# Consultation

## RIIO-3 Sector Specific Methodology Consultation – GD Annex

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We are consulting on the methodologies we will apply for the electricity and gas transmission and gas distribution sectors in the RIIO-3 price control, which will run from 1 April 2026. We would like views from all stakeholders with an interest in the regulation of the energy networks. We particularly welcome responses from groups representing consumers of gas and electricity. We would also welcome responses from other stakeholders and the public.

This document outlines the scope, purpose and questions of the consultation and how you can get involved. Once the consultation is closed, we will consider all responses. We want to be transparent in our consultations. We will publish the non-confidential responses we receive alongside a decision on next steps on our website at ofgem.gov.uk/consultations.

If you want your response – in whole or in part – to be considered confidential, please tell us in your response and explain why. Please clearly mark the parts of your response that you consider to be confidential, and if possible, put the confidential material in separate appendices to your response.

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## Contents

# 1. Introduction

## Structure of this document and associated documents

1.1 In October 2023, we published our decision on frameworks for future systems and network regulation (FSNR),[1] which set out our proposed approach to the RIIO-3 price controls and highlighted the main areas of proposed change from the current RIIO-2 price controls (this is referred to as our 'Framework Decision').

1.2 This consultation comprises the RIIO-3 Sector Specific Methodology (Overview Document), the Regulatory Finance sector annex (Finance Annex), and sector specific annex documents for gas distribution (GD), gas transmission (GT) and electricity transmission (ET). The sector specific documents are intended to be read alongside the Overview Document and Finance Annex.

1.3 The Overview Document provides detail on how we propose to apply the Framework Decision to areas that are relevant across the sectors. The proposals in the Overview Document apply across the GD, GT and ET networks.

1.4 This document is focused on the application of the RIIO-3 framework, established through our Framework Decision, to GD specific issues. It sets out our sector specific views on the aspects of the RIIO-3 price control that gas distribution network companies (GDNs) need to understand to be able to put together their Business Plans.

## What is gas distribution?

1.5 The GDNs are responsible for transporting gas locally to approximately 22 million homes and businesses, industry and power stations across Great Britain (GB).

1.6 Four GDNs own, operate and maintain the eight gas distribution network regions in GB: Cadent (East of England, North London, North West and West Midlands), NGN (Northern England), SGN (Scotland and South East England) and WWU (Wales and West Utilities).

## Challenges for RIIO-GD3

1.7 Natural gas continues to play a major role in the day-to-day heating of households, the functioning of industrial processes and the generation of electricity. Protecting the safe and secure delivery of gas to these homes and businesses, whilst strengthening the resilience of the infrastructure to threats

[1] Decision on frameworks for future systems and network regulation: https://www.ofgem.gov.uk/publications/decision-frameworks-future-systems-and-network-regulation

from climate change and cyber-attacks, remains a key priority for the RIIO-GD3 price control arrangements. Equally, gas consumers should continue to receive a high quality of service at a reasonable cost, with the GDNs maintaining an important role in supporting and protecting their customers, especially those in vulnerable situations.

1.8 However, the energy system will need to change to support the transition to a carbon-free economy by 2050 to achieve net zero. This means removing carbon emissions from the way we heat our homes and cook our food. While it is not known exactly how the United Kingdom (UK) will reach our net zero target, researchers and policy makers are exploring potential pathways in order to hit climate targets in the most efficient and least disruptive way. This includes electrification, carbon capture, usage and storage (CCUS), low carbon heat networks, and hydrogen. Each possible pathway or combination of interventions would result in a very different future use of the gas distribution networks.

1.9 Natural gas demand is expected to decline in all future scenarios. However, it is currently uncertain what impact this gas demand reduction will have on the existing gas distribution networks, and when this impact will occur. These strategic uncertainties around the future of the gas networks must be managed, including a need for better system planning to manage the transition away from natural gas use. The introduction of Regional Energy Strategic Planners (RESP) will have a key role in supporting this transition and will inform distribution level strategic investment across the electricity and gas distribution networks. However, in gas distribution, during the RIIO-3 price control period, the role of RESPs is likely to be limited as the Future System Operator (FSO) builds up its capability and while key uncertainties persist.

1.10 The overall balance of repurposing, decommissioning and retaining of natural gas assets, as well as the speed and timing of any changes, will be influenced by future national and devolved government decisions in relation to energy policy, the decarbonisation of heat and choices for how to reach our net zero target. In particular, the UK governments':

- expected strategic decision on the role of hydrogen for heat in 2026 will be of particular relevance for the gas distribution network;
- development of a Hydrogen Transport Business Model to facilitate and support the financing of certain hydrogen pipeline projects, expected to be designed by 2025, could have important interactions with RIIO-3 funding; and

- decisions on blending up to 20% hydrogen into the existing natural gas network, expected this year, could lead to additional GDN responsibilities.

1.11 These decisions provide important context for the development of RIIO-3 and in the longer-term will lead to substantial changes in the gas network. If these decisions lead to the decommissioning of parts of it, this could require the government to make policy decisions on who pays for this - consumers via energy bills, taxpayers, or both.

1.12 We do not anticipate that there will be large-scale, systematic changes to the gas networks during the RIIO-3 price control period. However, it is important to consider the future regulation of the gas networks, including beyond RIIO-3, in the context of this ongoing uncertainty. In particular, we need to:

- ensure that there is sufficient investment to efficiently maintain a safe and reliable gas network;
- ensure fairness in how current and future generations of gas customers pay for both historical and future network investment as we see a continuing decline in gas usage; and
- maintain an appropriate balance of risk allocation between consumers and investors.

1.13 Ofgem bases decisions on the current stated government position and how that flows into our remit. In setting our price controls, we have regard to the need to ensure that network companies can finance their activities. On this basis, we must plan to recoup the cost of past and future investment from current and future consumers. This may mean there is merit in leaving some optionality for transfers of repurposable assets to third parties to protect consumers. Our Finance Annex sets out how these considerations could inform our policy decisions around regulatory depreciation and asset lives to address any perception (or misperception) of asset stranding risk.

## What we expect RIIO-GD3 to deliver

1.14 The operation of the gas distribution networks is unlikely to change significantly during RIIO-GD3. Therefore, much of our approach to regulation does not need to change significantly from RIIO-GD2, with key methodologies around quality and cost of service continuing to be driven by the need to maintain a safe and reliable network.

1.15 We consider it is important to develop the flexibility within the price control to manage the uncertainty around the future of gas networks and to provide funding

where appropriate. As reaching net zero is a cross sectoral challenge, our approach to managing this uncertainty, including in relation to hydrogen and potential future decommissioning costs, is primarily addressed in Chapter 4 of the Overview Document, but Chapter 2 of this document covers some GDN specific considerations. We also consider how regulatory depreciation can be used to address concerns about the potential risk of gas network asset stranding in Chapter 10 of the Overview Document and Chapter 8 the Finance Annex.

1.16 We intend to require companies to further minimise their impact on the environment, including through the management of shrinkage and requiring increased transparency on their actions and plans to decarbonise in line with net zero. These areas are covered in Chapter 6 of the Overview Document and Chapter 2 of this document.

1.17 The importance of maintaining a safe and resilient network remains paramount and is discussed in Chapter 3 of this document. We expect investment in this area to remain the predominant driver of costs in RIIO-GD3, with a large part of this relating to the replacement of old and deteriorating assets. Due to both the large associated costs and importance of public safety, we have been undertaking a joint review of iron mains replacement with the Department of Energy Security and Net Zero (DESNZ) and the Health and Safety Executive (HSE). This review will ensure the work remains appropriate, effective and value for money and will inform our regulation of this important cost driver.

1.18 It is important for GDNs to deliver a high quality of service to customers. This includes supporting and protecting consumers in vulnerable situations, providing excellent customer service, and continuing to keep interruption times down. This is considered in Chapter 5 of this document.

1.19 Finally, GDNs must deliver services as efficiently as possible. It is therefore important to establish a cost assessment toolkit that will enable us to determine the efficient level of costs at which GDNs can carry out their activities. Chapter 6 of this document provides an overview of the approach to cost assessment we intend develop for RIIO-GD3.

## What are we consulting on?

1.20 This consultation, to be read alongside the Overview Document, sets out the key policy considerations that we would like stakeholder views on in advance of reaching a decision on the methodology for RIIO-GD3 in late spring 2024.

1.21 We are seeking views on the performance of RIIO-GD2 mechanisms and how these could be adapted or fundamentally changed for RIIO-GD3. We have set out initial options, and in some cases our proposed approach, to aid discussion. We welcome suggestions for alternative options as well as views on the options we have set out.

## How to respond

1.22 We want to hear from anyone interested in this consultation. Please send your response to the person or team named on this document's front page.

1.23 We've asked for your feedback in each of the questions throughout. Please respond to each one as fully as you can.

1.24 We will publish non-confidential responses on our website at www.ofgem.gov.uk/consultations.

## Your response, data and confidentiality

1.25 You can ask us to keep your response, or parts of your response, confidential. We'll respect this, subject to obligations to disclose information, for example, under the Freedom of Information Act 2000, the Environmental Information Regulations 2004, statutory directions, court orders, government regulations or where you give us explicit permission to disclose. If you do want us to keep your response confidential, please clearly mark this on your response and explain why.

1.26 If you wish us to keep part of your response confidential, please clearly mark those parts of your response that you do wish to be kept confidential and those that you do not wish to be kept confidential. Please put the confidential material in a separate appendix to your response. If necessary, we'll get in touch with you to discuss which parts of the information in your response should be kept confidential, and which can be published. We might ask for reasons why.

1.27 If the information you give in your response contains personal data under the General Data Protection Regulation (Regulation (EU) 2016/679) as retained in domestic law following the UK's withdrawal from the European Union ("UK GDPR"), the Gas and Electricity Markets Authority will be the data controller for the purposes of GDPR. Ofgem uses the information in responses in performing its statutory functions and in accordance with section 105 of the Utilities Act 2000. Please refer to our Privacy Notice on consultations, see Appendix 4.

1.28 If you wish to respond confidentially, we'll keep your response itself confidential, but we will publish the number (but not the names) of confidential responses we receive. We won't link responses to respondents if we publish a summary of

responses, and we will evaluate each response on its own merits without undermining your right to confidentiality.

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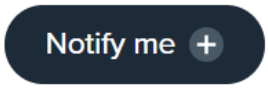


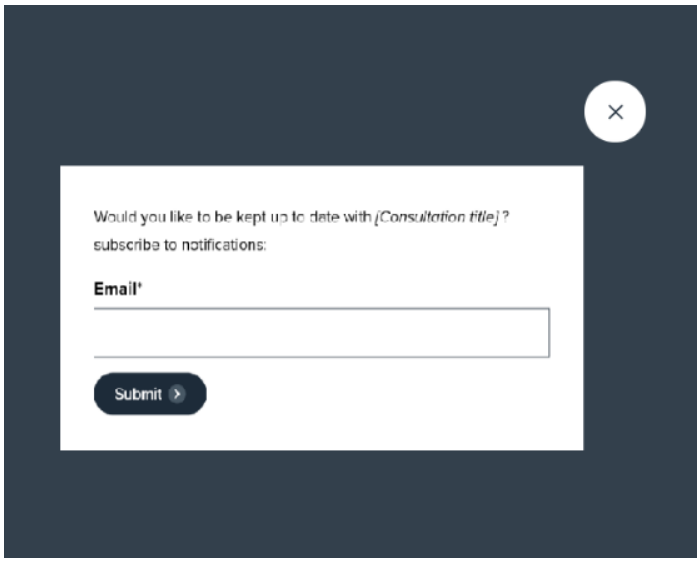


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**Upcoming > Open > Closed** (awaiting decision) **> Closed** (with decision)

# 2. Infrastructure fit for a low-cost transition to net zero

2.1 The energy system will need to change to support the transition to a carbon-free economy by 2050 to achieve net zero. Natural gas demand is expected to decline in all future scenarios, but it is currently uncertain what impact this will have on the existing gas distribution networks, and when this impact will occur.

2.2 We consider it is important to develop the flexibility within RIIO-GD3 to manage the uncertainty around the future of gas networks and to provide funding where appropriate. This chapter sets out some GD-sector specific approaches to managing this uncertainty and enabling investment where it is needed to support the transition to net zero.

2.3 This chapter also sets out how we intend to require companies to further minimise their impact on the environment, including through the reducing the amount of natural gas lost during transportation through the network.

2.4 This chapter should be read alongside the Overview Document, which considers:

- the future of gas in more detail in Chapter 4;
- cross-sector mechanisms to minimise the impact of networks on the environment in Chapter 6; and
- our approach to managing uncertainty in Chapter 8.

## Proposed RIIO-GD3 specific outputs and uncertainty mechanisms

### Outputs to minimise networks' impact on the environment

2.5 The delivery of an environmentally sustainable network will be a significant part of achieving the UK's net zero vision. Ofgem is committed to providing support to reduce the harmful impact that the gas distribution network and related business activities can have on the environment.

2.6 Our RIIO-GD2 environmental framework focused the GDNs on being more transparent on the environmental impacts of their networks and accountable for the mitigation actions they are taking to reduce these impacts. The core environmental outputs and incentives in RIIO-GD2 were:

- Environmental Action Plan (EAP) and Annual Environmental Report (AER): ensuring that the GDNs take responsibility for the environmental impacts arising from their networks and are more transparent in what they are doing to mitigate these;

- Business Carbon Footprint (BCF) reputational Output Delivery Incentive (ODI-R): setting a common reputational incentive for GDNs on their respective BCF reduction targets;
- Shrinkage management financial Output Delivery Incentive (ODI-F) and ODI-Rs: incentivising GDNs to reduce shrinkage of gas from their pipe networks; and
- Commercial Fleet Electric Vehicles (EVs) Price Control Deliverable (PCD): to enable GDNs to convert their commercial vehicle fleets to EVs or other zero emission equivalents.

2.7 Our aim for RIIO-GD2 environmental performance is:

- to mitigate environmental impacts that arise from network activities and increase transparency on GDN actions and plans to decarbonise in line with net zero;
- to ensure that GDNs consider biodiversity and the climate crisis in construction and mitigate environmental impacts prior to construction; and
- improved information sharing and cooperation between GDNs on environmental initiatives.

2.8 The EAP, AER and BCF mechanisms all apply to at least two of the sectors, so we have described our views on those mechanisms in Chapter 6 of the Overview Document. The end of this section discusses company specific environment outputs.

**Shrinkage management**

2.9 Shrinkage is gas lost during transportation through the network. It is made up of three elements:

- gas leakage from the network (eg from joins between pipes);
- gas used by the network as part of its operations (eg to preheat gas prior to pressure reduction); and
- gas stolen from the network.

2.10 Reducing shrinkage provides environmental benefits by reducing methane emissions, which account for about 95% of the GDNs' BCF. It also benefits consumers through reducing the cost of purchasing replacement gas.

2.11 Shrinkage is hard to measure and we rely on the GDNs' Shrinkage and Leakage Model (SLM) to estimate shrinkage. This measurement is not exact. The main

GDN influence on reducing shrinkage is from the replacement of iron pipes, which are prone to leaks, with plastic ones that are less leaky.[2] The repex programme is already funded through the price control and is considered business as usual (BAU) for the GDNs. However, there are some activities outside of the core repex work that the GDNs can influence to further reduce shrinkage, eg via pressure management and gas conditioning.

2.12 During RIIO-GD2, Cadent has received Strategic Innovation Fund (SIF) investment for the Digital Platform for Leakage Analytics (DPLA) project, which aims to use new technologies to improve the accuracy of leak detection and measurement. The DPLA could replace the existing SLM, improve shrinkage reporting and enable the GDNs to optimise their maintenance and repair operations to enable further leakage reductions. However, Cadent does not anticipate that the DPLA will be rolled out before RIIO-GD3. Although there is a potential for the DPLA to support shrinkage reduction in the future, currently we do not think there is enough information, or certainty, on how it would be rolled out to create an incentive linked to it. We do not have a clear understanding of the likely cost of rolling out the DPLA and would welcome further evidence on this from the GDNs.

2.13 In RIIO-GD2, two outputs were established to incentivise the GDNs to reduce shrinkage, as set out in Table 1.

Table 1: RIIO-GD2 shrinkage outputs

| **Output parameter** | **Output Delivery Incentive - Reputational (ODI-R)** | **Output Delivery Incentive - Financial (ODI-F)** |
|---|---|---|
| Incentive type | Reputational. | Financial reward and penalty with a cap/collar of ±0.25% of base revenue. |
| Performance measure | Total annual shrinkage volumes, measured in GWh. | The difference between baseline and outturn leakage levels, measured in GWh. |
| Performance target | Target shrinkage volume, which is individually set for each GDN. | Baseline leakage levels set using the average pressure and gas conditioning levels from the last three years of RIIO-GD1. An asymmetric deadband applies to the pressure calculation. |
| Reporting method | Annual Regulatory Reporting Pack (RRP) reporting. | Annual RRP reporting. |

[2] For example, replacing an iron main with a plastic main can reduce the leakage rate by 96%.

Shrinkage ODI-R

2.14 Currently GDNs are required to report on shrinkage as part of both the shrinkage ODI-R and the AER, as shown below in Table 2.

Table 2: Shrinkage reporting

| **Output parameter** | **ODI-R** | **AER** |
|---|---|---|
| Reporting method | Reported in the RRPs. | Data from the shrinkage ODI-R is reported in the RRPs and feeds into the AER. |
| Reporting requirements | GDNs are required to report on their total annual shrinkage volumes in GWh. | GDNs must report on the progress from the shrinkage ODI-R. This includes reporting on:<br>• the volumes of gas lost from each source of leakage, expressed in GWh;<br>• the leakage component of the overall shrinkage ODI-R target; and<br>• annual volumes for the other sources of shrinkage (own use gas and theft), and associated tCO2e volumes. |

2.15 As the GDNs report on shrinkage in both the AER and as part of the ODI-R, we propose to remove the shrinkage ODI-R as a separate output in the interest of streamlining the price control. However, we propose that the GDNs should still report on their annual shrinkage volumes in the RRPs as part of their AER obligations to ensure consistency in data reporting across all GDNs. More detail on the AER is set out in Chapter 6 of the Overview Document.

2.16 This proposed approach would remove duplication between the current ODI-R and the AER and consolidates the GDNs' reporting requirements. Additionally, reporting on shrinkage data in the AERs will ensure that robust data reporting is publicly available to wider stakeholders.

GDQ1. What are your views on our proposal to remove the shrinkage ODI-R as a separate output?

Shrinkage ODI-F

2.17 The RIIO-GD2 shrinkage ODI-F seeks to target the GDNs' performance on reducing shrinkage through pressure management and gas conditioning. We decided to exclude shrinkage reductions resulting from the repex programme from the shrinkage ODI-F as this work is already funded through the price control and will continue to happen without the shrinkage incentive. We set an asymmetric deadband above and below each network's baseline pressure to account for pressure increases that are non-controllable (eg from network growth and weather conditions) or which might be in consumer interests (eg the use of insertion to result in cheaper and less disruptive repex projects).

2.18 For RIIO-GD3, we are considering the following options to incentivise shrinkage management:

- Option 1: retain the shrinkage ODI-F in its current form. This approach targets the incentive at improving pressure management and gas conditioning and excludes shrinkage reductions resulting from the repex programme effectively. However, stakeholders have suggested that the current incentive might be too targeted and could exclude other beneficial activities. If we were to implement this option, we welcome views on how the design parameters, such targets and the incentive cap and collar, should be set;
- Option 2: remove the shrinkage ODI-F and replace it with a Use It or Lose It Allowance (UIOLI). As shrinkage is the GDNs' main source of carbon emissions, it could be appropriate to include within the Net Zero and Re-opener Development Fund (NZARD) UIOLI outlined in Chapter 8 of the Overview Document. This approach would allow the GDNs to fund low materiality activities to target and reduce shrinkage in full. A UIOLI would also be adaptable to fund projects that emerge during the price control period, eg to rollout innovation projects funded through the RIIO-3 innovation package discussed in Chapter 12 of the Overview Document. Any allowances not used during the price control would be returned to consumers. However, we do not currently have a clear view of whether there are sufficient projects in this area to justify using a UIOLI or whether these activities would be more suited to be funded through baseline allowances;
- Option 3: implement a penalty only ODI-F based on total shrinkage volumes (ie including shrinkage reduction from repex). This would be tied to the achievement of shrinkage reduction targets to hold GDNs to account for their performance in this area. GDNs could request funding for specific activities

and projects to reduce shrinkage through their business plans alongside this. Using targets based on total shrinkage volume could provide a simplified approach in comparison to the RIIO-2 ODI-F which uses a more complicated performance target relating to pressure and gas conditioning levels. A penalty only ODI-F would ensure the GDNs are not rewarded for BAU work carried out under the repex programme. However, it might not incentivise continued shrinkage reduction beyond the required threshold. If we were to pursue this option, we would also need to carefully consider how to set stretching performance targets for reductions in shrinkage volumes, as this has proved challenging in the past; and

- Option 4: combine Options 2 (UIOLI) and 3 (a penalty-only ODI-F). We consider a penalty-only ODI-F would hold GDNs to account for their performance in this area, while the addition of a UIOLI could provide them with flexibility to fund activities to reduce shrinkage beyond this.

2.19 We welcome views on these options, as well as suggestions for alternative options.

GDQ2. What are your thoughts on the options we have set out for the shrinkage ODI-F and on the design of this incentive?
GDQ3. If we provide baseline funding or a UIOLI allowance for shrinkage, can you provide examples of initiatives that could be funded, indicative cost, and why these activities would not go ahead without specific price control funding?
GDQ4. If the Digital Platform for Leakage Analytics is rolled out to all GDNs in RIIO-GD3, what would be the indicative cost and timescales for this?

