sources of funding available to support innovation to enable them to determine whether there are alternative schemes from which it may be more appropriate for parties to obtain funding. This process will be facilitated where there is transparency about the support available for innovation.

Facilitating network access

14.26. If the innovation project proposed by a non-network company involves trialling on a network the non-network company may need access to a licensee's network. If this is the case, non-network parties should seek to arrange for this access in advance of making the bid for innovation stimulus funding. They should provide details of these contractual arrangements in their bids as well as an outline of how they will work with the network company to ensure that the provision of reliable, safe, secure and low carbon network services is not put at risk.

14.27. There may be situations, however, where a non-network company has a potentially attractive innovative project involving trialling on a live network but is unable to secure agreement from a network company to allow it to proceed with the trial on reasonable terms[26]. The governance panel of the innovation stimulus package will decide, in these cases, whether to recommend that Ofgem consider taking action to require a network company to facilitate access.

14.28. In the first instance we may just advertise that we are looking for a network company to support the bidder, to facilitate situations where the non-network party does

[26] 'Reasonable terms' imply that (a) the costs of accessing the network should be reflective of the costs that the network company will face in allowing access and (b) non-network parties should be granted sufficient access to trial the proposed project.

not have access to the right group of people to identify a potential bidder. If none were forthcoming, we would ask the network companies to provide details of the reasons why they were unable to allow access to their network for trialling of technologies by non-network parties. Where network companies were unable to provide robust reasons for their reticence to allow access, we would explore further how access for non-network parties could be facilitated as part of the process of working up the arrangements for the innovation stimulus package.

14.29. As set out in Chapter 6, as part of the price control we will be developing primary outputs related to customer satisfaction. This will measure the satisfaction of a broad range of consumers, including network users, in relation to the network services they receive. The range of consumers could include non-network parties seeking to trail innovative projects under the innovation stimulus package. If the network companies remained unwilling to allow non-network parties to take forward trials on their network, this could be reflected in their performance with respect to the customer satisfaction primary outputs. We will also consider whether it is appropriate to use new licence provisions which will place an obligation on network companies to provide access to non-network parties on reasonable terms. If a licence condition was introduced and network companies continued to refuse non-network parties access to their networks to trial projects, the possibility would exist for us to initiate enforcement action.

The competitive process

14.30. Where appropriate, the competitive process to access funding will take the same form as that developed under the LCN Fund and will include a 'screening phase'. We will make changes to the format developed for the LCN Fund if we find, through learning from experience, that there are specific areas that could be developed further.

14.31. Some of the issues that may need to be further investigated by the price control policy team, when deciding how best to design and run the competitive process include:

- the arrangements for assessment of the proposals received across the network sectors and the different stages of innovation;
- the timings for bidding under the innovation stimulus;
- the representative parties that should sit on the independent panel;
- the way intellectual property issues will be dealt with;
- the assessment criteria that will be used to avoid crowding out existing projects that would have taken place anyway in the absence of the scheme;
- what arrangements could be put in place to ensure that learning from the project will be captured and disseminated widely; and
- the way that benefits will be most appropriately shared.

14.32. We expect funding under the innovation stimulus package to be largely allocated through the competitive process. This will allow both network companies and non-network parties equal opportunities to access the funding. Network companies will also be incentivised to seek out innovative solutions through the incentives inherent within the RIIO model, discussed above in paragraphs 14.5 to 14.9. Where network companies

think there may be benefits from innovating to meet their primary outputs, the network company should include this as an option in their business plan.

Principles for removal of the stimulus package

14.33. The innovation stimulus package will be a time limited initiative, which will remain in place until the incentives inherent to the RIIO model are found to be encouraging required innovation themselves or there is a reduction in the level of innovation required. To ensure we have clarity on the ongoing need for the innovation stimulus, we will undertake a review of the package at regular intervals (e.g. every two to three years). At each review we will decide whether to retain the package as is, whether to change the scope of the package (for example we could remove the stimulus in one sector and retain it in the other) and/or whether to remove the package.

14.34. The review of the innovation stimulus will be separate from the price control review. As part of the review of the innovation stimulus, we will undertake an assessment of network company behaviour over time to determine the extent to which they are responding to the incentives incorporated within the framework and hence better understand the continued need for the innovation stimulus.

14.35. The review will also consider other factors outside of the regulatory framework which could trigger the removal of the innovation stimulus. These include, but are not limited to:

- the emergence of a meaningful carbon price that impacts on the incentives for investment in low carbon technologies by indicating the potential for commercial benefits from sustainable solutions;
- the emergence of contracts between network companies and third parties not directly involved in innovative projects to reflect the benefit that the third parties were obtaining from the innovation;
- the progression of network innovation (by networks or non-networks) without the support of the innovation stimulus package or any other fund;
- the roll out of innovative technologies proven successful under the innovation stimulus for which the costs had reduced;
- a reduced need for innovation as large innovative solutions are uncovered representing significant steps in facilitating the transition to a sustainable energy sector;
- a reduced need for innovation as government policy changed focus;
- the risks of innovation reduce as parties obtain a better understanding of the areas where innovation is needed and the areas where innovation has reached its potential. This should also inform their understanding of where innovation may be successful and where it is likely to fail; and
- the funding available under the innovation stimulus is no longer used as companies are taking forward innovation of their own initiative.