Impact of blending on shrinkage

2.20 UK government has committed to making a strategic policy decision on whether to support blending of up to 20% hydrogen by volume into the GB gas distribution networks.[3] We note that the implementation of blending could impact on the way that the gas network is operated, eg in relation to pressure management, which could subsequently effect shrinkage. We welcome evidence on how the implementation of blending could change operational practices, and what impact this could have on the GDNs' shrinkage management and targets.

[3] Hydrogen Blending into GB Gas Distribution Networks: A consultation to further assess the case for hydrogen blending and lead options for its implementation, if enabled, October 2023: https://assets.publishing.service.gov.uk/media/650057d81886eb00139771f8/hydrogen-blending-into-gb-gas-distribution-networks-consultation.pdf

GDQ5. If up to 20% hydrogen is blended into the distribution network, what would be the impact on operational practices and shrinkage?

### Heat policy re-opener

2.21 In RIIO-GD2, we established a re-opener to increase or decrease the GDNs' allowances in response to changes to specific regulations and connection charging methodologies that support the decarbonisation of heat.

2.22 GDNs can trigger the re-opener for changes in the areas set out in Table 3.

Table 3: RIIO-GD2 Heat policy re-opener triggers

| **Trigger** | **Rationale for including trigger** |
|---|---|
| Connection charging arrangements for distributed entry connections. | This was included due to uncertainties in costs that GDNs might face when connecting biomethane supplies to the distribution network. |
| Connection charging arrangements for domestic premises. | We thought this might be needed to facilitate the penetration of alternative technologies for heating homes. |
| Obligations on GDNs to promote the energy efficiency of gas customers. | BEIS published a call for evidence in relation to energy schemes for small and medium sized businesses in March 2019, which could have led to new obligations for GDNs in relation to energy efficiency.[4] |
| Quality and composition of gas. | This was included as we thought investment in new systems and monitoring equipment could be required to facilitate the blending of natural gas with biomethane or hydrogen. |

Options

2.23 We think that the GDNs will continue to face uncertainties in relation to heat decarbonisation policy in RIIO-GD3. We therefore propose to keep a re-opener in this area.

2.24 However, we no longer consider costs associated with energy efficiency to be an area of uncertainty for the GDNs as UK government is no longer considering imposing energy efficiency responsibilities on the GDNs. We therefore propose to remove this trigger from the re-opener in RIIO-GD3. We propose to retain the

[4] Energy efficiency scheme for small and medium sized businesses: call for evidence: https://www.gov.uk/government/calls-for-evidence/energy-efficiency-scheme-for-small-and-medium-sized-businesses-call-for-evidence

other triggers relating to quality and composition of gas and connection charging arrangements for distributed entry connections and domestic premises.

2.25 We have identified two options for the design of this re-opener.

2.26 Our first option is to roll over the RIIO-GD2 heat policy re-opener mechanism to RIIO-GD3. Having a separate gas distribution re-opener can ensure we capture all the uncertainties in this area that are specific to the GDNs. However, keeping this as a separate mechanism in RIIO-GD3 might not reflect our goal to streamline the price control.

2.27 Our second option is to remove heat policy as a separate re-opener mechanism and combine this with one of the net zero-related uncertainty mechanisms (UMs) set out in Chapter 8 of the Overview Document. Whilst this would help to simplify the price control, we would need to ensure that a combined UM would have an appropriate materiality threshold. Additionally, our current RIIO-GD2 net zero mechanisms do not have the flexibility that the heat policy has in regard to increasing and decreasing allowances so we would need to consider including this.

2.28 At present, we do not have a preferred approach and therefore welcome the views in response to this consultation.

GDQ6. What are your views on the options we have laid out for the heat policy re-opener, including whether this should be combined with other RIIO-3 net zero mechanisms?

**Regional energy strategic planning**

2.29 In our Future of local energy institutions and governance decision document, we decided to establish a RESP function.[5] The RESP will seek to ensure there is accountability for regional energy system planning so a whole system approach to investment occurs in electricity distribution (ED) and GD to create consistency with national and local net zero ambitions.

2.30 The FSO will be the delivery body for the RESP and will devolve duties through multiple strategic planning roles across GB.

2.31 In our Framework Decision we set out that we will ensure that we have the flexibility to account for any RESP recommendations relevant to GDNs during the RIIO-3 price control period, eg via an UM.[6]

[5] Decision on future of local energy institutions and governance, Chapter 3, paragraph 3.1, page 15: https://www.ofgem.gov.uk/publications/decision-future-local-energy-institutions-and-governance
[6] Framework Decision Core Document, Chapter 3, paragraph 3.29, page 52: https://www.ofgem.gov.uk/publications/decision-frameworks-future-systems-and-network-regulation

2.32 We propose to include the ability to account for RESP recommendations through our Net Zero re-opener. Our current expectation is that during RIIO-3, the role of RESPs in relation to gas distribution is likely to be limited as the FSO builds up its capability and while key uncertainties persist. However, we expect that if there are recommendations by the RESP in relation to gas distribution, these would relate to large strategic investments and the Net Zero re-opener would be most suitable mechanism to cover these material costs. Including uncertainty relating to RESPs in the existing Net Zero re-opener, rather than creating a separate mechanism, would also help to streamline the price control.

GDQ7. What are you views on our proposed approach for managing uncertain costs relating to regional energy strategic planning?

## RIIO-GD2 outputs and UMs proposed for removal

### Commercial fleet electric vehicle (EV) PCD

2.33 The commercial fleet EV PCD was established at the start of RIIO-GD2 to provide funding for the GDNs to convert their commercial fleets to EVs or to other zero emission equivalents.

2.34 We support the GDNs electrifying their commercial fleets. However, we think this work is now BAU, so can be funded via baseline allowances and does not require a PCD. We therefore propose to remove this PCD to streamline the price control and to provide the GDNs with the opportunity to include costs relating to EVs within their Business Plans.

GDQ8. What are your views on our proposal to remove the Commercial fleet electric vehicle PCD in RIIO-GD3?

### Biomethane improved access rollout PCD (SGN only)

2.35 Biomethane improved access rollout is a bespoke PCD that was proposed by SGN in its RIIO-GD2 business plan. The PCD enables SGN to rollout biomethane technologies which had been developed through past innovation activities.

2.36 The work under this PCD is set to be delivered by the end of the RIIO-GD2 price control. We therefore propose to remove this as a PCD. If SGN, or other GDNs, want to deliver further work in this area, they may include it within their Business Plans to potentially form part of baseline allowances.

GDQ9. What are your views on our proposal to remove SGN's bespoke Biomethane improved access rollout PCD in RIIO-GD3?

### Remote pressure management PCD (SGN only)

2.37 SGN proposed a bespoke PCD in its RIIO-GD2 Business Plan to install pressure management equipment at 702 district governors across its Southern network to reduce greenhouse gas emissions from leakage. The remote pressure management PCD was accepted in our RIIO-2 Final Determinations (FDs) due to the environmental benefits that it brought.[7]

2.38 In our FDs, we set out that this work should be completed by the end of RIIO-GD2. We therefore propose to remove this PCD. If SGN, or other GDNs, want to deliver further work in this area in RIIO-GD3, they will have the opportunity to request and justify costs in their Business Plans.

GDQ10. What are your views on our proposal to remove SGN's bespoke remote pressure management PCD in RIIO-GD3?

### Gas escape reduction PCD (SGN only)

2.39 In SGN's RIIO-GD2 Business Plan, it proposed a bespoke gas escape reduction PCD to facilitate the rollout of innovations developed in RIIO-GD1 to reduce leakage. This involved the deployment of a high-volume gas escapes toolkit and stent bags.

2.40 In our FDs, we set out that work under this PCD should be completed by the end of the RIIO-GD2 price control.[8] Therefore, we propose to remove this PCD. If SGN, or and other GDNs, want to deliver further work in this area, they may propose and justify costs in their Business Plans.

GDQ11. What are your views on our proposal to remove SGN's bespoke Gas escape reduction PCD in RIIO-GD3?

### Intermediate pressure reconfigurations PCD (SGN only)

2.41 Intermediate pressure reconfigurations is a bespoke PCD proposed by SGN to reduce risk to its Scotland network by replacing and reconfiguring 515 services and 9.32km of steel mains connected to intermediate pressure gas mains. The PCD provided SGN with funding to install 85 small pressure regulating installations and 355 service governors.

[7] RIIO-2 Final Determinations, SGN Annex, Chapter 2: https://www.ofgem.gov.uk/publications/riio-2-final-determinations-transmission-and-gas-distribution-network-companies-and-electricity-system-operator
[8] RIIO-2 FDs, SGN annex, Table 22, P18: https://www.ofgem.gov.uk/publications/riio-2-final-determinations-transmission-and-gas-distribution-network-companies-and-electricity-system-operator

2.42 In our FDs, we set out that we expect work in this area to be completed by the end of RIIO-GD2.[9] As SGN is expected to fully deliver this project at the end of RIIO-GD2, we propose to remove it as a PCD for RIIO-GD3. If SGN, or other GDNs, want to deliver further work in this area, they may propose and justify costs in their Business Plans.

GDQ12. What are your views on our proposal to remove SGN's bespoke Intermediate pressure reconfigurations PCD in RIIO-GD3?

**HyNet Front End Engineering Design (FEED) PCD (Cadent only)**

2.43 The RIIO-GD2 HyNet FEED bespoke PCD provides Cadent with funding for a FEED study for an 85km hydrogen pipeline in the HyNet industrial cluster. The project is due to be completed by March 2024.

2.44 As the project will be completed next year, we propose to remove this as a PCD for RIIO-GD3.

GDQ13. What are your views on our proposal to remove Cadent's bespoke HyNet Front End Engineering Design PCD in RIIO-GD3?

[9] RIIO-2 FDs, SGN annex, Table 23, page 21: https://www.ofgem.gov.uk/publications/riio-2-final-determinations-transmission-and-gas-distribution-network-companies-and-electricity-system-operator

# 3. Secure and resilient supplies

3.1 Network companies need to deliver a safe and resilient network that is also efficient and responsive to change. This chapter sets out how we intend to deliver this in RIIO-GD3. We expect investment in this area to remain the predominant driver of costs in RIIO-GD3, with a large part of this relating to the replacement of old and deteriorating assets.

3.2 This chapter should be read in parallel with Chapter 6 of the Overview Document which describes our proposed RIIO-3 approach to:

- the Network Asset Risk Metric (NARM);
- physical security;
- cyber security; and
- climate resilience.

3.3 This package of measures reflects the importance of maintaining safety and reliability against a backdrop of significant changes in how the energy system operates.

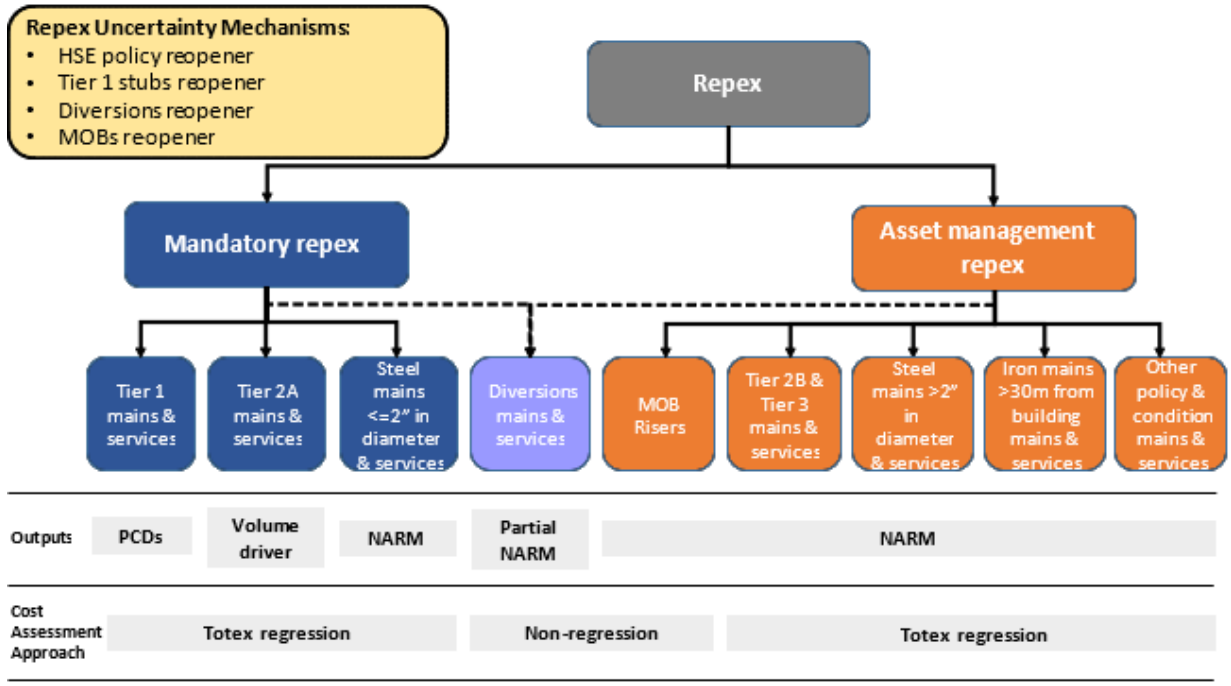
## Proposed RIIO-GD3 specific outputs and uncertainty mechanisms

### Repex

Background

3.4 Repex is the term used to describe the long-term programme to replace old and deteriorating mains, services and risers. For RIIO-GD2, we designed a suite of outputs and UMs to support the delivery of this large and complex programme. Figure 1 summarises our approach to outputs and cost assessment for repex in RIIO-GD2. We discuss the repex PCDs and UMs in the following section. The Tier 1 stubs re-opener, which we propose to remove, is discussed in paragraphs 3.45-3.48.

Figure 1: Overview of our approach to repex in RIIO-GD2




Note: capitalised replacement costs have been included in the relevant category (for Tier 1, Tier 2A etc.)

3.5 Typically, iron or steel gas mains and services are replaced with plastic pipes, which significantly reduces leakage and lowers safety risks. In addition to protecting health and safety, repex provides the following additional benefits:

- reducing greenhouse gas emissions and providing mid-stream mitigation for achieving UK government's Carbon Budget Delivery Plan;[10]
- reducing the cost of gas purchased to replace leakage;
- improving the operational efficiency of the network through avoided emergency and repair costs;
- fewer unplanned interruptions experienced by customers; and
- readying the network for potential repurposing to hydrogen, subject to future UK government decisions.

3.6 Health and Safety Executive (HSE) regulations, including the Pipeline Safety Regulations 1996, are the primary driver of repex.[11] In RIIO-GD2, about 80% of repex spend is for activity mandated by HSE via its Iron Mains Risk Reduction Programme (IMRRP), which requires the GDNs to manage the safety risk of their

[10] Carbon Budget Delivery Plan: https://www.gov.uk/government/publications/carbon-budget-delivery-plan
[11] A guide to the Pipeline Safety Regulations 1996: https://www.hse.gov.uk/pubns/books/l82.htm

iron mains populations.[12] Iron mains that are within 30 metres of a building present the highest risk so are included in the IMRRP. Depending on their size, HSE's current IMRRP enforcement policy specifies that these iron mains must be managed either through decommissioning, remediation[13] or ongoing monitoring, as summarised in Table 4 below. Certain Tier 2 and Tier 3 pipes are also subject to condition monitoring requirements mandated by HSE.[14]

Table 4: Overview of iron mains categories

| Tier | Characteristics of Mains | Action |
|---|---|---|
| Tier 1 | Less than or equal to 8 inches in diameter. | Must be decommissioned by 2032. |
| Tier 2A | Greater than 8 inches to less than 18 inches in diameter, which breach a risk-action threshold.[15] | Must be decommissioned or remediated over the period of the GDN's Approved Programme. |
| Tier 2B | Greater than 8 inches to less than 18 inches in diameter, which are below a risk-action threshold. | Mains can remain operational but decommissioning can be funded if supported by cost-benefit analysis (CBA). |
| Tier 3 | Greater than 18 inches in diameter. | Mains can remain operational but decommissioning can be funded if supported by CBA. |

3.7 Based on HSE's current IMRRP enforcement policy, we estimate that the GDNs will have approximately 19,100km of mandatory Tier 1 iron mains remaining to abandon between the start of RIIO-GD3 and 2032, when the IMRRP is set to conclude. We expect that the vast majority of these mains will be decommissioned within the RIIO-GD3 price control period.

[12] HSE, Iron Mains Risk Reduction: https://www.hse.gov.uk/gas/supply/mainsreplacement/index.htm
[13] For larger diameter mains, it may be possible for GDNs to undertake remediation action (ie internally sealing pipe joints) that prolongs the operating life of a pipe over the medium-term (ie 10-20 years). Typically, these remediation actions are less costly than full replacement, but offer shorter operating lives.
[14] Tier 2 pipes scoring above a risk-action threshold and Tier 3 pipes are also subject to condition monitoring. The IMRRP Enforcement Policy requires GDNs to analyse the outputs from these condition monitoring activities to pinpoint any pipe failure 'hotspots'. Where pipes are found not to be in an efficient state, in efficient working order and in good repair, the GDNs should take action to remedy this, including decommissioning where the pipe is considered to have deteriorated beyond safe or effective repair. For more information about the IMRRP Enforcement Policy, see: https://www.hse.gov.uk/gas/supply/mainsreplacement/enforcement-policy-2021-2026.htm
[15] The risk-action threshold is agreed between HSE and each GDN individually. It is a risk score for an individual main, above which the GDN is expected to take appropriate action to make the pipe safe, either through remediation, decommissioning and/or replacement. The score is measured by the Mains Risk Prioritisation System (MRPS) methodology and estimates the probability of the mains pipe causing an explosion incident, per kilometre, per annum. The MRPS considers factors such as the fracture history of the pipe, the fracture history of other mains within the same area, the likelihood that gas will enter a building, the operating pressure of the pipe and the diameter of the main.

3.8 In addition to Tier 1 and Tier 2A iron mains, we also consider the replacement of non-polyethylene (non-PE) services and steel pipe less than 2 inches in diameter to be mandatory, since HSE expects that GDNs will replace these assets when they encounter them.[16] The replacement of medium pressure ductile iron (MPDI) mains is also mandatory, with GDNs having 12 months to remove any remaining MPDI mains they encounter. However, the vast majority of MPDI mains on the network have already been decommissioned.

3.9 The GDNs must also manage the risk of their assets that are not included within HSE's replacement programme. Therefore, the remaining repex spend in RIIO-GD2 is incurred on non-mandatory replacement activities. This includes replacement of Tier 2B and Tier 3 mains, as well as risers and mains of other materials as required. Non-mandatory repex is covered by NARM and is justified on the basis of compliance with health and safety duties and through a CBA developed by Ofgem, considering safety, leakage reduction and emissions benefits. Our approach to NARM is discussed in Chapter 6 of the Overview Document. We see no issues with this broad approach and propose to continue it for RIIO-GD3.

Joint review of the IMRRP with DESNZ, HSE and Ofgem

3.10 In July 2023, DESNZ announced a package of retail market and affordability reforms, which included a commitment to review gas distribution network charges in relation to the IMRRP.[17] The review is examining the costs and benefits of repex from safety, environmental, cost and effectiveness perspectives. Policy discussions are ongoing among the GDNs, Ofgem, DESNZ and HSE to inform the review. Any changes to the repex programme will be subject to the outcome of the review. We welcome information in response to this consultation which could help inform the ongoing review.

3.11 Our initial thinking from the review is that the repex programme in its current form provides value for money and that it should be continued through RIIO-GD3. It delivers significant environmental, commercial and safety benefits to current and future consumers and GB. The programme has led to a reduction in

[16] GDNs may encounter these assets through undertaking mains replacement activity or for other reasons, such as after a reported gas escape. See, for example: https://www.hse.gov.uk/foi/internalops/og/og-00019.htm

[17] Delivering a Better Energy Retail Market policy paper: https://www.gov.uk/government/publications/delivering-a-better-energy-retail-market

fatalities, injuries and property damage caused by gas explosions, as well as to a downward trend in the number of gas-in-building events (GIBs).[18]

3.12 The programme is also helping to ensure that the UK meets its net zero targets by 2050 and is a leading force behind reducing GB's methane emissions. The Carbon Budget Delivery Plan lists the IMRRP as a major contributor to the reduction of greenhouse gas emissions for GB.[19]

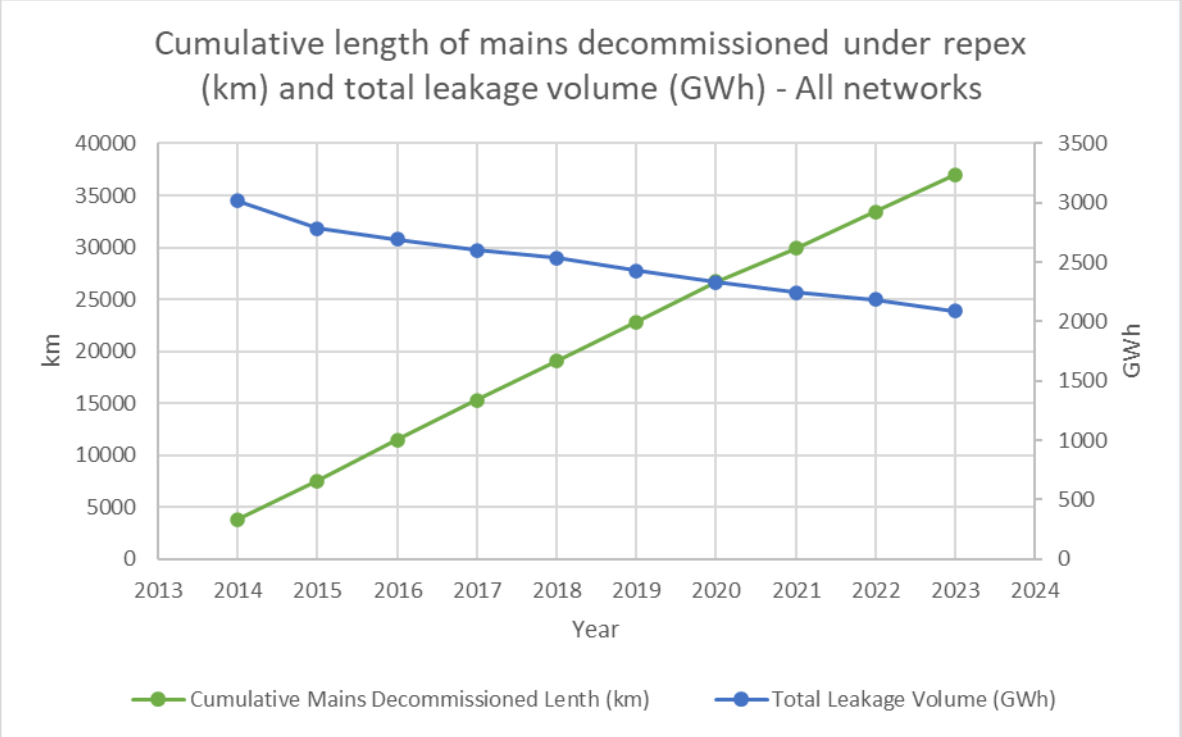
3.13 While leakage is difficult to measure, we estimate that total leakage across the GDNs collectively has reduced by more than 930 GWh since 2014.[20] This equates to a savings of approximately 1.3 MtCO2e, and we expect this figure to continue to rise as more iron pipes are decommissioned. The decommissioning and replacement of iron mains (which are prone to leakage) under the repex programme is chiefly responsible for this decline in potent greenhouse gas emissions. As illustrated in Figure 2, as more iron mains have been decommissioned, the total leakage volume has decreased across the GDNs.

[18] GIBs are events involving the accumulation of gas within the confines of a building. GIB events have the potential to lead to explosive gas-air mixtures which if ignited may cause property damage, injury or loss of life. RIIO-GD2 - Regulatory Instructions and Guidance: Version 1.15 (clean), page 151: https://www.ofgem.gov.uk/publications/decision-modifications-regulatory-instructions-and-guidance-rigs-regulatory-reporting-packs-rrps-and-pcfm-guidance-riio-2-year-2

[19] Carbon Budget Delivery Plan: https://www.gov.uk/government/publications/carbon-budget-delivery-plan

[20] This estimate is based on leakage volumes reported by the GNDs from 2014 to 2023 with the annual RRPs. The GDNs estimate leakage using the SLM.

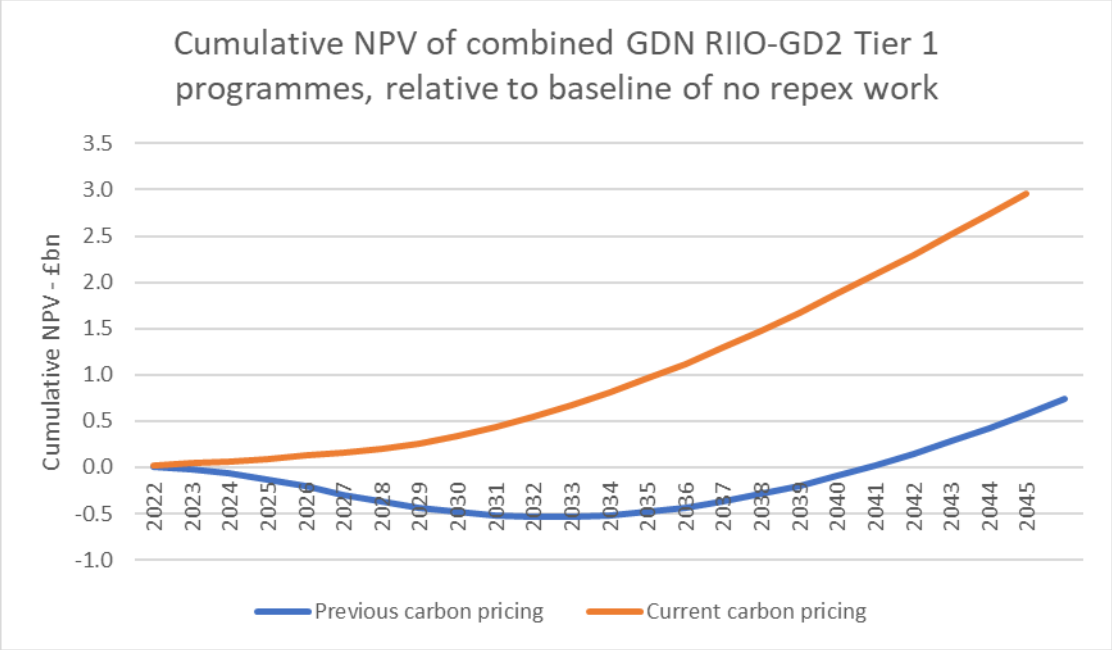
Figure 2: Cumulative length of mains decommissioned under repex (km) and total leakage volume (GWh) for all GDNs collectively from 2014 to 2023[21]




3.14 In addition, changes to the UK government's approach to carbon values since the start of RIIO-GD2 suggest that the repex programme delivers greater value environmental benefits to consumers than previously assumed. In September 2021, government announced a significant revision to its approach for valuing greenhouse gas emissions, which resulted in the carbon values we use in our CBAs increasing by over 200%.[22] This has a major impact on our expected payback periods for repex work, as can be seen in Figure 3. At the time of our RIIO-2 FDs, the GDNs' Tier 1 programmes were not due to show a positive net present value (NPV) (in comparison to a baseline of ceasing repex work) until 2041. However, had the new carbon values been in place at that time, they would have demonstrated a positive NPV by the end of the RIIO-GD2 price control period.

[21] Figure 2 leverages repex and leakage data reported by the GNDs in the RRPs from 2014 to 2023. The GDNs estimate leakage using the SLM. This figure does not take into account data prior to 2014.
[22] Valuation of greenhouse gas emissions: for policy appraisal and evaluation policy paper: https://www.gov.uk/government/publications/valuing-greenhouse-gas-emissions-in-policy-appraisal/valuation-of-greenhouse-gas-emissions-for-policy-appraisal-and-evaluation

Figure 3: Cumulative NPV of combined GDN RIIO-GD2 Tier 1 programmes, relative to baseline of no repex work[23]




3.15 HSE is currently undertaking a further technical review of the IMRRP to ensure that it remains fit for purpose. As a result of its eventual findings, HSE might decide to make changes to the IMRRP enforcement policy, which could potentially lead to changes in the scope or timing of mandatory repex activities that the GDNs will be required to carry out during RIIO-GD3.

3.16 Potential HSE decisions could include: requiring additional justification of the adequacy of mains condition monitoring techniques; requiring the acceleration or deceleration of mandatory workloads; changing the diameter of bands that are included within mandatory workloads; redefining the "at-risk" boundary; or adding classes of mains as mandatory.

3.17 Currently, HSE's thinking on potential changes to its IMRRP enforcement policy is at an early stage. The materiality of any changes to the scope, timing or costs of mandatory repex activities during the price control will depend on the policy options adopted by HSE following the review. Our shared intention is for any proposed changes in HSE policy to be communicated ahead of our RIIO-GD3 Sector Specific Methodology Decision (SSMD).

[23] Values are in the FY 2018/19 price base. They are charted out to 2045 to provide clarity on the evolution of the NPV curves on a constant basis, and do not take into account potential scenarios for network decommissioning.

GDQ14. What are your views on the benefits of repex that we have identified, how well the repex programme is currently working, and what evidence we should consider as part of the joint repex review?

GDQ15. Do you consider there to be alternative approaches that could deliver mandatory repex at least cost to the consumer whilst maintaining the legislative safety standards?

HSE policy re-opener

3.18 We established the HSE policy re-opener as part of our FDs.[24] The purpose of this re-opener is to allow flexibility in response to any significant changes to HSE policy that result in a material impact on output targets, workload volumes or cost allowances.

3.19 The HSE policy re-opener includes two triggers:

- Trigger 1: changes to the GDNs' repex costs due to changes to a GDN's Approved Programme or HSE policy or legislation underpinning the repex programme that materially impacts the GDNs' cost to deliver repex related licensed activity, including but not limited to the IMRRP; and
- Trigger 2: material changes to the GDNs' emergency and repair costs relating to new legislation or changes to HSE policy regarding excessive working hours and shift worker fatigue.

3.20 We are proposing to continue this re-opener in RIIO-GD3. Repex is heavily driven by HSE policy, both in terms of volume of work, and the sequencing and approach that the GDNs take. We think it is important to retain the flexibility to adjust costs in the event that HSE policy or legislation changes during the RIIO-3 price control period.

3.21 While we expect any changes in HSE policy resulting from the joint repex review to be communicated ahead of the SSMD, if any relevant policy changes subsequently emerge, we expect that these could be accommodated through the HSE policy re-opener.

3.22 However, we no longer anticipate further changes to HSE policy relating to excessive hours or worker fatigue. We also expect the GDNs to have developed sufficient knowledge of the current requirements to build the related labour costs into their baseline allowances. We therefore propose to remove Trigger 2 from the HSE policy re-opener in RIIO-GD3.

[24] RIIO-2 FDs, GD Annex, pages 141-142: https://www.ofgem.gov.uk/publications/riio-2-final-determinations-transmission-and-gas-distribution-network-companies-and-electricity-system-operator

GDQ16. What are your views on our proposal to keep the HSE policy re-opener, but to reduce its use to a single trigger?

Tier 1 mains decommissioned PCD

3.23 Tier 1 iron mains decommissioning is mandated by HSE and forms the majority of repex workloads and costs for the GDNs. Due to the significant costs and benefits to consumers, it is important to ensure that GDNs continue to be held to account for delivering this work.

3.24 In RIIO-GD2, we implemented a PCD to fund work associated with Tier 1 mains decommissioning activities.[25] It is designed to ensure alignment between workloads delivered and cost allowances. The PCD provides the GDNs with flexibility to manage the Tier 1 repex programme efficiently, while ensuring consumers only pay for workloads that are delivered.

3.25 In RIIO-GD2, we decided to use four diameter bands (≤3", 4"-5", 6"-7", 8") as the Workload Activities for this PCD. We consider that using four categories streamlines the PCD, while retaining the benefits of aligning allowances with delivered workloads.

3.26 This PCD includes an Allowance Adjustment Mechanism to adjust allowances at closeout to reflect both the Outturn Workload (the total workload volume to be delivered by the end of RIIO-GD2) and the Outturn Workload Mix (the final delivered mix of workload activities within the Outturn Workload at the end of RIIO-GD2) based on ex ante unit costs.[26] Any upward adjustment is restricted to 3% of the value of the Baseline Cost Allowance, with any overspend beyond this going through the Totex Incentive Mechanism.[27] There is no lower limit on adjustments to the Baseline Cost Allowances, as customers should not pay for workloads that the GDNs do not deliver.

3.27 We have not identified any issues with this PCD and propose continuing this approach in RIIO-3, subject to the outcomes of the joint repex review.

GDQ17. What are your views on the design of the Tier 1 mains decommissioned PCD?

[25] RIIO-2 FDs, GD Annex, pages 50-55: https://www.ofgem.gov.uk/publications/riio-2-final-determinations-transmission-and-gas-distribution-network-companies-and-electricity-system-operator
[26] In RIIO-GD2, we set unit costs based on each of four workload activities. These were derived from top-down totex allowances. We did not use Baseline Target Workloads to calculate Baseline Cost Allowances on a bottom-up basis.
[27] Outlined in Chapter 7 of the Overview Document.

Tier 1 services PCD

3.28 The GDNs replace non-PE service pipes alongside Tier 1 mains replacement projects. We consider this work to be mandated by HSE policies, since HSE expects that the GDNs will replace services when they encounter them.[28] In RIIO-GD2, we implemented a PCD to fund services interventions associated with Tier 1 mains decommissioning activities.[29] Like the Tier 1 mains decommissioned PCD, the services PCD is designed to ensure alignment between workloads delivered and cost allowances.

3.29 The benefit of this PCD is that it provides clarity over Baseline Target Workload for RIIO-GD2. The Allowance Adjustment Mechanism is designed to ensure that costs to consumers reflect what is delivered (based on Outturn Workload Mix) while maintaining an incentive for GDNs to deliver work efficiently.

3.30 We have not identified any issues with this PCD and propose continuing this approach in the next price control. If there are any changes to HSE policy, modifications to this PCD might be required.

GDQ18. What are your views on the proposed design of the Tier 1 services PCD?

Tier 2A mains and services replacement volume driver

3.31 In RIIO-GD2, we included a volume driver to fund mains replacement for Tier 2A mains within 30m of a building and associated services.[30] This is broadly similar to the approach used in RIIO-GD1. Volumes of Tier 2A work are uncertain due to risk scores on individual mains changing over time. This mechanism adjusts allowances based on Tier 2A workloads delivered, which accounts for forecasting uncertainty on required volumes.

3.32 We expect that workloads for Tier 2A will be relatively small in RIIO-GD2, with most of these mains having already been abandoned. We think that using a volume driver is the most appropriate way to address the uncertainty around workloads, while retaining an incentive on GDNs to deliver projects cost efficiently. The mechanism is designed to protect consumers and GDNs from any costs arising from inaccurately forecasted volumes, while ensuring GDNs are

[28] The GDNs could encounter non-PE services through undertaking mains replacement activity or for other reasons, such as after a reported gas escape.
[29] RIIO-2 FDs, GD Annex, pages 55-59: https://www.ofgem.gov.uk/publications/riio-2-final-determinations-transmission-and-gas-distribution-network-companies-and-electricity-system-operator
[30] RIIO-2 FDs, GD Annex, pages 139-140: https://www.ofgem.gov.uk/publications/riio-2-final-determinations-transmission-and-gas-distribution-network-companies-and-electricity-system-operator

appropriately funded for additional mandatory Tier 2A work that might emerge during the price control.

3.33 We have not identified any issues with this mechanism and propose continuing this approach in RIIO-GD3. If there are any major changes to HSE policy, we will consider if modifications are required.

GDQ19. What are your views on the design of the Tier 2A mains and services replacement volume driver?

London medium pressure PCD (Cadent North London only)

3.34 In RIIO-GD2, we introduced the London medium pressure PCD, which is specific to Cadent's North London network. The PCD is designed to hold Cadent North London to account for delivering specific sections of the London Medium Pressure (LMP) project during the price control.[31] The project involves replacing large diameter, medium pressure iron mains in central London and is expected to continue until 2031. The PCD serves to protect consumers if any discrete capital investment is not delivered.

3.35 The PCD in RIIO-GD2 allocates £46.69m[32] of baseline funding for the project, with the understanding that Cadent London will prioritise replacement of the highest risk medium pressure iron mains. The rationale behind this PCD is to ensure that we have adequately funded and accounted for resilience and safety benefits. Reporting on this PCD comes through the annual RRPs, as well as through an independently audited engineering report confirming the completion of each section of the project as detailed in Cadent's Business Plan.

3.36 We have not identified any issues with this approach and propose to continue this PCD for Cadent North London in RIIO-GD3, as the project is expected to continue until 2031. However, if there are any major changes to HSE policy, such as a decision to redefine Tier 3 mains as mandatory under the IMRRP, then a different approach for all GDNs might be required.

GDQ20. What are your views on the design of the London medium pressure PCD (Cadent North London only)?

[31] RIIO-GD2 FDs, Cadent Annex, pages 24-25: https://www.ofgem.gov.uk/publications/riio-2-final-determinations-transmission-and-gas-distribution-network-companies-and-electricity-system-operator
[32] This value is presented in a FY 2018/19 price base.

### Diversions and loss of development claims re-opener

3.37 Pipeline diversions occur when the GDNs are required to move and re-route sections of their networks. Diversions are usually driven by third parties and the costs are mostly rechargeable to the third party. However, in some cases, the GDNs are unable to recover all, or part, of the costs.

3.38 In RIIO-GD2, we set a re-opener to enable GDNs to recover costs associated with diversions as shown in Table 5.

Table 5: Cost areas covered in the diversions and loss of development claims re-opener

| **Cost areas** | **Rationale** |
|---|---|
| Non-rechargeable costs related to pipeline diversions at any pressure tier. | We included this cost as GDNs raised concerns about the higher risk exposure they might face. |
| Settling claims brought by landowners whose ability to develop their property is curtailed by the presence of gas pipelines. | Accepted due to potential material costs and the volume of uncertainty that GDNs could incur. WWU also provided evidence of known claims that could incur significant costs in RIIO-GD2. |
| Rectifying damages to pipelines from soil erosion as a result of extreme weather events. | We accepted this cost as stakeholders highlighted significant uncertainties. |

3.39 We think that the GDNs will continue to face uncertainties in costs associated with diverting and rerouting their networks, so we propose to retain this re-opener in RIIO-GD3. However, we do not currently have a clear understanding of whether all cost areas covered within the re-opener are still uncertain in RIIO-GD3. We therefore welcome views on its scope, including justification for why these cost areas are still uncertain.

GDQ21. What are your views on our proposal to retain the diversions and loss of development claims re-opener in RIIO-GD3, and whether all the cost areas are still uncertain in RIIO-GD3?

### Emergency response time licence obligation (LO)

3.40 GDNs must attend unplanned gas escapes quickly to ensure their network is safe. Regulation 7(4) of the Gas Safety (Management) Regulations 1996 (GSMR) requires the GDNs to attend gas escapes as soon as it is reasonably practicable and prevent the gas escaping within 12 hours.[33]

[33] Gas Safety (Management) Regulations 1996: https://www.legislation.gov.uk/uksi/1996/551/contents/made

3.41 In RIIO-GD2, we retained the emergency response time LO (complementary to the GSMR), requiring the GDNs to respond to 97% of reported gas escapes within one hour for uncontrolled escapes and within two hours for controlled escapes.[34] This is an annual target.

3.42 We modified the LO during RIIO-GD2 to clarify that:

- in meeting the performance standard, those attending gas escapes must have sufficient training to deal with the situation competently; and
- the GDNs must be able to demonstrate that those attending gas escapes can deal with the situation competently.

3.43 These additions to the LO address the potential risk that a performance standard alone might be insufficient to ensure public safety by clarifying the behaviours we expect from the GDNs.

3.44 We note that using an annual target could smooth out disparities between higher and lower performance at different times of the year, meaning consumers might not experience consistent levels of safety in this area throughout the year. We are therefore considering whether it would be more appropriate for the 97% target to be set on a monthly or quarterly, rather than annual, basis.

GDQ22. What are your thoughts on our proposal to continue the emergency response time LO and whether the target should be set monthly, quarterly or annually?

## RIIO-GD2 outputs and uncertainty mechanisms proposed for removal

### Tier 1 iron stubs re-opener

3.45 Tier 1 iron stubs are short lengths[35] of Tier 1 iron mains attached to larger diameter parent mains.[36] Under the IMRRP, stubs need to be decommissioned by 2032. Faced with uncertainty around workloads for Tier 1 iron stubs, we

[34] RIIO-2 FDs, GD Annex, page 34: https://www.ofgem.gov.uk/publications/riio-2-final-determinations-transmission-and-gas-distribution-network-companies-and-electricity-system-operator
[35] Usually up to 3m in length, although definitions of a stub vary between GDNs.
[36] Prior to RIIO-GD1, the IMRRP required the GDNs to decommission all iron mains, regardless of diameter. Stubs were created when GDNs decommissioned (replaced) the Tier 1 main, but left a short section connected to the larger diameter parent main, with the intention of decommissioning it when replacing the parent main. Under the updated decommissioning programme, the current IMRRP, replacement of larger diameter mains should be supported by CBA, meaning many stubs will need to be addressed individually if replacement of the parent main is not economically justified.

introduced the Tier 1 iron stubs re-opener in RIIO-GD2 to provide the GDNs with the opportunity to recover costs for decommissioning them.[37]

3.46 However, we no longer think the costs associated with Tier 1 stubs activities are uncertain because the GDNs have gathered information on stubs replacement and remediation costs during RIIO-GD2. As a result, the GDNs should be able to calculate appropriate baseline allowances for the next price control.

3.47 We therefore propose to remove this re-opener in RIIO-GD3 and instead factor costs for Tier 1 stubs into the GDNs' baseline allowances.

3.48 We recognise that the HSE IMRRP enforcement policy review is ongoing. Our expectation is any changes to HSE policy impacting the Tier 1 iron stubs workload occurring after the SSMD could be accommodated through the HSE policy re-opener.

GDQ23. What are your views on our proposal to remove the Tier 1 iron stubs re-opener in RIIO-GD3 and our approach for the costs to be included in the baseline allowances?

**Capital projects PCD**

3.49 In the RIIO-GD2 business plans, the GDNs submitted proposals for discrete capex investments. We established the Capital projects PCD to provide funding for these projects and to ensure that they are delivered during the RIIO-GD2 price control.

3.50 Projects that fall under this PCD are all expected to be completed by 31 March 2026, as set out in our RIIO-2 FDs.[38] We therefore propose remove this as a PCD for RIIO-GD3.

GDQ24. What are your views on our proposal to remove the Capital projects PCD in RIIO-GD3?

**Gas holder demolitions PCD (NGN and WWU only)**

3.51 Gas holders were previously used to store town gas from nearby gasworks. Their use declined following the discovery of gas in the North Sea and an increased preference for storing gas within pipelines. As a result, we provided funding to the GDNs for a phased demolition of gas holders in RIIO-GD1. SGN and Cadent transferred their non-listed gas holders to non-regulated companies in RIIO-GD1,

[37] RIIO-GD2 FDs, GD Annex, pages 142-144: https://www.ofgem.gov.uk/publications/riio-2-final-determinations-transmission-and-gas-distribution-network-companies-and-electricity-system-operator
[38] For further information please see RIIO-2 FDs, GD Annex, pages 62-64: https://www.ofgem.gov.uk/publications/riio-2-final-determinations-transmission-and-gas-distribution-network-companies-and-electricity-system-operator

so did not need further price control funding in RIIO-GD2. NGN and WWU had some gas holders remaining on their networks at the start of RIIO-GD2, so a PCD was established to ensure they would complete all demolitions by March 2029.