14.36. Should a review conclude that the innovation stimulus package is no longer needed we will consult on this decision and prepare a plan for winding down the package

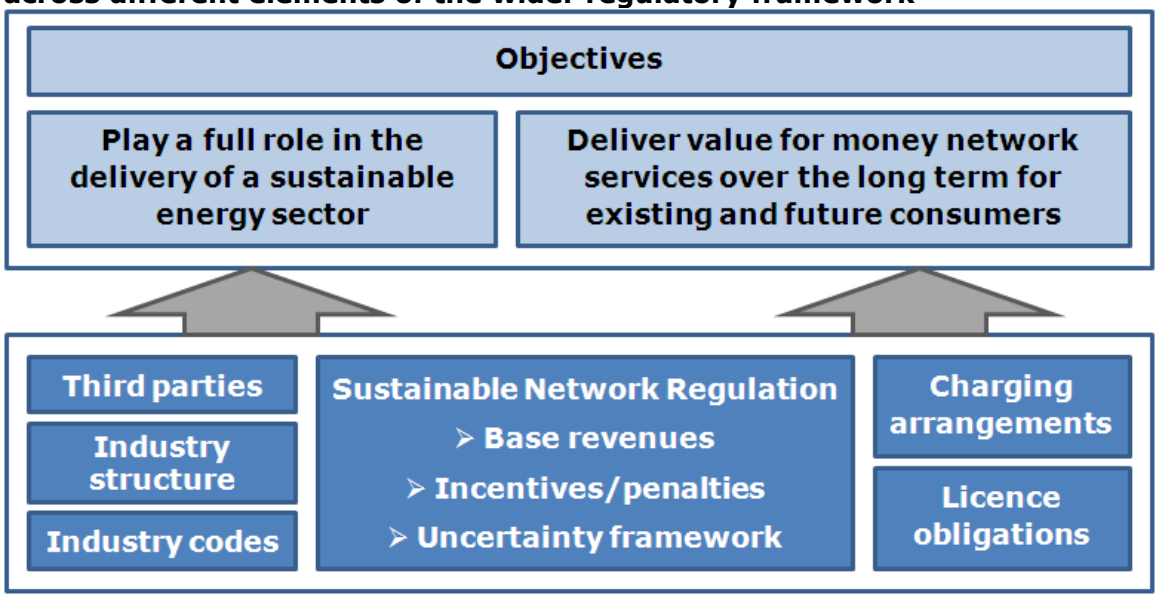
in a way that does not distort the decisions of network companies or non-network parties.

Rewards for commercial innovation

14.37. The contribution that network companies make to delivery of the objectives under the RIIO model could be helped or hindered by the way in which they consider the interaction between the price control alongside wider aspects of their regulatory arrangements (see Figure 29). These wider aspects include regulatory arrangements such as licence obligations, code arrangements and the charging structures. They also include the existing industry structure (e.g. the supplier hub) and the current arrangements (or absence of) for third parties to participate in delivery alongside the network companies.

14.38. We expect network companies, in taking decisions about how best to deliver primary outputs and long-term value for money, to consider the interaction with these other arrangements. For example, we will encourage network companies to consider whether the outputs and long-term value for money delivered under the price control arrangements could be enhanced through changing the charging arrangements.

Figure 29: Opportunities for commercial innovation arising from interactions across different elements of the wider regulatory framework



14.39. Under the incentives of the price control framework energy network companies will be encouraged to pursue commercial innovation, in the same way as technical innovation, recognising the benefits this will bring in delivering outputs and long-term value for money. Developing new approaches to working with users of the network, introducing new charging arrangements and/or contracting to deliver outputs with other

parties (e.g. a local community) are all examples of the types of commercial innovation that might be relevant.

14.40. Taking steps in this direction will require a significant mindset and cultural change by network companies. To encourage them to make such changes we will encourage commercial innovation, as well as technical innovation, through the innovation stimulus package.

- Network companies and non-network parties will be able to make bids for partial financing for commercial innovation projects upfront. For example, an energy supply company might make a bid for funding for a project that involves them teaming up with a network company to develop new commercial arrangements with consumers that enable trialling of active demand management solutions. It will be possible for these types of projects to be progressed under the LCN Fund but the current arrangements mean that a network company will need to lead this.

- If a network company or a non-network party has taken forward a commercial innovation project they could make a bid to be awarded a reward for that innovation. For example, when the recommendations of our Code Governance Review are implemented, a supply company might push forward proposals for charging changes and seek a reward for encouraging development of commercial innovation in this area. In these cases upfront funding will not be provided but there will be a potential 'prize' where the expected benefits in terms of meeting the objectives of the RIIO model are clear.

14.41. We will develop the specific details of the arrangements for the rewards for commercial innovation alongside other elements of the innovation stimulus package. We expect parties to submit a bid for a reward, setting out the case for why their commercial innovation project is contributing to delivery of the objectives of the RIIO model. The bids will be reviewed by the stimulus panel and they will make recommendations on which parties might receive a reward. We will consider whether to allow parties to make a case at any time or whether we will have set times (e.g. annually mid financial year) when parties can bring forward bids for consideration.

14.42. When making decisions at a price control review on how much funding to raise from consumers for the innovation stimulus as a whole we will decide how much should be set aside for these rewards for commercial innovation. We will also consider whether the proportion will be fixed or whether there will be flexibility to move funding between the 'upfront' support for projects and these rewards for commercial innovations after they have been progressed.

14.43. It is important to be clear that these proposals will not change any current arrangements in place. For example, we will continue to judge the appropriateness of proposed charging modifications using the prevailing criteria set out for this purpose.