3.52 Both NGN and WWU have confirmed that they will complete their gas holder demolitions by the end of RIIO-GD2. We therefore propose to remove this as a PCD as it will no longer be needed in RIIO-GD3.

GDQ25. What are your views on our proposal to remove the Gas holder demolitions PCD in RIIO-GD3?

**Multiple Occupancy Buildings (MOBs) safety re-opener**

3.53 The MOBs safety re-opener was established in RIIO-GD2 to allow GDNs to respond to any new safety standards imposed on MOBs by regulators in response to the Hackitt review.[39] Areas of work included in the re-opener were, safety related maintenance, repairs, and surveys in medium rise MOBs between three and five floors.

3.54 The Hackitt review inquiry has ended, therefore GDNs will not face uncertainties relating to costs of responding to new safety standards. We therefore propose to remove this re-opener. However, the GDNs may include associated costs within their baselines.

GDQ26. What are your views on our proposal to remove the Multiple Occupancy Buildings safety re-opener in RIIO-GD3?

**Job completion lead-time including re-instatement ODI-R (NGN only)**

3.55 In NGN's RIIO-GD2 Business Plan, it proposed an ODI-R to reduce the time between customers paying for a standard connection service (or alteration) and NGN completing areas of work. The job completion time ODI-R focuses on achieving faster connections to improve customer satisfaction. In our RIIO-2 Final Determinations, we set a performance target of 45% connections or alteration services to be completed within 20 working days of payment by the end of RIIO-

[39] Following the Grenfell Tower tragedy, an independent inquiry (the 'Hackitt Review') into the regulation of high-rise residential buildings and fire safety was commissioned by the UK government. The Ministry of Housing, Communities & Local Government led on the reform of the building safety regulatory system, which included the establishment of the Joint Competent Authority (JCA). The JCA is a building and fire safety regulator, compromised of HSE and Local Authority Building Standards, fire and rescue authorities, which oversees building safety within high-rise buildings across their life cycle. See Chapter 1, page 21, paragraph 1.12 of the Building a Safer Future Independent Review of Building Regulations and Fire Safety: Final Report: https://assets.publishing.service.gov.uk/media/5afc51e940f0b622e6e19089/Building_a_Safer_Future_-_print.pdf. Reforms in this area have now come to end in which a Building Safety Programme was published by HSE on the 20th of July 2017. For further information please see the Building Safety Programme: https://www.gov.uk/guidance/building-safety-programme

2.[40] NGN has successfully exceeded its targets in the first two tears of RIIO-GD2. In the first year of RIIO-GD2, NGN achieved a rate of 58% and increased it to 90% in year 2.

3.56 We propose to remove this bespoke output to aid in simplification of the price control. We expect work in this area to become BAU for NGN, following its successful improvements in this area in RIIO-GD2. We also expect that the connections customer satisfaction survey will continue to incentivise performance in this area.

GDQ27. What are your views on our proposal to remove NGN's bespoke job completion lead-time including re-instatement ODI-R in RIIO-GD3?

[40] RIIO-2 FDs NGN annex, Chapter 2, Table 7, page 10: https://www.ofgem.gov.uk/publications/riio-2-final-determinations-transmission-and-gas-distribution-network-companies-and-electricity-system-operator

# 4. High quality of service from regulated firms

4.1 We expect network companies to deliver high quality and reliable service to all network users and consumers, including those in vulnerable situations.

4.2 This chapter sets out our approach to maintaining a high quality of service at a reasonable cost in RIIO-GD3. This includes how we intend to ensure the GDNs are supporting and protecting consumers in vulnerable situations, providing excellent customer service, and continuing to keep unplanned interruption times down.

## Proposed RIIO-GD3 specific outputs and uncertainty mechanisms

### Vulnerability

Overview

4.3 Supporting and protecting consumers in vulnerable situations is a priority for Ofgem, particularly given the legacy impacts of the Covid-19 pandemic, the current cost of living crisis and the need to deliver a just transition to net zero.

4.4 Our Consumer Vulnerability Strategy[41] defines vulnerability to be when a consumer's personal circumstances and characteristics combine with aspects of the market to create situations where:

- the consumer is significantly less able than a typical domestic consumer to protect or represent their interests; and/or
- significantly more likely than a typical domestic consumer to suffer detriment, or that detriment is likely to be more substantial.

4.5 Factors influencing vulnerability can be related to the individual or their circumstances, as well as how these factors interact, and vulnerability can be permanent or transitory as circumstances change. We recognise that vulnerability factors are often multidimensional and intersecting. Our definition is intentionally wide, requiring energy companies to invest time and effort to understand their consumers' contexts and needs, and provide appropriate support.

4.6 While we consider that devolved governments have the primary role in addressing fuel poverty, Ofgem will consider interventions where consumers in

[41] Our current Consumer Vulnerability Strategy runs until 2025, and we will aim to refresh this ahead of the RIIO-3 price control. Ofgem Consumer Vulnerability strategy: https://www.ofgem.gov.uk/publications/consumer-vulnerability-strategy-2025

vulnerable situations are at significant risk, the benefits of the intervention are significant, and the redistribution costs are low.

Role of the GDNs in supporting consumers in vulnerable situations

*Background*

4.7 We consider that the GDNs have an important role in helping consumers in vulnerable situations. As in RIIO-GD2, we think that it is important to clearly define the boundaries of this role. In RIIO-GD2, we determined that the GDNs' role in addressing vulnerability should be related to their existing areas of competence, activity, and consumer interaction. For example, it was determined that the GDNs should:

- assist consumers in vulnerable situations during outages;
- recognise and take proactive measures to address vulnerability when responding to emergencies;
- provide subsidised connections to fuel poor households;
- recognise and appropriately take vulnerability into account through their customer service functions; and
- identify consumers in vulnerable situations and offer them some additional assistance free of charge.

4.8 The Framework Decision broadly confirmed the defined role above. It also added a responsibility on GDNs to provide support where they are best placed to help those in fuel poverty and those most at risk of being left behind in the transition to net zero.

4.9 As set out in RIIO-GD2, we remain of the view that the devolved governments have the primary role in addressing fuel poverty. In particular, we think that policy aimed at redistributing substantial costs between energy consumer groups is within the remit of government. Therefore, the price control should not fund the GDNs to address vulnerability in areas which are not directly related to their existing role. However, we want to continue to enable and encourage the GDNs to better coordinate with government funding and third parties.

4.10 We recognise the important role that the GDNs play in supporting consumers in vulnerable situations, particularly in relation to fuel poverty and carbon monoxide (CO) safety. We continue to think that this role should be expressly related to the GDNs' existing areas of competence, activity, and consumer interaction. We also

consider there might be opportunities for the GDNs to provide support to those most at risk of being left behind in the transition to net zero.

GDQ28. What are your views on our proposed position on the role of GDNs in relation to vulnerability, and how can they support a just transition to net zero?

Vulnerability strategies

4.11 As in RIIO-GD2, we consider the GDNs to be responsible for ensuring that their vulnerability strategies are tailored to the needs of consumers. We expect the GDNs to continue to keep their overarching vulnerability strategies up to date. We also expect the GDNs to use these strategies to inform their use of the Vulnerability and Carbon Monoxide Allowance (VCMA - discussed later in this chapter), as well as how they carry out BAU activities and processes which might involve interactions with consumers in vulnerable situations. These strategies should be tested with the GDNs' stakeholders, fuel poor partners, and their Independent Stakeholder Groups.

4.12 We also note that the GDNs have independently developed a collaborative VCMA strategy, governed by their VCMA Steering Group.[42] We consider that publishing a joint GDN strategy, covering both VCMA and BAU approaches to vulnerability, could help to facilitate knowledge sharing, highlight opportunities for collaboration, avoid duplication, and mitigate the risks of creating a postcode lottery. A joint strategy could also facilitate progress on wider cross-sector challenges such as delivering a just transition and the use of data and digitalisation to identify and address vulnerability, eg through the development of a multi-sector Priority Services Register (PSR).[43]

4.13 We therefore expect the GDNs to continue to develop and maintain both individual and joint GDN vulnerability strategies which are informed by stakeholders. These strategies should be used to inform the GDNs' Business Plans, but we do not expect to require their submission to us through the

[42] Vulnerability and Carbon Monoxide Allowance Annual Collaborative Report 2022/23 - Gas Distribution Networks, page 6: https://www.sgn.co.uk/sites/default/files/media-entities/documents/2023-06/VCMA-GDN-Collaborative-Annual-Report-2023.pdf

[43] The UK Government has recently announced it is exploring options to introduce a single, multi-sector PSR across the water, energy and telecoms sectors. This would reduce duplication and inconsistencies across the utilities sector and alleviate the burden on consumers in vulnerable situations by only requiring them to declare their situation once. Department for Business and Trade, Smarter Regulation: Strengthening the economic regulation of the energy, water and telecoms sectors, p47: https://assets.publishing.service.gov.uk/media/655dee93d03a8d000d07fe75/strengthening-the-economic-regulation-of-the-energy-water-and-telecoms-sectors.pdf

Business Plan Guidance (BPG). We propose to include a requirement to develop and maintain these strategies as part of the VCMA governance document.

GDQ29. What are your views on our proposal for GDNs to develop individual and joint-GDN vulnerability strategies?

Vulnerability Minimum Standards

4.14 RIIO-GD2 sets out several minimum standards for the GDNs in relation to vulnerability:

- an LO to provide additional services to specified customer groups;[44]
- a principles-based LO which requires the GDNs to treat domestic customers fairly;[45] and
- the Guaranteed Standards of Performance (GSOPs), which are discussed in more detail later in this chapter.

4.15 We introduced the principles-based LO as part of setting RIIO-GD2, based on the Standards of Conduct included in the gas and electricity supply licences.[46] We have since also implemented a similar principles-based LO in RIIO-ED2.[47]

4.16 We propose to maintain the existing vulnerability minimum standards in RIIO-GD3. We think these standards protect consumers in vulnerable circumstances and ensure they can expect fair treatment from GDNs.

GDQ30. Do you agree with our proposal to retain the RIIO-GD2 vulnerability minimum standards is sufficient to ensure customers in vulnerable situations are protected and treated fairly?

Vulnerability and carbon monoxide allowance (VCMA)

4.17 The VCMA was introduced in RIIO-GD2 for GDNs to fund projects focused on vulnerability and CO safety initiatives that go beyond the BAU activities funded through other price control mechanisms or required through LOs.

*4.18* VCMA funding is provided through a UIOLI allowance. 25% of the allowance is ring-fenced for collaborative projects delivered by at least two GDNs and the remaining 75% is divided between each network based on the number of domestic gas customers served. The GDNs must ensure that their VCMA portfolio

[44] Standard Special Condition D13: 'Provision of services for specific domestic customer groups', Gas Transporter Licence.
[45] Standard Special Condition (SSC) D21: 'Treating Domestic Customers Fairly', Gas Transporter Licence.
[46] Standard Licence Condition 0 of the Gas and Electricity Supply licences.
[47] Standard Licence Condition 10AA: 'Treating Domestic Customers Fairly', Electricity Distribution licence.

covers a range of activities (related to both vulnerability and CO safety), which are tailored to the needs of their customers and aligned with their vulnerability strategies. Projects which meet the eligibility requirements (including a positive, or forecasted positive, Social Return on Investment (SROI)) qualify for VCMA funding, with any unspent allowances at the end of RIIO-GD2 returned to customers.[48] Each GDN must produce an annual report on its use of the VCMA and the progress of VCMA projects.

4.19 Vulnerability is also a key priority in the ED sector. In RIIO-ED2, we included an ODI-F to drive ambition and hold Distribution Network Operators (DNOs) accountable for the delivery of their strategies and baseline expectations within the price control. DNOs are funded through their baseline allowances to deliver their vulnerability strategies. The consumer vulnerability ODI-F holds the DNOs accountable against their RIIO-ED2 strategies, the Treating Domestic Customers Fairly principles-based LO,[49] and baseline expectations.[50] The RIIO-ED2 ODI-F covers power cut support (PSR reach), fuel poverty and support for those at risk of being left behind in the net zero transition, as well as vulnerable customers' satisfaction with the service they receive.

*Use of VCMA or ODI-F*

4.20 In comparison to GDNs, DNOs have different opportunities across the spectrum of their functions to provide solutions to vulnerable consumers (eg DNOs have different touch points with customers than GDNs and own and operate their own PSR). We therefore consider it might be appropriate to have different mechanisms in the two sectors. However, we think it important to consider the relative merits of both UIOLI and ODI-F approaches to ensure we effectively address issues of vulnerability in RIIO-GD3.

4.21 We have therefore identified two potential options for funding and incentivising vulnerability in RIIO-GD3:

- continuing the RIIO-2 VCMA UIOLI allowance; or
- introducing a vulnerability ODI-F, similar to the RIIO-ED2 vulnerability incentive.

[48] Full eligibility requirements are outlined in the VCMA Governance Document available on our website: https://www.ofgem.gov.uk/publications/decision-update-riio-2-gas-network-vulnerability-and-carbon-monoxide-allowance-governance-document
[49] SLC 10AA: 'Treating Domestic Customers Fairly', Electricity Distribution licence.
[50] The RIIO-ED2 consumer vulnerability ODI-F measures DNOs' performance against five common metrics, with rewards and penalties available which are worth ±0.2% of the DNO's Return on Regulatory Equity. There are also deadbands where a DNO will receive neither a penalty nor a reward for its performance.

4.22 We consider that the VCMA has had a positive impact in addressing issues of vulnerability and CO safety in the first two years of RIIO-GD2. The use of a UIOLI allowance for GDNs has also been broadly welcomed by stakeholders to date. Some stakeholders have commented that they think the certainty derived from the UIOLI allowance has allowed for innovation and ambition in VCMA projects, both in terms of action and scale. It also enables in-period flexibility, so the GDNs can be reactive to new issues and ideas that arise during the price control. By ring-fencing funding for collaborative projects and removing competition between the GDNs it promotes collaboration and therefore potentially improves efficiencies, increases impact, and facilitates the exchange of learnings.

4.23 However, in the absence of financial incentives, the UIOLI allowance might: not target projects with the greatest benefit to consumers, risk the ineffective use of resources, and the full allowance might not be used. However, we have seen limited evidence from the first two years of the VCMA to indicate that this is happening.

4.24 Conversely, an ODI-F approach would set baseline expectations and then provide a financial incentive to invest beyond this. This approach could drive the delivery of higher quality projects through incentivisation. The ODI-F metrics could also focus specifically on areas which we consider benefit consumers in vulnerable situations the most. However, this could create unhelpful competition, reduce beneficial risk-taking and inhibit collaboration to the potential detriment of consumers. We also recognise that an ODI-F could require more resource-intense oversight, and that we might not be best placed to set what areas within the GDNs' role will have the most benefit to consumers ahead of the price control.

4.25 If we used an ODI-F approach, Ofgem would also need to work with stakeholders to develop an appropriate framework using the SROI model. If the rewards, penalty and deadbands are not set at the right level it could disincentivise ambition. Additionally, given many VCMA projects are delivered through partnership with external organisations (eg local and national charities), it might be difficult to identify where the GDNs should be rewarded rather than their project partners.

4.26 We recognise that both UIOLI and ODI-F approaches have their advantages and disadvantages, and both can drive ambition and deliver improvements for consumers in vulnerable situations. Following initial discussions with stakeholders, we consider that the benefits of consistency provided to GDNs and project partners by continuing the VCMA outweighs the possible advantages of an ODI-F for RIIO-GD3. We also recognise the difference in roles delivered by GDNs

and DNOs in relation to consumer vulnerability. Our current preferred approach is therefore to maintain funding for the VCMA through a UIOLI allowance.

4.27 We could also consider whether some initiatives (such as training staff in identifying vulnerabilities, service signposting, or some safeguarding services) could now be placed into baseline allowances. This would ensure that these initiatives are embedded in BAU and enable the VCMA to be spent on more innovative or bespoke projects. We are interested in stakeholder views on what, if any, vulnerability activities could be considered BAU and included in baseline allowances.

GDQ31. What are your views on our proposal to retain the use of the VCMA UIOLI allowance, on the alternative option to incentivise vulnerability through an ODI-F, and on which activities to support vulnerability could be funded through baseline allowances?

*Level of VCMA funding and ringfencing for collaboration*

4.28 Funding for the VCMA was set at £60m in RIIO-GD2.[51] In June 2023, recognising the acute pressures facing consumers, we decided to repurpose £111m of unspent funds from the Fuel Poor Network Extension Scheme (FPNES) to the VCMA,[52] taking effect on 31 July 2023.[53] As a result, the total funding available for the VCMA during RIIO-GD2 is £171m.

4.29 Based on the GDNs' 2023 RRPs, VCMA spending is outlined in Table 6.

Table 6: VCMA spend during RIIO-GD2

| **Year (year of RIIO-GD2)** | **Annual VCMA spend (actual or forecast)** |
|---|---|
| 2021/22 (GD2 Year 1) | £5.85m |
| 2022/23 (GD2 Year 2) | £13.00m |
| 2023/24 (GD2 Year 3) | £22.98m |
| 2024/25 (GD2 Year 4) | £56.48m |
| 2025/26 (GD2 Year 5) | £59.93m |
| Total VCMA Spend during GD2 | £158.25m |

[51] RIIO-2 FDs GD Annex, p13, paragraph 2.8: https://www.ofgem.gov.uk/publications/riio-2-final-determinations-transmission-and-gas-distribution-network-companies-and-electricity-system-operator
[52] Decision on modifications to the Price Control Financial Instruments and Licence conditions for Gas Transmission, Gas Distribution and Electricity Transmission: https://www.ofgem.gov.uk/publications/decision-modifications-price-control-financial-instruments-and-licence-conditions-gas-transmission-gas-distribution-and-electricity-transmission
[53] Decision to update RIIO-2 VCMA Governance Document: https://www.ofgem.gov.uk/publications/decision-update-riio-2-gas-network-vulnerability-and-carbon-monoxide-allowance-governance-document

4.30 Currently 25% of VCMA funding is ring-fenced for collaborative projects between two or more GDNs. In the latest RRP forecasting for RIIO-GD2, the GDNs plan to spend around 26% (£45m) of total available VCMA funding on collaborative initiatives. While the ringfenced allowance sets the minimum percentage of VCMA funding to be spent collaboratively, the actual and forecast spend suggests the GDNs do not currently plan to significantly exceed the minimum requirement.

*Options*

4.31 We consider that, if the VCMA were to be maintained in RIIO-GD3, it should be of a sufficient scale to deliver tangible outcomes and enable a degree of continuity and consistency for existing project partners. However, we decided to set the current funding levels as part of a one-off decision for us to repurpose unspent funds from the FPNES to help support consumers facing substantially and unexpectedly higher bills due to the cost of living crisis. Without this context, we do not see the current funding level as being proportionate to the impact of the projects in the longer-term.

4.32 We are proposing to return VCMA funding to a level aligned with the 2018/19 price base of £60m, as it was originally conceived. This would equate to roughly £74.2m using a 2023/24 price base. We think this level of funding could continue to enable the delivery of impactful projects at scale, while encouraging the GDNs to avoid duplication and prioritise their efforts on the most beneficial projects and where they are best placed to act. While resetting the funding level may impact the future of some ongoing VCMA projects, we consider that early signalling of these changes will allow time to secure alternative sources of funding.

4.33 We also note that collaborative VCMA projects between two or more GDNs have been widely welcomed by stakeholders. We consider collaboration enables large scale projects to be delivered efficiently, and knowledge and expertise to be applied effectively. Given the benefits of collaborative VCMA projects, we welcome views on whether the percentage of ringfenced VCMA funding should be increased beyond 25% and, if so, to what level.

GDQ32. At what level should VCMA funding be set to ensure its effectiveness and sustainability, and what percentage should be ringfenced for collaborative projects?

*VCMA funding allocation*

4.34 VCMA funding is currently allocated to networks based on the number of domestic gas customers they serve. We recognise that all the GDNs have consumers in

vulnerable situations in their network areas, but that vulnerability is not evenly distributed – both within and across the GDNs.

4.35 We welcome views on whether VCMA funding should continue to be allocated based on the number of domestic gas customers, or if there are alternative ways to allocate it to ensure it has the maximum impact for consumers in vulnerable situations.

GDQ33. How should VCMA funding be allocated to ensure maximum impact for consumers in vulnerable situations?

*Adding value to VCMA partnerships*

4.36 While funding is delivered through the GDNs, VCMA initiatives are a collaborative partnership between the GDNs and project delivery organisations. Some stakeholders have commented on the shared benefits of the co-creation of projects for GDNs, project partners and consumers in vulnerable situations.

4.37 However, we also understand that some other stakeholders would prefer VCMA funding to be provided directly to project delivery organisations. Providing funding directly to third parties is not possible under the price control. We therefore want to cultivate effective partnerships between GDNs and project partners to add value.

4.38 We recognise that these partnerships are beneficial for addressing vulnerability as project partners work directly with consumers in vulnerable situations and have expertise in this area. We therefore encourage these partnerships to be developed further in RIIO-GD3. We consider there could be opportunities to further integrate vulnerability insights from VCMA project partners and third parties into the GDNs' own VCMA project development and BAU activities. We therefore welcome views on how the VCMA can further incorporate learnings from project partners and third parties.

GDQ34. How can learnings from VCMA projects better inform the GDNs' organisational approaches to consumer vulnerability?

**Customer satisfaction survey ODI-F**

4.39 The customer satisfaction survey ODI-F in RIIO-GD2 is intended to maintain good customer service and provide financial rewards for the GDNs that deliver exceptional performance. Financial penalties aim to ensure that the GDNs' performance does not deteriorate. The ODI-F has a cap and collar of ±0.5% of base revenue (roughly £2m per annum).

4.40 The GDNs' performance measurement is based on scores from three equally weighted customer surveys for connections, planned work, and unplanned (emergency) work.[54]

4.41 In RIIO-GD2, ODI-F reward targets were set at a level which were intended to be stretching, to encourage exceptional performance. Common targets were applied to all GDNs, as consumers should be able to expect consistent levels of satisfaction irrespective of where they live.

4.42 Figure 4 shows the reward, deadband, penalty and target scores out of 10 for GDNs in RIIO-GD2.[55] This represents a combined target score of 8.75 across all surveys.

Figure 4:RIIO-GD2 customer satisfaction survey financial incentive design


4.43 There have been significant improvements in the GDNs' customer satisfaction scores since the beginning of RIIO-GD1. However, while the difference between the highest and lowest scoring regions has reduced, the range of scores suggests that customers are not yet able to expect the same level of satisfaction across all network areas. The highest, lowest, and GDN average performance scores for each of the three survey areas are shown in Figure 5, Figure 6 and Figure 7.

[54] In RIIO-GD2, each GDN requires 150 customer responses each month for planned work and 200 customer responses for unplanned work. For connections, 100% of customers are surveyed as the numbers affected by this type of work are much lower.

[55] In RIIO-GD2, we implemented a symmetrical deadband for each survey that is ±0.5 standard deviations from the target, except for unplanned works. We considered that scores above 9/10 to be exceptional so did not apply penalties for scores above nine on the unplanned work survey. Each incremental 0.1 performance deviation from the deadband is worth ±0.41%, ±0.26%, and ±0.09% of Base Revenue on connections, planned, and unplanned work surveys respectively. The maximum reward and penalty scores at 1.75 standard deviations around the average target for connections and planned work surveys. The GDNs are rewarded, or penalised, based on the actual score down to the 0.01 increment.

Figure 5: GDN Customer Satisfaction Survey Scores - Connections Work

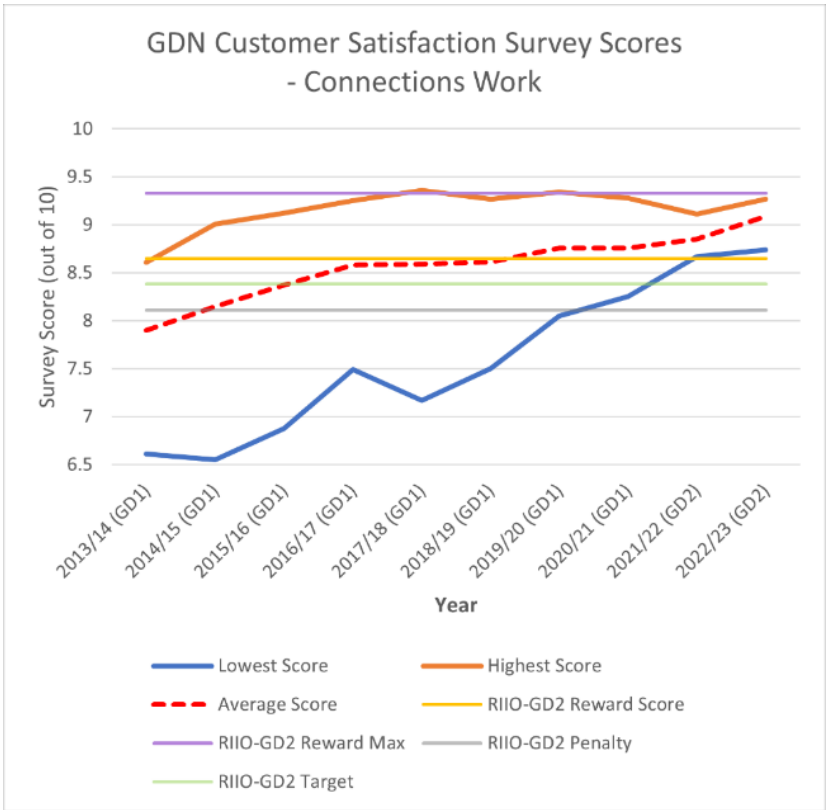



Figure 6: GDN Customer Satisfaction Survey Scores - Planned Work

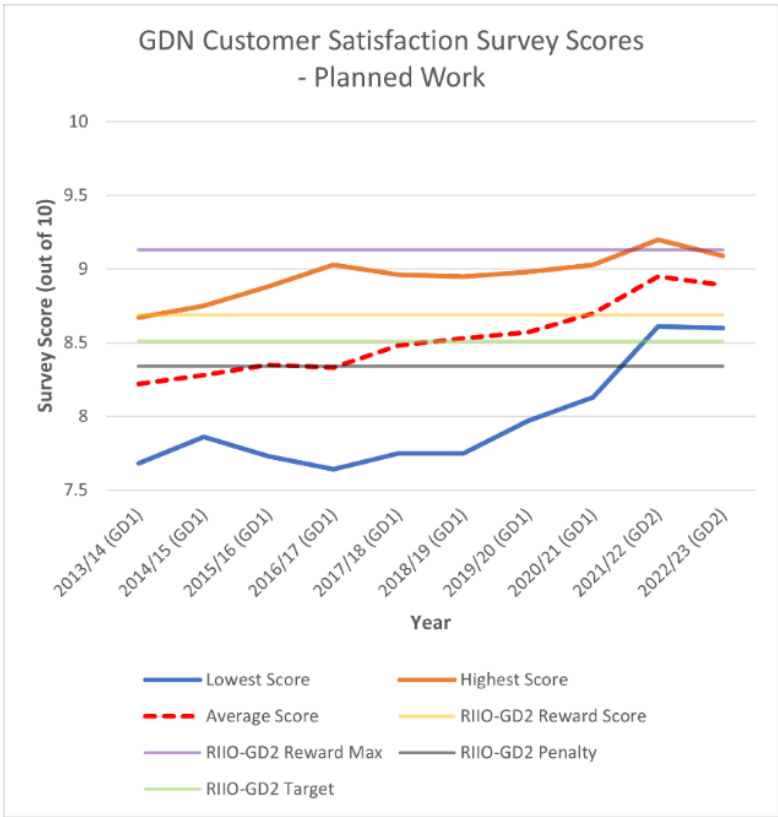
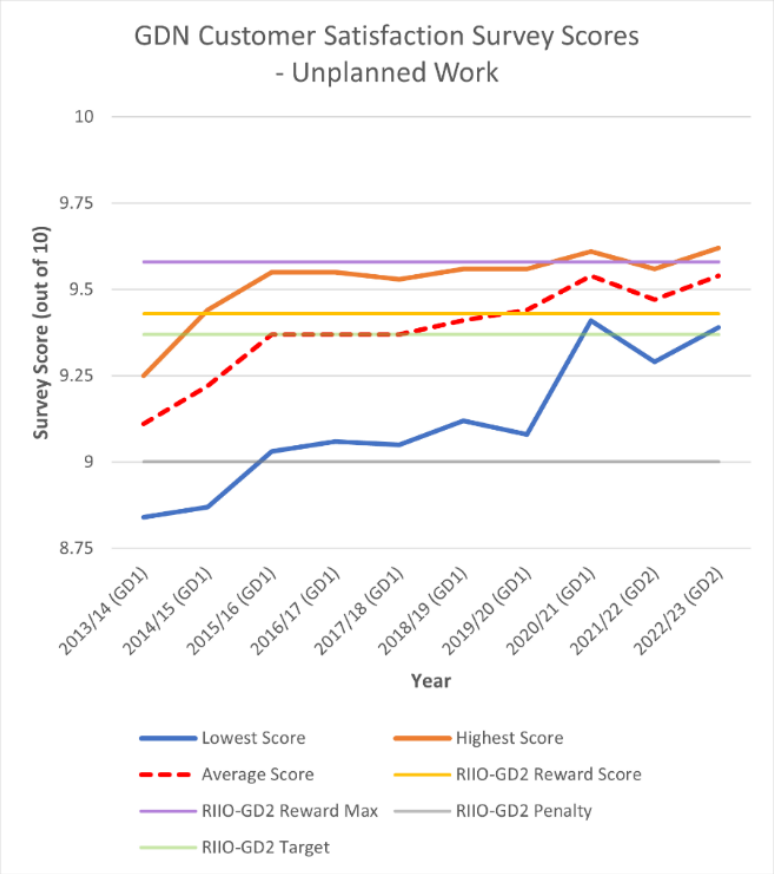


Figure 7: GDN Customer Satisfaction Survey Scores - Unplanned Work




4.44 In RIIO-GD2, the GDNs also report separate customer satisfaction scores for customers on the PSR. In the first two years of RIIO-GD2, these PSR-only scores have been broadly in line with the overall customer satisfaction scores, suggesting that PSR customers share similar satisfaction levels.

4.45 The financial rewards in RIIO-GD2 for customer satisfaction are intended to recognise exceptional customer service. However, in the first two years of RIIO-GD2 every network has received a reward in at least one of the three survey areas and five of the networks received rewards for all three survey areas in both years. As a result, the GDNs have been rewarded £7.55m and £9.53m between them in 2021/22 and 2022/23 respectively. Table 7 shows how many of the eight networks have received rewards in the first two years of RIIO-GD2.

Table 7: Number of networks (out of 8) achieving customer satisfaction survey scores greater than the reward scores in RIIO-GD2

| **Survey** | **2021/22** | **2022/23** |
|---|---|---|
| Connections Work | 6 | 7 |
| Planned Work | 8 | 8 |

| Survey | 2021/22 | 2022/23 |
|---|---|---|
| Unplanned Work | 6 | 6 |

4.46 No GDN has received a penalty during the first two years of RIIO-GD2.

4.47 We also note that GDNs with more than one network could earn net rewards through the incentive even if one or more of their networks received a penalty. While this has not yet occurred in RIIO-GD2, we consider that this could disincentivise focusing on customer satisfaction equally across all networks.

Options

4.48 We are considering several options to consolidate the improvements to customer satisfaction made in RIIO-GD1 and RIIO-GD2. Where the GDNs have already achieved exceptional standards of customer satisfaction, we do not consider it to be cost effective to incentivise them to strive for ever increasing survey scores. Therefore, we consider that the priorities for the Customer Satisfaction Survey ODI-F in RIIO-GD3 should be to maintain the high standards achieved during RIIO-GD2 and encourage convergence across the GDNs to ensure consumers receive excellent customer service irrespective of where they live.

4.49 We are considering maintaining the RIIO-GD2 incentive design with rewards and penalties available up to ±0.5% of base revenue, deadbands, and common static targets. If we keep the current incentive design, we are considering recalibrating the incentive targets for rewards, penalties and deadbands in RIIO-GD3. This could include raising the fixed targets to ensure they only reward truly exceptional performance, or amending the weighting given to each survey to encourage GDNs to focus on areas where scores are lower. We consider there might also be benefits in reconsidering asymmetric deadbands so rewards are harder to achieve. We think this approach could reflect our goal to maintain high standards.

4.50 We could also consider introducing asymmetry to the incentive value so the value of a penalty could be greater than the value of a reward under the ODI-F. This would reflect the lower likelihood of the GDNs receiving penalties when setting the ODI-F, recognising that the level of risk should appropriately correspond with the level of any reward. We would welcome views on what level of asymmetry could be appropriate to account for this risk differential.

4.51 An alternative incentive design could be to implement a penalty only ODI-F. This approach could reflect that we do not consider it to be cost effective to continue to incentivise the GDNs to further improve survey scores, and instead want to

ensure performance does not deteriorate. If we implement this option, we propose to set the penalty target based on a fixed target at the start of the price control using the scores achieved in RIIO-GD2.

4.52 Another alternative option is to set relative rewards and penalties, emulating the competitive drivers of an open market. This could mean only the best performing network(s) would be rewarded through the incentive. Likewise, the lowest performing network(s) could be subject to a penalty, even where they are delivering good customer service. However, this approach could reduce collaboration between the GDNs in sharing best practice and learning. We are therefore interested in understanding more about how this collaboration currently benefits consumers in response to this consultation. If we were to include relative rewards and penalties in RIIO-GD3, we would consider setting a fixed minimum standard as a backstop to ensure performance does not deteriorate below our minimum performance expectations. Any GDN scoring below the minimum standard would be subject to a financial penalty in addition to any penalty related to their ranking and would be ineligible for a reward. We could either set this penalty as a fixed value or have an incremental penalty up to a maximum value depending on their score.

4.53 We propose to maintain the reporting of customer satisfaction scores for customers on the PSR through the RRPs alongside all these options, as discussed in the section on the consumer vulnerability ODI-R later in this chapter.

GDQ35. What are your views on the options we've set out to incentivise customer satisfaction during RIIO-GD2?

**Complaints metric ODI-F**

4.54 Both RIIO-GD1 and RIIO-GD2 included a penalty-only complaints ODI-F to ensure that the GDNs maintain good performance in their handling of complaints. All GDNs should handle customer complaints quickly and effectively, and the RIIO-GD2 complaints metric incentivises this by measuring four weighted indicators. These are based on the percentages of:

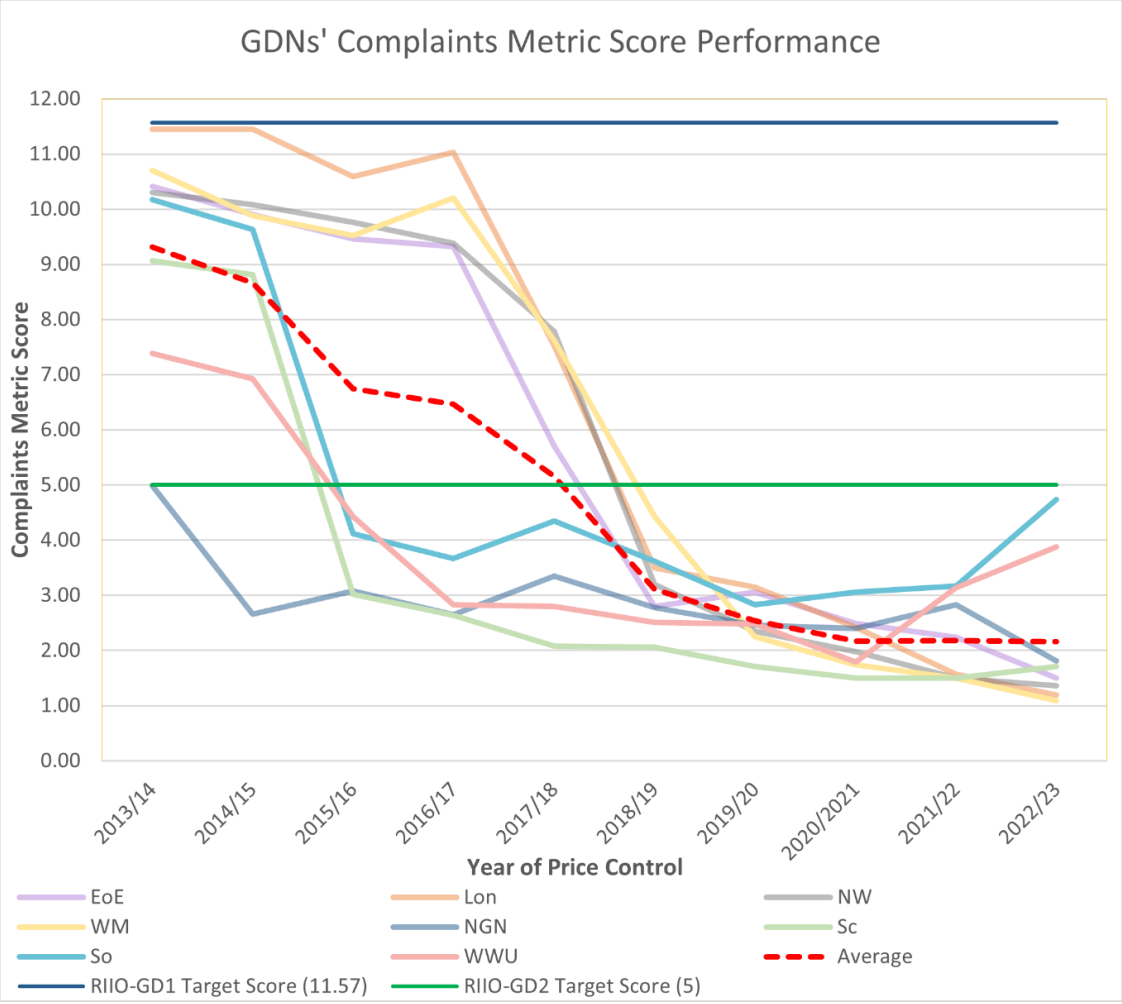
- complaints unresolved in one day (Day (D)+1) (10%);
- complaints unresolved in 31 days (D+31) (30%);
- repeat complaints (50%); and
- the number of Energy Ombudsman decisions that go against the GDN (as a percentage of total complaints) (10%).

4.55 Performance against each indicator is combined to derive an overall score. The lower the overall score, the better the GDN is at resolving complaints.

4.56 In RIIO-GD2, we set a common static target of five, with companies receiving a penalty for scores above this.[56] Penalties are applied linearly above the minimum performance level, with a maximum penalty of 0.5% of base revenue for scores of ten or above.

4.57 Figure 8 shows the GDNs' Complaint Metric Scores in RIIO-GD1 and RIIO-GD2 to date. The GDNs have made significant improvements against the reporting metrics but there continue to be differences in performance between the GDNs, with the gap between best and worst increasing since 2019/20.

Figure 8: GDNs' complaint metric score performance to date




[56] This was a tightening of the RIIO-GD1 target score of 11.57 to embed the improved performance average of GDNs in RIIO-GD1. RIIO-2 FDs GD Annex, paragraph 2.45: https://www.ofgem.gov.uk/publications/riio-2-final-determinations-transmission-and-gas-distribution-network-companies-and-electricity-system-operator

4.58 Overall, the GDNs' average complaints metric scores are well within the target score of five. The average score over both RIIO-GD1 and the first two years of RIIO-GD2 is 4.85, and no GDNs have been subject to complaints metric penalties to date.

Options

4.59 We propose to maintain the complaints metric in RIIO-GD3 with the use of a static target. Alternatively we could set a dynamic target, which is adjusted annually to reflect improvements in industry performance. A dynamic approach in RIIO-GD3 could ensure that targets remain stretching, but potentially adds unnecessary complexity. We consider that having a static target in RIIO-GD2 is sufficient to maintain recent improvements in the handling of complaints and we think this approach provides greater clarity and certainty for GDNs than a dynamic target.

4.60 We have identified two options for setting a static target:

- maintaining the current target of five; or
- set the target based on the average industry performance across RIIO-GD1 and RIIO-GD2, if this is lower than five.

4.61 The existing complaints metric score of five is already reasonably stretching for most GDNs and, as in RIIO-GD2, we consider there is limited capacity for continuous improvement. We also don't have strong evidence to support the need for substantial changes to enhance performance or further protect consumers.

4.62 However, we could set the target based on the average scores achieved in RIIO-GD1 and RIIO-GD2 to embed performance improvements. This approach is more ambitious and would reflect that most networks are already achieving scores significantly below the average complaints score.

4.63 We are also considering requiring the GDNs to report on the total volume of complaints received as a percentage against the number of customers served through their RRPs to allow for greater transparency of their performance. We could also require the GDNs to publish this information on their websites. However, we do not propose to attach any financial incentive to this additional reporting as we think it is important for customers to be able to make complaints and our focus is on incentivising the efficient handling of these.

4.64 We are also considering whether the unresolved complaint time indicators included in the current complaints metric remain the most appropriate timeframes to measure. The difference between a complaint being resolved within

D+1 and D+31 could be significant for consumers, but we do not currently have any data on the intervening period. It might be appropriate to change the timeframe of the D+31 indicator or include an additional indicator for the intervening period, eg for 7 days, 10 days, 14 days, or 21 days. To reach an evidence-based decision, we intend to work with the GDNs to understand more about their complaints handling timeframes.

4.65 We consider it would also be beneficial for the GDNs to separately report complaints metrics for customers on the PSR through their RRPs. This would be equivalent to the requirement to report customer satisfaction scores for customers on the PSR that we outlined earlier in this chapter for the customer satisfaction survey ODI-F.

4.66 Under the existing ODI-F high customer satisfaction could be rewarded even whilst it receives a penalty under the complaints ODI-F, to the extent that the GDN receives a net reward across the incentives. We are therefore also interested in views on how we can better understand the relationship between customer satisfaction and complaints volumes, and whether accounting for this could improve the customer service provided by GDNs.

GDQ36. What are you views on how the complaints metric can ensure customers' complaints are resolved quickly and effectively?

**Guaranteed Standards of Performance (GSOPs)**

4.67 The GSOPs are a set of common minimum performance standards for the GDNs in the areas of interruptions, connections, and customer service. If the GSOPs are not met, the GDN pays compensation to customers.

4.68 The GSOPs sit outside of the price control and are implemented through a Statutory Instrument.[57] We decided to review the GDNs' GSOPs as part of setting RIIO-GD2 as this had not happened for over 10 years. We decided to retain the 14 existing GSOPs, with some changes to the standards to address stakeholder concerns.[58] We also decided to reset the payment levels and associated caps, and link these to inflation (CPIH).

[57] RIIO-2 SSMC GD Annex, p34, paragraphs 3.111 and 3.112: https://www.ofgem.gov.uk/publications/riio-2-sector-specific-methodology-consultation
[58] A summary of the current GD GSOPs can be found in Appendix 2.

4.69 As part of RIIO-ED2, and as a result of the Review of Severe Weather Compensation Arrangements for Electricity Customers,[59] amended Reliability GSOPs took effect for DNOs on 1 September 2023, with amended Connection GSOPs coming into force on 1 October 2023.[60] These changes included a requirement for the DNOs to make additional payments every six hours after the first twelve hours of a power cut.

Options

4.70 We do not propose to amend the GSOPs as we amended these as part of setting RIIO-GD2. We want a consistently high quality of service across both GD and ED, and note that the DNOs' GSOPs were recently updated. However, because operational responses differ across the sectors we consider that deviation between the GD and ED GSOPs may be justified.

4.71 We could consider amending the GSOPs if we determine there is clear justification for why amendments would benefit consumers in response to this consultation, noting that GSOP amendments can be made outside of the price control process.

GDQ37. What changes, if any, are required to the GSOPs?

**Unplanned interruptions ODI-F**

4.72 In RIIO-GD2 we created a financial incentive to focus on average restoration times during unplanned interruptions and to ensure the GDNs' performance does not deteriorate in this area.

4.73 Unplanned interruptions occur when a fault on the network (eg a gas escape) causes the supply of gas to be cut off without warning to customers. All gas customers can experience delays in supply restoration following unplanned interruptions. However, we note the placement of riser pipes in blocks of flats (multiple occupancy buildings or MOBs) can complicate the detection of leaks and prolong the repair or replacement of pipes, which can make supply restoration particularly difficult during unplanned MOB interruptions.

4.74 During RIIO-GD1, the average restoration time for unplanned interruptions in Cadents' North London MOBs increased significantly, leading to some customers being very poorly served. We therefore decided to put in place separate MOB and

[59] Review of Severe Weather Compensation Arrangements for Electricity Customers: https://www.ofgem.gov.uk/publications/review-severe-weather-compensation-arrangements-electricity-customers

[60] Final Decision and Statutory Instrument on Guaranteed Standards of Performance (GSOPs) for Reliability and Connections: https://www.ofgem.gov.uk/publications/final-decision-and-statutory-instrument-guaranteed-standards-performance-gsops-reliability-and-connections

non-MOB ODI-F targets for Cadents' networks to get a clearer measure of Cadents' performance of restoring unplanned interruptions in MOBs. This approach also avoids distortion in the ODI-F performance resulting from changes in the relative numbers of MOB and non-MOB interruptions from year to year. As Cadents' networks have high numbers of MOBs relative to other GDNs, we considered it was appropriate for the MOB targets to be put in place across all its networks.

4.75 SGN, WWU and NGN have fewer MOBs on their networks than Cadent. When setting RIIO-GD2 there was also no evidence to suggest a deterioration in their performance in restoring unplanned MOB interruptions. As such, we decided to set a single ODI covering both MOBs and non-MOBs for these GDNs.[61] We considered that due to the lower number of MOB interruptions, the risk of the average duration of overall unplanned interruptions being distorted by MOB interruptions was lower for the other networks than for Cadent. We also noted that work would be needed on their systems and processes before MOB interruptions can be easily separated out in reporting for NGN, SGN and WWU.

4.76 While we implemented a different ODI-F for Cadent compared to the other GDNs, we noted that having the same ODI-F across all GDNs would provide greater clarity on performance across the sector. We therefore introduced new data and reporting tools for MOB interruptions in the RIIO-GD2 RRPs so we could consider whether it's appropriate to consolidate the approach for all GDNs in RIIO-GD3.

4.77 Table 8 outlines the RIIO-GD2 unplanned interruptions ODI-Fs, including the differences between the ODI-F for Cadent and the ODI-F for the other GDNs.

Table 8: RIIO-GD2 unplanned interruptions outputs

| **Output parameter** | **All networks (excluding Cadent)** | **Cadent** |
|---|---|---|
| Output type | Penalty only ODI-F with a collar of 0.5% of base revenue. | Two penalty only ODI-Fs with collar of 0.25% for each ODI. |
| Performance measure | The average duration of all unplanned interruptions during the year, excluding major incidents.[62] | Two separate measures for the average durations of unplanned interruptions during the year (excluding |

[61] RIIO-2 FDs GD Annex, Chapter 2, paragraph 2.83: https://www.ofgem.gov.uk/publications/riio-2-final-determinations-transmission-and-gas-distribution-network-companies-and-electricity-system-operator

[62] Major incident refers to the loss of supply to more than 250 customers following a single incident. We decided to exclude major incidents from the performance measure for all GDNs to avoid the risk of GDNs that are otherwise performing well being penalised for incidents that are particularly difficult to manage.

| Output parameter | All networks (excluding Cadent) | Cadent |
|---|---|---|
| | | major incidents): one based on MOB Risers and one for all other interruptions. |
| Performance level | Each network has a:<br>• Minimum Performance Level (MPL) in hours - the point at which a penalty will be incurred; and<br>• Excessive Deterioration Level (EDL) - the point at which the maximum penalty will be incurred. | Each network has two separate MPLs in hours, one for MOBs and one for all other interruptions. The same applies to EDL. |
| Incentive value | Penalty will increase linearly between MPL and EDL. | Penalty will increase linearly between the MPL and EDL. |
| Reporting method | Annual RRP reporting. | Annual RRP reporting. |
| Applied to | NGN, WWU and SGN. | All Cadents' networks. |

4.78 Table 9 shows how we set the RIIO-GD2 performance levels.

Table 9: RIIO-GD2 performance levels for the unplanned interruptions ODI-Fs

| | MPL | EDL |
|---|---|---|
| NGN, SGN and WWU | Two hours above the highest annual average duration recorded in the first six years of RIIO-GD1, rounded up to the next hour. | 7.5 hours beyond the MPL. |
| Cadent non-MOBs | Highest annual average duration recorded in the first six years of RIIO-GD1, rounded up to the next hour. | 5 hours beyond the MPL. |
| Cadent MOBs | Highest annual average duration recorded in the first six years of RIIO-GD1, rounded up to the next hour, subject to a maximum of 601 hours. | 200 hours beyond the MPL. |

4.79 All GDNs that breach the EDL are also required to submit an explanatory report so we can understand the cause of the deterioration and subsequent actions to improve its performance in relation to unplanned interruptions.

4.80 Figure 9 shows the number of unplanned MOB interruptions and Figure 10 shows the average annual duration of unplanned MOB interruptions reported in RIIO-GD2 to date.

Figure 9: Number of unplanned MOB interruptions in RIIO-GD2

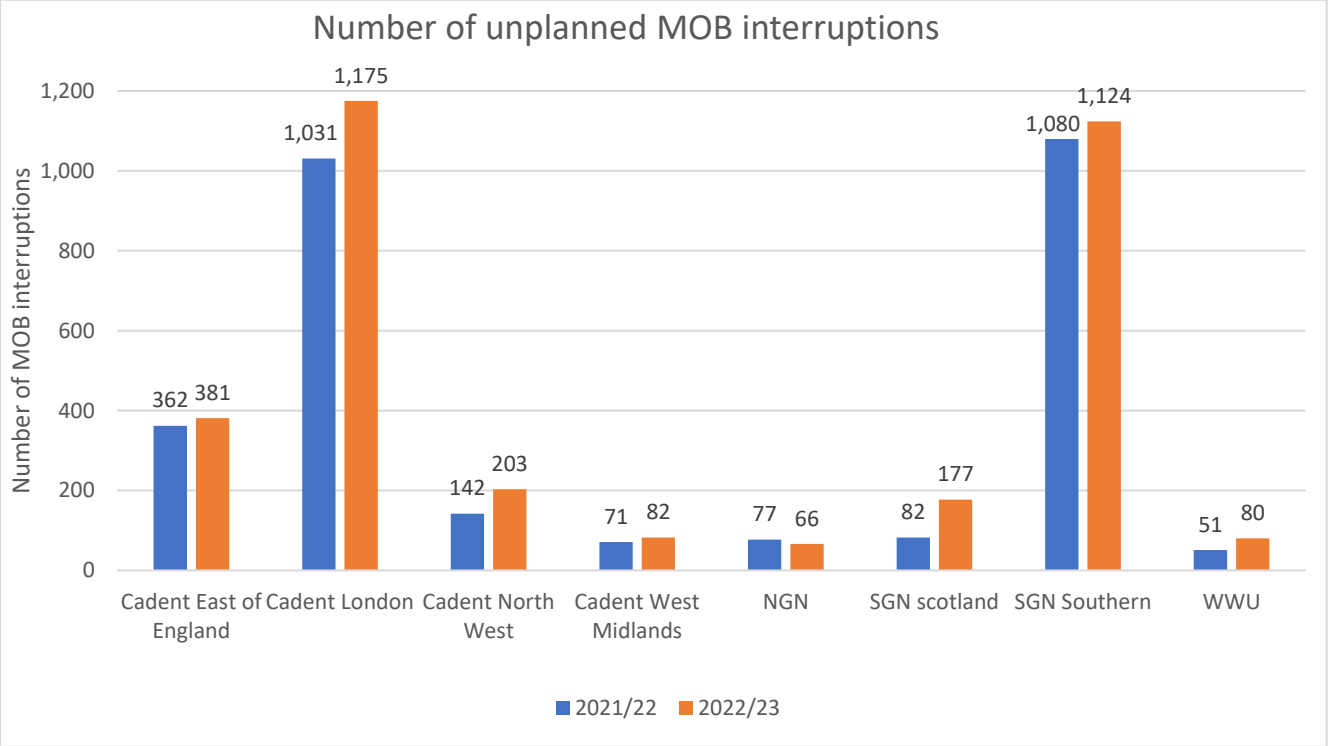
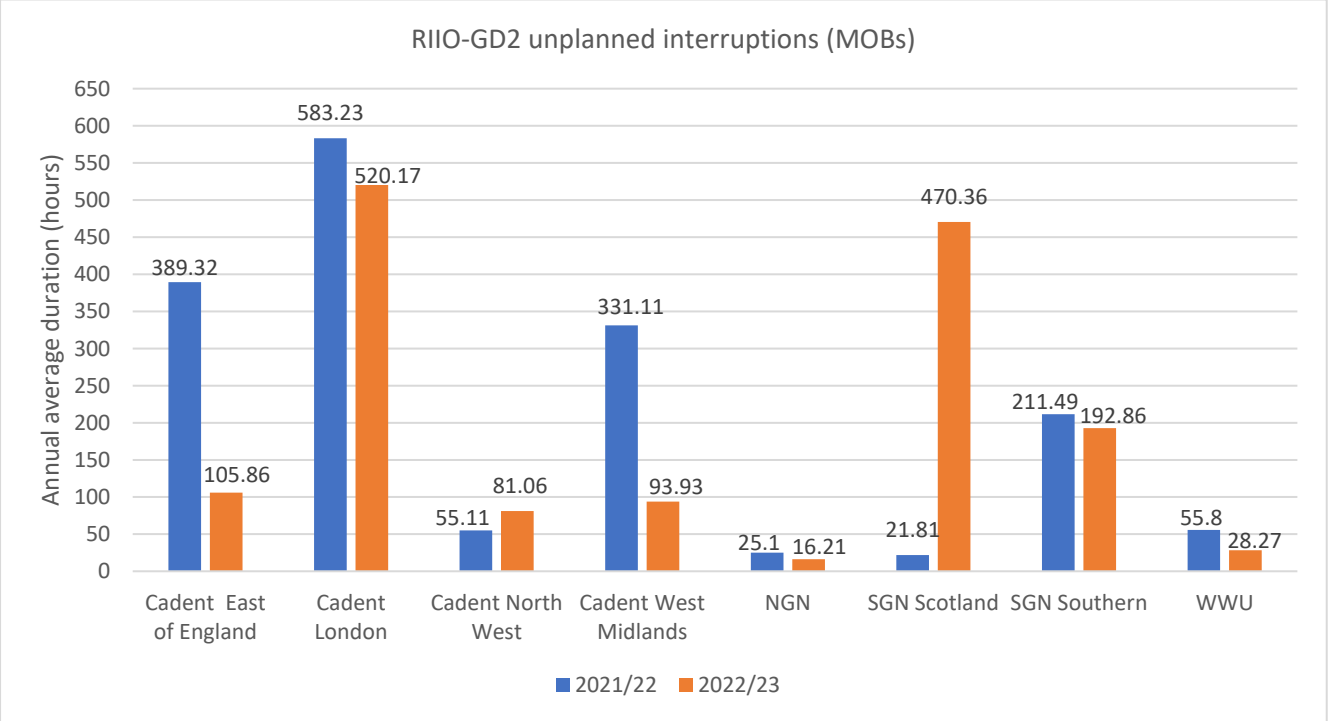



Figure 10: Average annual duration (in hours) of unplanned interruptions in MOBs in RIIO-GD2




4.81 Cadents' North London network has continued to report the longest average annual duration for unplanned MOB interruptions, but it has not exceeded its MPL.

4.82 In the second year of RIIO-GD2, SGN's Scotland network exceeded its annual excessive deterioration level and received a penalty of £1.47m. This was largely due to a single unplanned MOB interruption which could not be resolved quickly. SGN has therefore advocated for the separation of MOBs and non-MOB targets for RIIO-GD3 to better reflect the different challenges in resolving unplanned interruptions for MOBs and non-MOBs. We also note that SGN has reported a relatively high number of MOB interruptions in its Southern network, which is comparable to Cadent's North London network.

Options

4.83 We propose to retain the unplanned interruption ODI-F in RIIO-GD3. This will continue to provide the GDNs with a strong financial incentive to focus on average restoration times for unplanned interruptions and to ensure that performance in this area does not deteriorate. We propose to continue excluding major incidents from the performance measure to avoid penalising GDNs for incidents that are particularly difficult to manage. We also propose to keep the requirement for GDNs that breach the EDL to submit an explanatory report on the cause of the deterioration and its subsequent actions to improve performance.

Common or separate performance targets

4.84 We have identified three incentive design options for implementing single or separate MOB and non-MOB performance measures, as set out in Table 10.

Table 10: Options for common or separate unplanned interruptions performance targets

| **Option** | **Separate performance measures for MOBs and non-MOBs** | **Single performance measure for MOBs and non-MOBs** |
|---|---|---|
| Option 1 (RIIO-GD2 approach) | Cadent | NGN, SGN, WWU |
| Option 2 | All GDNs | N/A |
| Option 3 | Cadent, SGN | NGN, WWU |

4.85 Option 1 would retain the RIIO-GD2 unplanned interruption incentive design, with Cadent being the only GDN to have separate measures for MOBs and non-MOBs. This approach reflects that Cadent has the largest number of MOBs across its networks.

4.86 Option 2 would separate MOB and non-MOB measures for all GDNs. This approach would simplify the incentive by creating a consistent incentive design for all GDNs. However, it might not be proportionate for NGN and WWU which

have limited numbers of MOBs and a relatively low average duration of unplanned MOB interruptions in RIIO-GD2.

4.87 Option 3 would separate MOB and non-MOB performance measures for Cadent and SGN but keep a single measure for NGN and WWU. This is our current preferred approach. We think it might be appropriate to introduce separate performance measures for SGN as it has reported a longer average annual duration of MOB interruptions in RIIO-GD2 relative to NGN and WWU, and it has a relatively high number of MOB interruptions in its Southern network. We do not currently consider it proportionate to introduce separate performance measures for NGN and WWU as they are reporting a low number and duration of unplanned MOB interruptions to date in RIIO-GD2. Whilst we acknowledge that we are only analysing two years' worth of data so it is difficult to determine trends, we think this reflects that NGN and WWU have fewer MOBs on their networks. We therefore consider there may be comparatively less risk of customers in their networks experiencing unplanned interruptions in MOBs that are difficult to restore.

Performance level

4.88 Subject to which incentive design option we decide to implement, we will need to consider how to update the MPL and EDL for RIIO-GD3 to reflect the incentive design and take account of performance in RIIO-GD2. We welcome views on how these can be set. Potential options include:

- the GDNs suggest MPL and EDL performance levels through their Business Plans which have been tested with their customers and Independent Stakeholder Groups;
- we set performance levels based on the highest annual average duration from first four years of RIIO-GD2;
- we set performance levels based on the highest annual average duration from RIIO-GD1 and the first four years of RIIO-GD2 (although we note we do not have separate data for MOBs and non-MOBs in RIIO-GD1 for NGN, SGN nor WWU); or
- retain RIIO-GD2 performance levels where we are not changing the incentive design from the RIIO-GD2 approach.

GDQ38. What are your views on our proposed options for the unplanned interruption ODI-F?

### Collaborative streetworks ODI-F (Cadent North London & East of England and SGN Southern)

4.89 In RIIO-GD1, Cadent and SGN participated in a trial of collaborative streetworks projects in London as part of a scheme facilitated by the Greater London Authority (GLA).

4.90 Following on from this, we decided to create an output in RIIO-GD2 to incentivise SGN and Cadent to continue collaborative works with other utilities to deliver streetworks in their Greater London networks, as set out in Table 11. In RIIO-ED2 we created a similar collaborative streetworks incentive for UKPN's London network.

Table 11: Collaborative streetworks output

| **Output parameter** | **Financial output** |
|---|---|
| Incentive type | Reward only with a cap of 0.5% base revenue |
| Performance measure | Completed collaboration projects must be:<br>• 0.2km minimum length;<br>• level 2 collaboration at a minimum, as defined in the GLA collaboration manual;[63]<br>• fulfilled by a minimum of two collaborating utilities;<br>• projects should be a permanent solution, not a temporary fix; and<br>• completed by the end of RIIO-GD2. |
| Incentive value | £0.305m per collaborative project subject to each network's totex sharing rate. |
| Reporting method | Annual RRP reporting and knowledge sharing through the Smarter Networks Portal. |
| Applied to | Cadent East of England & North London and SGN Southern. |

4.91 The incentive is intended to reduce the frequency and duration of roadworks across Greater London and promote knowledge sharing across utilities.

4.92 The incentive value that we set for this output was produced from a social value method to reflect the adverse social impacts faced by residents living near

[63] The GLA developed a collaboration handbook which sets out a defines a scale for collaborative streetworks. The scale starts as BAU streetworks (stage 1), paced streetworks (stage 2), semi streetworks (stage 3), through to complete collaboration (stage 4). As companies increase further up the scale of collaboration, savings and public benefits increases. For further information please see The Collaboration Handbook, Chapter 2, page 20-21: https://www.londoncouncils.gov.uk/sites/default/files/Collaboration-Manual_0.pdf

repeated utility works, which could be mitigated through collaborative projects undertaken by companies.[64]

4.93 SGN and Cadent have completed a total of 28 collaborative streetworks in the first two years of RIIO-GD2. The GLA has conducted analysis of collaborative streetworks projects, which suggests that the ODI-F has been fundamental in driving social benefits. Based on its analysis, over 1,254 days of streetworks disruption have been avoided to date, saving £1.48m of construction costs and achieving a £6.71m increase in resident wellbeing.

Options

4.94 In our initial stakeholder engagement workshops, we have been told that a financial incentive for collaborative streetworks is still required in RIIO-GD3 to enable GDNs to continue learning how to embed collaboration into BAU. This view is supported by the GLA.

4.95 We therefore propose to retain a reward-only collaborative streetworks ODI-F in RIIO-GD3 for networks in Greater London. We propose to keep an incentive cap of 0.5% base revenue.

4.96 We have identified two options for setting the incentive rate:

- Option 1: retain a flat incentive rate. If we retained a flat incentive rate in RIIO-GD3, we would update the rate to take account of the social value delivered by projects under the RIIO-GD2 incentive. A flat incentive rate is simple to implement and provides clarity of the rewards available. The flat incentive rate might not always encourage GDNs to undertake the most beneficial projects, although this might be appropriate if the level of social value for a project is not clear upfront; and
- Option 2: set a dynamic incentive rate based on the social benefits of the individual projects. For example, this could be set using the number of days saved measured by the GLA's Monitoring and Evaluation (M&E) tool.[65] A dynamic incentive rate could incentivise the GDNs to undertake projects of higher social value which have greater benefits to consumers. However, implementing this approach would be more complex. It might also provide

[64] The social value method was based on a method proposed in SGN's RIIO-2 Business Plan. This was supported by a project that Cadent had undertaken in RIIO-GD1 and evidence of the complexities of projects and days saved through collaborative projects produced by the GLA.
[65] The GLA has developed the M&E tool to produce a consistent measure of the value and benefits that collaborative streetworks generate: https://www.london.gov.uk/programmes-strategies/better-infrastructure/infrastructure-coordination/streets-service/performance-and-results

less certainty of the reward available during the early stages of a project if the potential social value is unclear. If we implement this option, we will need to define a dynamic incentive rate based on the number of days saved. We will also need to consider if we set this based on each individual day or based on a range of days, eg 10-20 days saved.

4.97 For both options, we would need to consider how to set the incentive rate to avoid consumers paying twice where there are similar incentives in place for other utilities.

4.98 We have also considered whether to expand the incentive to cover other parts of GB due to the social benefits that collaborative streetworks can generate. However, initial feedback from stakeholders indicates that the greatest value is derived where there is a central co-ordinator to oversee the collaborative projects. In London this role is played by the GLA. We do not currently have a good understanding, and would welcome views on, whether this is a priority in other parts of GB and whether stakeholders would be willing, able and appropriate to take on this responsibility outside of London. We are therefore not currently proposing to expand the ODI-F outside of London.

GDQ39. What are your views on the options we have set out for the Collaborative Streetworks ODI-F?

**New large load connections re-opener**

4.99 In RIIO-GD1 a re-opener was created to allow the GDNs to recover costs incurred from network reinforcements required by new large industrial loads, eg power stations and distilleries.

4.100 The re-opener was rolled over from RIIO-GD1 to RIIO-GD2 as the GDNs evidenced that there were uncertain costs associated with the volume of additional gas-fired electricity generation that might seek to connect to their networks during RIIO-GD2.

4.101 Some GDNs have indicated that they may continue to face uncertain costs in this area in RIIO-GD3. If this is the case, we could roll over the RIIO-GD2 re-opener. However, we do not currently have a clear understanding of the uncertainty in this area and welcome evidence to justify whether this re-opener is still required.

GDQ40. What are your views on whether the new, large load connections re-opener is still needed in RIIO-GD3?

### Specified streetworks costs re-opener

4.102 In RIIO-GD1 the specified streetworks cost re-opener was established to enable GDNs to recover efficient costs associated with new permit and lane rental schemes. The re-opener was extended to RIIO-GD2 to enable the GDNs to recover the additional costs for work related to new requirements introduced by public bodies.

4.103 We do not currently have a clear understanding of the uncertainty in this area and welcome evidence to justify whether this re-opener is still required.

GDQ41. What are your views on whether the specified streetworks costs re-opener is still needed in RIIO-GD3?

## RIIO-GD2 outputs and uncertainty mechanisms proposed for removal

### Fuel Poor Network Extension Scheme (FPNES) volume driver and ODI-R

4.104 The FPNES was created to help off-grid, fuel poor households connect to the gas network by providing funding towards the cost of the connection. To qualify for a connection under the FPNES, the household must meet eligibility criteria set by us.[66]

4.105 We decided to retain the FPNES in RIIO-GD2 due to the immediate benefits the scheme could provide to fuel poor households. The FPNES mechanism is a capped volume driver with an ODI-R.[67] As part of the ODI-R, the GDNs report annually through the RRPs on the number and cost of FPNES connections by type. We also developed a re-opener to retain the flexibility to stop the scheme, if appropriate, in response to developments in government heat policy.

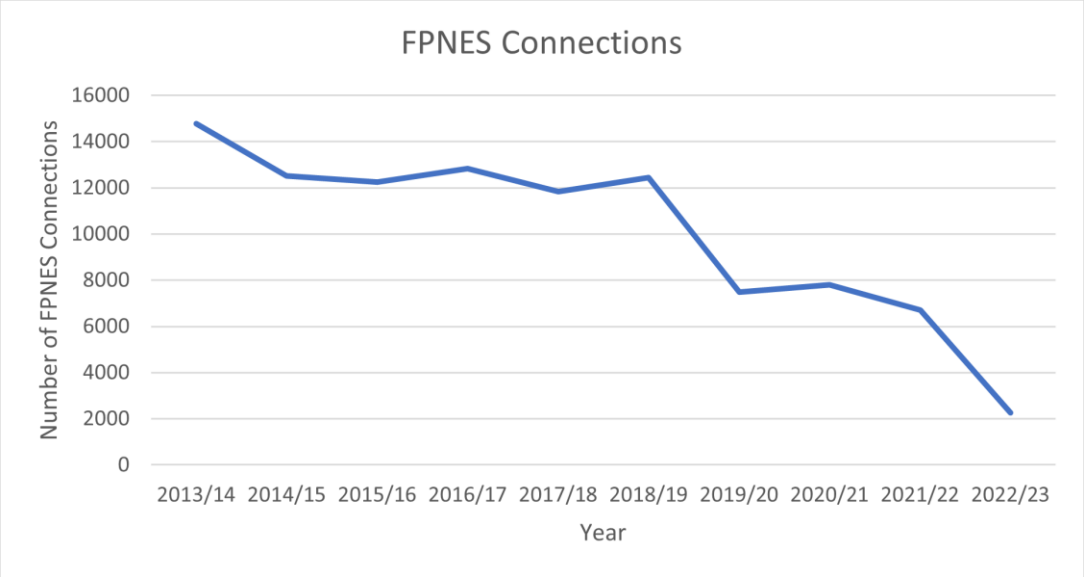
4.106 Since setting the RIIO-GD2 FPNES connection targets, the number of FPNES connections that the GDNs deliver has reduced significantly, as shown in Figure 11 below. This is for several reasons; a shift in policy towards renewable energy and reducing carbon emissions, the recent rise in energy prices, and operational

[66] The FPNES eligibility criteria reflect commonly-used proxies of fuel poverty, or criteria employed by other related government (national, devolved, and local) measures and schemes. There is also a requirement for the GDNs, in collaboration with stakeholders, to assess whether gas is the best solution for the household, including considering if other low carbon heating solutions may be more appropriate. The full eligibility criteria and other requirements are set out in the Fuel Poor Network Extension Scheme (FPNES) Governance Document: https://www.ofgem.gov.uk/publications/fuel-poor-network-extension-scheme-fpnes-governance-document-0

[67] Company specific FPNES targets and caps on the number of connections set out in the company annexes of our RIIO-2 FDs: https://www.ofgem.gov.uk/publications/riio-2-final-determinations-transmission-and-gas-distribution-network-companies-and-electricity-system-operator

issues. In particular, devolved government and local authority funding for First Time Central Heating (FTCH) systems, which is needed to enable FPNES connections, has reduced due to increased focus on decarbonisation.

Figure 11: Total number of FPNES connections each year since 2013/14




4.107 As it became clear that the remaining FPNES allowances in RIIO-GD2 would not be spent, we decided to repurpose £111m of unspent FPNES funds to support consumers in vulnerable situations through the VCMA on 31 July 2023.[68] While the FPNES remains open to support off-grid, fuel poor households in RIIO-GD2, it is now much smaller than originally expected.

Options

4.108 We propose to remove the FPNES in RIIO-GD3. The limited availability of funding for FTCH systems has restricted the use of FPNES in RIIO-GD2, with the number of connections significantly decreasing in the period since 2020. We are not aware of plans for new FTCH funding to be made available. Unless there are new sources of FTCH funding, we would not expect the number of FPNES connections to increase during the remainder of RIIO-GD2 and beyond. We do not consider that the costs of administering the FPNES would justify the consumer benefit from continuing it in RIIO-GD3.

4.109 Some stakeholders have suggested that the FPNES should be expanded to provide funding for FTCH systems where no other funding is available. We

[68] Decision to update the RIIO-2 Gas Network VCMA Governance Document: https://www.ofgem.gov.uk/publications/decision-update-riio-2-gas-network-vulnerability-and-carbon-monoxide-allowance-governance-document

consider this to be beyond the purpose and scope of the FPNES, and beyond the GDNs' existing areas of competence, activity, and consumer interaction. Therefore, we do not consider this approach to be an appropriate solution to issues relating to FTCH funding.

4.110 Other stakeholders have suggested that the FPNES could be subsumed into the VCMA. We are unconvinced that this would reduce the administrative costs associated with delivering the FPNES. Furthermore, this would not address the challenges faced in securing funding for FTCH.

4.111 We recognise that there might continue to be situations where natural gas is the appropriate energy solution for a household in the short- to medium-term. However, we are also conscious that the future of gas is subject to future national and devolved government policy decisions, including the expected 2026 decision on hydrogen heating. We consider there to be a risk in connecting additional fuel poor households to the gas network and facilitating the installation of natural gas central heating systems while such uncertainty remains.

GDQ42. What are your views on our proposal to remove the Fuel Poor Network Extension Scheme in RIIO-GD3?

**Consumer vulnerability ODI-R**

4.112 In RIIO-GD2, the consumer vulnerability ODI-R requires the GDNs to host an annual showcase event and mandates six common reporting metrics to highlight GDN performance relating to consumers in vulnerable situations and CO awareness.

ODI-R reporting metrics

4.113 The six metrics, reported through the annual RRPs, are:

- PSR
    i. Average Customer Satisfaction for PSR customers;
- FPNES
    i. Number of FPNES Connections;
    ii. Percentage of the company-specific FPNES target delivered;
    iii. Percentage of FPNES connections delivered compared to the volume driver cap;
- CO awareness
    i. Average CO awareness score via a common survey;

ii. Number of consumers reached through CO awareness sessions.

4.114 There are also separate requirements to report the outcomes of activities funded through the VCMA, which do not form part of this ODI-R.

4.115 To facilitate effective monitoring and accountability, it is important that the GDNs continue to report on key vulnerability metrics. However, we do not consider that all the metrics remain relevant beyond RIIO-GD2. Therefore, we propose to remove the ODI-R as a separate metric and remove or combine the existing metrics with other reporting metrics, as set out in Table 12.

Table 12: Proposals for consumer vulnerability reporting RIIO-GD2

| **Existing consumer vulnerability ODI-R theme** | **Proposals for RIIO-GD3** |
|---|---|
| PSR | Report PSR customer satisfaction metric as part of the customer satisfaction survey ODI-F reporting through the RRPs, as proposed earlier in this chapter. |
| FPNES | Remove the reporting metric should FPNES be removed from RIIO-GD3. |
| CO Awareness | Report through the GDNs' VCMA Annual Reports. |

Vulnerability Event

4.116 The annual vulnerability event which forms part of the ODI-R has now been incorporated into the VCMA Governance Document.[69] The GDNs are required to collectively organise an annual showcase event for interested stakeholders. This event highlights the key outcomes that have been achieved since the previous event and gives the GDNs and stakeholders an opportunity to present initiatives and ideas, including on potential future projects to support consumers in vulnerable situations.

4.117 We propose to remove the separate ODI-R for the vulnerability showcase event but retain the requirement as part of the VCMA.

4.118 We also want to understand if there are more effective ways to facilitate further collaborative sharing of ideas, opportunities, learning, and best practice through the annual event. We recognise that this event can be most effective when key

[69] Decision to update the RIIO-2 VCMA Governance Document: https://www.ofgem.gov.uk/publications/decision-update-riio-2-gas-network-vulnerability-and-carbon-monoxide-allowance-governance-document

stakeholders are actively engaged and we encourage responses on how their expertise can be harnessed. This could include platforming stakeholder-led presentations, workshops and panel discussions during the annual event, and encouraging follow-up engagement. We welcome input on whether additional stakeholders, including from other sectors, should be invited to attend or present given the intersecting and cross-sectoral factors of vulnerability.

4.119 We consider that the annual event should be an opportunity to celebrate the impact and successes of VCMA projects. However, we also consider the event important for the purposes of monitoring, evaluation, accountability, and learning. We want the event to enable projects and vulnerability strategies to be constructively critiqued and challenged by stakeholders. We welcome views on how this can best be facilitated at the annual event.

GDQ43. What are your views on our proposal to remove the consumer vulnerability ODI-R in RIIO-GD3?
GDQ44. How can the annual VCMA event be improved?

**Domestic load connections allowance**

4.120 The Domestic Load Connection Allowance (DLCA) is the contribution GDNs provide towards the cost of installing gas connections from the main to a domestic premise, as required under the conditions of the Gas Transporter licence.[70] The DLCA socialises the cost of laying the first 10m of pipe in land that is dedicated for public use. To benefit from the DLCA, connections must be for properties that are wholly or mainly used for domestic purposes and are located within 23m of a relevant main. The DLCA does not apply where customers receive the FPNES.

4.121 Use of the DLCA is organically declining as the number of new gas connections is decreasing and fewer premises are eligible. This downward trend is expected to continue. Further, DESNZ has referred to the DLCA as a subsidy for extensions to the gas network and said that it distorts competition with lower carbon technologies.[71] Therefore, in line with the government's ambitions to phase out fossil fuel subsidies and achieve its net zero targets, we propose to remove the DLCA.

[70] Standard Condition 4B: 'Connection Charging Methodology', Gas Transporter licence, paragraph 1.
[71] Energy White Paper: Powering our Net Zero Future, page 84: https://assets.publishing.service.gov.uk/media/5fdc61e2d3bf7f3a3bdc8cbf/201216_BEIS_EWP_Command_Paper_Accessible.pdf

GDQ45. What are your views on our proposal to remove the DLCA, and do you see any challenges that might arise if it were to be removed?

### Domestic connections volume driver

4.122 In RIIO-GD2, we introduced the domestic connections volume driver to provide the GDNs with funding for the non-recoverable portion of connection costs, including costs relating to the DLCA. The volume driver covers new and existing domestic service connections and operates alongside an opening baseline totex connections allowance.[72] This mechanism enables adjustment of cost allowances to reflect differences between outturn workloads and baseline allowances during RIIO-GD2. It was designed to protect customers and the GDNs from inaccurate volume assumptions made when setting the RIIO-GD2 price control. We determined that due to varying GDN methodologies for calculating the net cost of domestic connections, unit costs would be calculated using networks' own costs and volumes.[73]

4.123 Consistent with our proposal to remove the DLCA, we also propose to remove the domestic connections volume driver. While we expect there will continue to be some new domestic connections in RIIO-GD3, we anticipate that without the DLCA the non-recoverable costs associated with these connections are likely to be of a low materiality. We therefore do not expect it be proportionate to use a volume driver, particularly with the low number of anticipated connections, in RIIO-GD3. We consider returning to the RIIO-GD1 approach to provide funding through baseline allowances will be more efficient. However, if the DLCA is continued in RIIO-GD3, then we would be inclined to continue this mechanism as this would increase the materiality of the non-recoverable costs relating to domestic connections.

GDQ46. What are your views on our proposal to remove the domestic connections volume driver? If you think it should be retained, what changes do you recommend for its design?

### Smart metering rollout costs re-opener

4.124 The smart-meter rollout costs re-opener was established in RIIO-GD1 to provide the GDNs with support to recover efficient costs incurred from the smart meter rollout programme. In their RIIO-GD2 Business Plans, the GDNs provided

[72] RIIO-GD2 FDs, GD Annex, pages 151-152: https://www.ofgem.gov.uk/publications/riio-2-final-determinations-transmission-and-gas-distribution-network-companies-and-electricity-system-operator
[73] RIIO-GD2 FDs, GD Annex, paragraph 4.42: https://www.ofgem.gov.uk/publications/riio-2-final-determinations-transmission-and-gas-distribution-network-companies-and-electricity-system-operator

evidence of uncertainties that they might face throughout the price control, so we extended this re-opener for RIIO-GD2.

4.125 The current framework for the smart-meter rollout is set to end on 31 December 2025 and the UK government will be responsible for any further policies in this area. We therefore propose to remove the smart metering rollout costs re-opener.

GDQ47. What are your views on our proposal to remove the smart metering rollout costs re-opener in RIIO-GD3?

**Personalising welfare facilities PCD (Cadent only)**

4.126 In Cadent's RIIO-GD2 Business Plan, it proposed a PCD to provide additional support beyond the requirements of GSOP3 to consumers in vulnerable situations.[74] This included the provision support such as food vouchers, electric kettles, and rechargeable showers. We included this PCD in our RIIO-2 FDs and set out that work in this area is expected to be completed by the end of RIIO-GD2.[75]

4.127 We have set out two options for how work associated with personalising welfare could be funded if Cadent (or other GDNs) want to deliver further work in this area in RIIO-GD3.

- Our preferred option is to ensure that activities in this area are in scope of the VCMA, discussed earlier in this chapter. We consider this approach to be appropriate as the work is aimed at supporting consumers in vulnerable situations. As the VCMA is a UIOLI allowance, this approach would ensure that any unspent allowances are returned to consumers, thus safeguarding consumers interests.
- The second option is for work in this area to be included and justified within GDNs' Business Plans to potentially form part of their baseline allowances. This approach would ensure that the GDNs can provide personalised welfare support to consumers as BAU during RIIO-GD3. However, without it being a PCD it may provide less focus on the delivery of the scheme.

[74] GSOP3 ensures the provision of facilities during a supply interruption, eg alternative heating, cooking facilities, access to hot water and a hot meal to PSR customers. See Appendix 2 for a summary of the GD GSOPs.
[75] RIIO-2 FDs Cadent annex, Chapter 2, Table 12, page 13: https://www.ofgem.gov.uk/publications/riio-2-final-determinations-transmission-and-gas-distribution-network-companies-and-electricity-system-operator

4.128 We welcome the views of stakeholders in the consultation responses in relation to the options that we have set out.

GDQ48. Should personalising welfare services continue to be supported under RIIO-3 and, if so, how should it be funded?

**High-rise building plans ODI-R (Cadent only)**

4.129 High-rise building plans were established as a bespoke ODI-R for Cadent in RIIO-GD2 to increase the production of management plans for each high-rise residential building that it supplies.

4.130 Cadent has successfully surpassed its year 2 targets across all its networks. We therefore propose to remove Cadent's bespoke high-rise building plans ODI-R as we are satisfied that the creation of high-rise building plans is now part of its BAU processes.

GDQ49. What are your views on our proposal to remove Cadents' bespoke High-rise building plans ODI-R from RIIO-GD3?

# 5. Cost of service

## Introduction

5.1 As in RIIO-GD2, one of our main objectives for RIIO-GD3 is to assess the efficient level of costs that will enable GDNs to carry out their activities and deliver an appropriate level of service for consumers.

5.2 With respect to cost assessment, in our Framework Decision we decided to refine the RIIO-2 model rather than move to a radically different approach. This is especially true of gas distribution where historically, because expenditure has largely comprised routine opex, repex and smaller-scale capex activities, the sector is well suited to benchmarking, and in particular regression modelling. In previous price controls this has been the largest component of the GD cost assessment toolkit. Despite the future challenge of the uncertainty around the speed and scale of the decline in gas usage, we consider RIIO-GD2 the correct starting point to develop the cost assessment approach for RIIO-GD3.

5.3 This chapter summarises how we assessed costs in RIIO-GD2 and outlines some of our early thinking on the development of the RIIO-GD3 cost assessment approach. We invite feedback from stakeholders on our initial thinking.

5.4 Since the publication of the Framework Decision, we have conducted two cost assessment working groups (CAWGs) to discuss challenges, risks, and opportunities for cost assessment in RIIO-GD3. We will continue to hold these meetings in the coming months to facilitate dialogue and encourage transparency, and to help inform the development of our cost assessment approach ahead of the GDNs' Business Plan submissions in 2024.

## Overview of the RIIO-GD2 cost assessment approach

5.5 In RIIO-GD2, we used a variety of methods to assess the GDNs' efficient costs and set baseline allowances. We used regression and non-regression analysis (which allowed for benchmarking), as well as technical assessment where benchmarking was not suitable and costs were company or project specific.

5.6 We used a single top-down totex regression model to assess 86% of forecast costs. The model used ordinary least squares estimation with Cobb-Douglas functional form and a composite scale variable (CSV) as the main cost driver. The time period of data used covered RIIO-GD1 and RIIO-GD2. To account for unobserved time effects, the model specification also included two linear time trends - one for historical data and another one for the forecast period.

5.7 The non-regression assessment made up around 8% of total forecast costs. It covered a range of individual cost activities including Multiple Occupancy Buildings (MOBs), repex diversions, growth governors, streetworks, smart metering, land remediation and Statutory Independent Undertakings (SIU) opex.

5.8 A catch-up efficiency challenge,[76] based on GDNs' relative performance over the RIIO-GD2 period, was applied to the results from the regression and non-regression modelling. The efficiency benchmark was set at the 75th percentile of the efficiency scores in the first year of RIIO-GD2, followed by a glide path to the 85th percentile for the last two years of RIIO-GD2.

5.9 Technically assessed costs (6% of total forecast costs) included large capex and repex projects, and the majority of bespoke outputs and specialist areas, such as gasholder demolition and physical security expenditure. These were subject to technical and engineering reviews, but we did not apply a catch-up efficiency challenge to these costs.

## Options for evolving our cost assessment approach for RIIO-GD3

5.10 In this section, we set out some initial thinking and preliminary proposals on areas of the RIIO-GD2 approach that we may evolve for RIIO-GD3. This includes:

- The approach we take to modelling costs, ie the levels at which we choose to assess costs (totex, capex, repex, opex, activity level), and the modelling techniques in our assessment toolkit. We discuss approaches for totex, middle-up and disaggregated modelling;
- The application of pre-modelling adjustments and normalisations to the data that enables a robust comparative analysis. This includes regional and company specific factors, workload adjustments and cost exclusions; and
- Finally, we touch on other considerations including our approach to separate assessments, pass-through cost items and the approach to the disaggregation of final allowances.

5.11 For each aspect listed above, we review the RIIO-GD2 approach, before highlighting relevant stakeholder engagement and feedback from recent CAWGs. We also draw comparisons with the approaches taken in the RIIO-GD1 and RIIO-ED2 price controls where appropriate.

[76] In order to protect consumers by setting efficient cost allowances, the catch-up efficiency challenge is a mechanism of our cost assessment toolkit that sets a challenge to relatively low performing companies to catch up with the high performing companies in the sector.

5.12 It should be noted that cross-sector aspects such as Real Price Effects (RPEs) and ongoing efficiency are discussed in the Overview Document.

### Approach to cost modelling

Introduction

5.13 Econometric analysis or benchmarking will continue to represent our primary cost assessment tool for RIIO-GD3. To develop our approach, we intend to test models at different levels of aggregation and different cost drivers. This provides useful information to assess GDNs comparative efficiency.

5.14 Totex or top-down benchmarking has the advantage of being a simple comparative analysis across GDNs. It is largely immune to trade-offs between cost activities and reporting differences and therefore is less susceptible to the statistical issues of a dataset with a relatively low number of samples. Because of this, it typically provides a more statistically robust comparative analysis across the GDNs when compared with the other forms of benchmarking. We also believe that a totex approach encourages GDNs to deploy the lowest cost solution to a problem over time. A criticism of totex benchmarking is that the model can lead to a less intuitive relationship between costs and cost drivers. It is also more difficult to determine a narrative as to why companies may be deemed inefficient, when compared to more disaggregated models.

5.15 As an alternative, middle-up modelling benchmarks broad blocks of expenditure. It is a more disaggregated approach when compared to totex benchmarking. Depending on the aggregation of costs and the cost drivers selected, this approach can be useful in providing a different perspective for cost assessment and insights on the causes of inefficiency. Criticism of this approach lies in not addressing any trade-offs between capex and opex or between other cost groupings, meaning results may not reflect true differences in relative efficiency.

5.16 Granular disaggregated or bottom-up benchmarking is where individual cost activities are assessed, potentially using different techniques. This has the advantage of allowing a better specification of the relationship between cost and cost drivers and can be useful for cost areas with specific outputs associated with them. Criticisms of this approach are around the risks of cherry picking by creating a theoretically efficient company that might not be realistic. Results can also be impacted by different business practices or workload mix between opex and capex, so they are not always a reflection of differences in relative efficiency.

5.17 At the end of this section we compare, at a high level, two potential approaches for RIIO-GD3: an approach which relies mainly on a single totex model (as at RIIO-GD2); or a hybrid approach that utilises middle-up and/or disaggregated benchmarking to a greater degree alongside totex modelling.

Totex Modelling

5.18 Totex or top-down benchmarking has been at the core of our cost assessment approach for RIIO-GD1 and RIIO-GD2. It has also been used extensively in the price controls for the electricity distribution sector.

5.19 As described in paragraph 5.6, our totex benchmarking for RIIO-GD2 involved a single regression model, which modelled 86% of GDNs' submitted costs using a single composite scale variable (totex CSV) and historical and forecast time trends. To avoid distortions in submitted totex, the capex element was smoothed using a seven-year rolling average.

5.20 The totex CSV was a weighted average of multiple cost drivers capturing variations in network scale and workload between GDNs. A CSV allows us to include multiple variables in the model despite a limited sample size. Components of the CSV (see Table 13) included customer numbers, external condition reports, Modern Equivalent Asset Value (MEAV), as well as a synthetic cost driver for repex, mains reinforcement and connections. The synthetic drivers for mains reinforcement and connections were smoothed using a seven-year rolling average to produce a smoothed totex CSV.

Table 13: RIIO-GD2 regression model totex CSV components.

| Cost activities | Totex CSV component | Weight |
|---|---|---|
| Emergency | Emergency CSV[1] | 0.05 |
| Maintenance | Maintenance MEAV | 0.08 |
| Repairs | Total external condition report | 0.05 |
| Repex | Repex synthetic cost | 0.38 |
| Mains reinforcement | Mains reinforcement synthetic cost | 0.01 |
| Connections | Connections synthetic cost | 0.06 |
| Work Management, Business Support, Other Direct Activities, Training and Apprentices, Other Capex | MEAV | 0.37 |

[1] Composite scale variable including customer numbers (0.80) and total external condition reports (0.20).

5.21 Other cost drivers were tested for the totex regression in RIIO-GD2. This included model specifications with a single cost driver as well as an alternative top-down CSV which consisted of a 50% weight on network length and a 25% weight on

both customer numbers and throughput. Whilst these produced a reasonable model fit, the overall model performance was lower than with the totex CSV, and so we decided against their use for RIIO-GD2. However, we believe it will be a valuable exercise to revisit and test different cost drivers in RIIO-GD3, and we plan to work with the GDNs to do this. We will ensure that any potential changes to cost drivers are aligned with the principles set out at previous price controls - ie, that they should:

- make economic and/or engineering sense;
- be accurately and consistently measurable;
- have a relatively stable relationship with the costs over time and incorporate as much relevant information as possible; and
- where possible, be beyond the control of the network company, to avoid distorting company incentives in ways which might be inefficient.

5.22 The totex model for RIIO-GD2 used 13 years of data, which comprised of seven years of historical data and six years of forecast data. As a starting point, we propose to use both historical and forecast data in our totex modelling for RIIO-GD3. However, the uncertainty around the energy system transition for the gas networks, as well as inflationary cost pressures, may present some new challenges in terms of our ability to use historical costs in our econometric benchmarking of forecast costs. In a recent CAWG, some GDNs argued that the use of historical costs in benchmarking of forecast costs should not be as relevant in RIIO-GD3, given changes to existing GDN activities and cost pressures. We recognise that this is an important consideration as we develop our cost assessment approach for RIIO-GD3.

5.23 The RIIO-GD2 totex regression was relatively simple to interpret and performed robustly, with the model achieving a high adjusted R-squared and passing most post-estimation tests. The strong model fit and solid statistical performance, together with a totex CSV that reflected sound economic and engineering logic, supported the decision to use a single top-down model.

5.24 However, in the recent CAWGs, two GDNs supported using more than one totex model for RIIO-GD3. One GDN argued that relying on a single model places significant pressure on its accuracy, with any changes to the model specification potentially leading to big changes in results. They suggested that averaging across a range of totex models, perhaps with alternative CSVs, would provide a more comprehensive picture of efficiency.

5.25 For comparison, in RIIO-ED2, we used three different totex models, acknowledging that there was not an optimal single approach for assessing comparative efficiency, particularly given the changing environment facing DNOs. One model used a bottom-up CSV, and a RIIO-ED2 time dummy. The bottom-up CSV combined multiple cost drivers in a similar fashion to the CSV used at RIIO-GD2. In contrast, the second model used a top-down CSV comprising of 4 key cost drivers, alongside the RIIO-ED2 dummy variable, and an activity variable representing the average capacity released on each DNO's network. Finally, the third model focused on the forecast period only, using the same top-down CSV and a 'composite growth variable (CGV)' that reflected the forecast uptake of low carbon technologies (LCTs). By using a suite of different totex models, we were able to arrive at a comprehensive view of the relative efficiency of the DNOs.

5.26 Whilst we acknowledge the difference in nature between the electricity and gas distribution sectors, with each facing different challenges in respect of the energy system transition, we believe there are lessons we can learn from the RIIO-ED2 cost assessment. In particular, we consider alternative totex models may help provide a richer view of relative efficiency, and therefore should be a focus for model development and testing in RIIO-GD3.

5.27 As an initial exercise, following publication of the Framework Decision, we reran the RIIO-GD2 totex model with the latest historical information. This involved replacing RIIO-GD2 forecast data with actuals outturn values from the RRPs for the regulatory years 2020/21, 2021/22 and 2022/23. The model we chose to update included the post-CMA appeals remedy applied.[77]

5.28 The purpose of this was to stimulate early discussion on totex model performance and robustness. Beginning this review of the RIIO-GD2 modelling suite will aid future testing of potential alternative totex models, cost drivers, and help address data reporting gaps for the RIIO-GD3 BPDTs. While the outputs are only preliminary, the exercise has already proved useful in highlighting gaps and errors within the modelling suite and the data. At a recent CAWG, the GDNs provided valuable feedback on addressing these gaps as well as suggestions of additional model tests and analysis that could be performed at this stage. Resolution of issues found during this exercise will be a key component of our model development work for RIIO-GD3.14

[77] For this initial exercise, we considered a modelling suite inclusive of the remedies relevant to the sector as determined by the CMA within the 2021 appeals. For more details, see Energy licence modification appeals 2021 - GOV.UK (www.gov.uk)

Middle-up modelling

5.29 Middle-up modelling refers to an approach based on the use of different cost pooling compared to the ones used in totex and disaggregated modelling. The cost pooling used in this approach is more granular than the one used in the totex modelling, but broader than the one used in a disaggregated approach.

5.30 In both RIIO-GD1 and RIIO-GD2 we tested a middle-up approach which drew together three separate regression models for total controllable opex, capex and repex. On both occasions results were broadly similar to the totex modelling, and so it was deemed to add little value and was discarded.

5.31 Additionally, we tested middle-up models with alternative cost pools in RIIO-GD2. These included groupings such as Asset Management, Operations Management, Business support, and Other Direct Activities (ODAs) in one pool. Emergency, Repairs, Repex, and Other Services formed a second pool. The regression models used MEAV as a single cost driver, but ultimately were discarded due to their poor performance relative to other middle-up and totex specifications.

5.32 We plan to revisit middle-up approaches for RIIO-GD3 and propose to start from the basis of previous testing conducted for the RIIO-GD2 price control. Our view is that potential middle-up models, even if not ultimately used in setting allowances, may prove useful in validating the results of the totex benchmarking.

Disaggregated modelling

5.33 Disaggregated modelling or bottom-up benchmarking refers to assessing the costs of undertaking individual activities. Across RIIO-1 and RIIO-2 cost assessments, we have frequently used disaggregated modelling techniques to provide an alternative view to top-down benchmarking. However, we did not apply disaggregated modelling extensively in RIIO-GD2.

5.34 In RIIO-GD1, we took a bottom-up approach to assessing seven cost categories[78] using regression analysis. For each of these cost activities, we identified an appropriate cost driver (either a single driver or a combination of several drivers in a CSV). We aggregated modelled costs before applying upper-quartile benchmarks, to avoid the risk of cherry-picking between regression activities. For non-regressed activities,[79] we carried out qualitative and technical assessments and determined our view of efficient costs. We then combined the analysis of the

[78] Work management, emergency, repair, maintenance, mains reinforcement, connections and repex.
[79] Gasholder decommissioning, land remediation, smart metering, interruptible contracts, SIUs, training and apprentices, other direct activities, governors, IT systems and infrastructure, vehicles, other capex, MOBs, streetworks and rechargeable diversions.

regression cost activities with assessment of the non-regression cost activities to determine the bottom-up baseline, aiming to capture the capex and opex trade-offs. The top-down and bottom-up views were then combined using equal weight.

5.35 In RIIO-GD2, whilst we performed some disaggregated non-regression analysis for several individual activities, we did not produce a bottom-up view of totex through disaggregated modelling. The disaggregated regression models applied in RIIO-GD1 were revisited. However, concerns over statistical robustness meant these models were ultimately discarded following testing. Furthermore, we considered that the totex model already embodied bottom-up considerations given the totex CSV effectively combined the cost drivers used in this disaggregated regression analysis.

5.36 In RIIO-ED2, our disaggregated modelling incorporated a mixture of cost assessment techniques appropriate to the activity in question, including regression analysis, ratio analysis, trend analysis and technical assessment. Following the analysis, the output of the disaggregated models formed a bottom-up view of totex which was given 50% weight when combined with the results of the top-down modelling. The RIIO-ED2 approach to disaggregated modelling is discussed in the RIIO-ED2 Final Determinations.[80]

5.37 Discussions at recent CAWGs have touched on the need to consider all cost assessment tools at our disposal, with one GDN recommending that we implement a more comprehensive disaggregated modelling approach for RIIO-GD3. Our view is that disaggregated modelling, even if not ultimately used when setting allowances, may prove useful in validating the results of the totex benchmarking.

5.38 We will therefore consider lessons learned from the disaggregated benchmarking applied in RIIO-GD1, RIIO-GD2 and RIIO-ED2. We plan to explore a disaggregated modelling approach for RIIO-GD3 by starting from the basis of previous testing and model development.

Summary

5.39 We propose to build on the cost assessment approach in RIIO-GD2 and consider a variety of modelling tools to assess GDNs' cost efficiency. This includes aggregated and disaggregated analysis, as well as regression and non-regression techniques.

[80] Ofgem (2022), RIIO-ED2 Final Determinations Core Methodology Document.

5.40 There are lessons we can learn from other RIIO price controls. Where appropriate we will incorporate aspects of modelling approaches developed across the RIIO-1 and RIIO-2 price controls. This is a view supported by the GDNs.

5.41 Ultimately, the precise mix of different techniques in our cost assessment approach will depend on a model's performance against a set of criteria. It is important to have a clear set of criteria that allows the evaluation of the robustness and suitability of models and benchmarking techniques for efficiency analysis. As at RIIO-GD2, we propose to apply a set of selection criteria that test the logic, reliability, transparency, and robustness of different models. Below is a high-level summary of these criteria:

- Rationale: Are choices of explanatory variables consistent with economic and engineering rationale?
- Consistency with RIIO-GD3 policy: Is the model consistent with policy and regulatory objectives?
- Reliability: How reliable is the available data?
- Transparency: Are the results transparent and easy to interpret?
- Robustness: Does the model pass statistical tests/requirements?

5.42 Using these criteria, we will determine whether we should expand the predominantly single totex model approach of RIIO-GD2, into a hybrid approach that combines some, or all of, multiple totex models, middle-up models, and disaggregated benchmarking.

5.43 We consider the main potential advantage of a multiple model approach is that it can produce a more comprehensive picture of efficiency. A range of totex models may provide a more diverse top-down view of efficiency, whilst the inclusion of bottom-up assessments can help identify relative efficiency within cost activities and determine whether efficiency is unit cost or workload related.

5.44 Furthermore, multiple models allow for the combination of a wider range of modelling techniques, a greater variety of cost drivers, and different time periods. Combining both top-down and bottom-up assessments may help to alleviate any concerns around statistical robustness by providing a range of model outputs. The presence of disaggregated benchmarking also provides another source of information for allowance disaggregation which can be a challenge when relying on a single totex model.

5.45 However, the use of multiple models for totex benchmarking is not a minded to position, and we are equally aware of the downsides. Despite the potential

advantages, we acknowledge that a mix of approaches could result in a more complex cost assessment framework. A single totex model provides a result that is simpler and easier to interpret.

5.46 We welcome views from stakeholders on the potential mix of totex, middle-up and disaggregated approaches at RIIO-GD3, as well as on any alternative models for early consideration.

GDQ50. What are your views on the potential advantages of using multiple totex regression models in RIIO-GD3?
GDQ51. What alternative cost drivers and model specifications would you propose for early testing?
GDQ52. What are your views on the potential of middle-up modelling in RIIO-GD3?
GDQ53. What are your views on the potential of disaggregated modelling in RIIO-GD3?
GDQ54. In your view, what is the most suitable configuration of cost activities for middle-up or disaggregated modelling, that once combined, could form a complete bottom-up assessment of totex?

**Normalisations and adjustments**

5.47 Pre-modelling normalisations and adjustments made to submitted data are a crucial step in cost assessment. They help to ensure network company submitted costs are on a comparable basis prior to modelling and benchmarking. These adjustments include:

- Reclassifications: We reclassify costs from one activity to another when they have been reported incorrectly or differently to other company submissions;
- Exclusions: We aim to exclude costs from the modelling altogether when they are not explained by the cost drivers used, or where there is a substantial change in the nature of the activity being undertaken. This is sometimes the case for costs associated with bespoke outputs or large capex investments;
- Workload adjustments: These are adjustments to forecast volumes of work, where we consider the volumes to be inefficient or lack justification; and
- Regional and company-specific factors: These are adjustments made to cost allowances to reflect specific factors that might mean the efficient level of costs is higher in some regions than others.

Reclassifications

5.48 In RIIO-GD2, for example, we reclassified Cadent's reinforcement for insertion expenditure as repex, rather than capex, to align with other GDNs' reporting. We

also reclassified SGN's gasholder maintenance costs as maintenance, to ensure equal treatment of non-routine maintenance activities across GDNs. Our aim is to limit the number of reclassifications in RIIO-GD3 through clear business plan guidance, but if required, we will continue to reclassify costs to enhance consistency in our cost assessment.

Exclusions

5.49 In RIIO-GD2, we excluded historical and forecast costs associated with large capex projects (above £5m), gasholder demolition, cyber and physical security from our modelling. This was in line with our approach to perform a technical assessment of these costs categories. We also excluded a number of cost activities where variations across GDNs were not well represented by the regression cost drivers. The activities we excluded were MOBs, streetworks, repex diversions, smart metering, land remediation, SIU opex and growth governors (see section on separately assessed costs below).

5.50 We excluded forecast costs where GDNs had taken different approaches to bespoke outputs and uncertainty. For example, we removed consumer vulnerability costs from SGN and WWU, as these were funded separately through a common output. We also removed SGN's forecast fatigue related costs for emergency and repair to establish a consistent uncertainty level for workforce costs across all the GDNs.

5.51 In RIIO-GD3, we will continue to make exclusions of historical and forecast costs where assessment outside of the standard benchmarking models is required, to ensure comparability across GDNs.

Workload adjustments

5.52 In RIIO-GD2 we implemented a number of pre-modelling workload adjustments for repex. Our synthetic cost driver used for repex in the totex regression was a workload driver, meaning that variances in workloads between different activities drive different values between the networks. We determined the workload inputs to the synthetic cost driver for repex following our engineering and cost assessment review of GDNs' investment proposals. Where we disallowed workloads, we excluded volumes from the calculation of the synthetic cost driver and removed the corresponding submitted costs from our totex modelling. For example,

- we disallowed all workloads associated with dynamic growth[81] in Repex Tier 1, given uncertainty with forecasting workloads and the declining size of the Tier 1 population; and
- we adopted a CBA pay-back cut-off of 2037 for asset management mains investment, and as a result, disallowed a small proportion of asset management repex workloads on this basis. The RIIO-3 CBA strategy is discussed in more detail in the Overview document. As we develop the RIIO-GD3 CBA methodology through stakeholder engagement, we may review this payback cut-off date for asset management mains investment.

5.53 In RIIO-GD3, we will continue to implement workload adjustments to repex or other activities, when we consider that GDNs have not justified the volumes of work. The precise way in which workload adjustments are applied may depend on the final cost modelling approach. We note that in other cost assessments, workload adjustments have been applied within the modelling step, such as within the disaggregated benchmarking in RIIO-ED1 and RIIO-ED2. We welcome stakeholders views on how to treat workload adjustments in the modelling suite for RIIO-GD3.

Regional factors

5.54 In RIIO-GD2 we made a number of regional factor adjustments, accounting for differences in labour costs, as well as differences in the operating environment linked to urbanity and sparsity effects.[82]

5.55 We made a pre-modelling regional labour cost adjustment to account for differences in labour costs for three regions across London and the South-East. This was done using Office for National Statistics (ONS) Annual Survey of Hours and Earnings (ASHE) wage data to construct different labour indices.

5.56 To account for urbanity factors, we made two different adjustments. The first was applied to Reinforcement, Connections, and Repex costs to reflect the lower labour productivity associated with working in the London area. The second was to account for additional reinstatement costs associated with working in highly dense urban areas.

[81] Dynamic growth is any incremental growth workload resulting from risk migration during the price control period.
[82] Details of labour, urbanity and sparsity adjustments can be found in the following published document. Ofgem (2020), RIIO-2 Final Determinations for Transmission and Gas Distribution network companies and the Electricity System Operator | Ofgem, Final Determinations: Technical Annex part one, Final Determinations - RIIO-GD2 Step-by-Step Guide Annex, Annex A and Annex B, page 26 onwards.

5.57 Regarding sparsity, we accepted that there are differences in costs associated with working in relatively sparse areas for emergency and repair cost activities. This was based on population density data at the Local Authority (LA) level. An adjustment of 13% was applied to WWU's costs with sparsity indices for the other GDNs scaled accordingly.

5.58 In a recent CAWG, one GDN suggested adjusting for certain regional differences within the regression modelling at RIIO-GD3, as this will allow for a more comprehensive quantification of factors. They proposed that variables that reflect population density and network density could be used within the model alongside other pre-modelling adjustments.

5.59 We intend to continue to account for the regional factors of labour, urbanity, and sparsity in RIIO-GD3. We are open to alternative approaches that account for these differences, and we will look to revisit within-modelling approaches.

Company-specific factors

5.60 In RIIO-GD2, we excluded some costs prior to benchmarking where GDNs had provided sufficient evidence that they incur higher efficient costs due to the inherent nature of their network(s). These are costs not captured by the regional factors adjustments mentioned above. Examples of these from RIIO-GD2 are: higher costs attributable to Cadent's Thames Tunnel project which is unique to Cadent's London network and higher plant hire costs in London which is unique to Southern. [83]

5.61 In RIIO-GD2 we assessed company-specific factors on the following criteria:

- the materiality threshold of 0.5% of a GDN's gross total expenditure;
- the claim should be unique in nature to a single or small number of GDNs;
- the claim should be outside the control of the GDN;
- the claim should be excluded from the cost drivers used in the econometric modelling; and
- the claim should be excluded from other adjustments such as regional factors.

5.62 Our view for RIIO-GD3 is to continue to use the same criteria when accounting for company specific factors.

[83] A comprehensive list of company-specific factors considered in RIIO-2 can be found in the Final Determinations company annexes. Ofgem (2020), https://www.ofgem.gov.uk/publications/riio-2-final-determinations-transmission-and-gas-distribution-network-companies-and-electricity-system-operator.

GDQ55. What do you think would be appropriate criteria for determining cost exclusions for RIIO-GD3?
GDQ56. What are your views on the modelling treatment of workload adjustments for RIIO-GD3?
GDQ57. What are your views on the approach to regional factors for RIIO-GD3?
GDQ58. What are your views on the approach to company-specific factors for RIIO-GD3?

**Costs requiring separate assessment**

5.63 As described above, through exclusions and company specific factor adjustments, we remove certain forecast costs from our totex modelling for separate assessment. In RIIO-GD2, we distinguished between costs separated for a detailed technical assessment and those suitable for non-regression benchmarking.

Technical Assessment

5.64 The discrete nature of certain investments carried out by the GDNs limits our ability to model costs and apply a comparative benchmark. This can be due to multiple factors such as lack of historical comparators or unique characteristics of an area or project resulting in higher costs which are not linked to inefficiency. These higher costs are not captured by our adjustments designed to account for regional factors. To assess these costs, we apply a combination of qualitative and quantitative technical assessment approaches, including an expert and engineering review.

5.65 Technically assessed costs in RIIO-GD2 included bespoke repex programmes, major project capex investments, and gas holder demolition costs. For example, large capex projects that passed an initial engineering needs case assessment, and met the £5m materiality threshold, were assessed further through a bottom-up technical assessment. Only the direct project costs were technically assessed, with indirect costs remaining in totex benchmarking. All technically assessed costs were excluded from the application of the catch-up efficiency challenge but were subject to ongoing efficiency.

5.66 In a recent CAWG, one GDN proposed an alternative approach for separately assessing costs in RIIO-GD3. It commented that the criteria for separating costs had been applied inconsistently for some areas in RIIO-GD2 and emphasised that it was vital that cost exclusion principles are outlined early in the process. The GDN argued that the approach to technical assessment could be streamlined by use of the Demonstrably Inefficient and Wasteful Expenditure (DIWE) framework. Under this approach, costs separated from the totex benchmarking would not

undergo an ex ante assessment, but would be assumed efficient and assessed ex post if necessary.

5.67 In RIIO-GD3, it will continue to be necessary to technically assess some costs. We will continue to use expert and engineering qualitative reviews where appropriate, but we consider it important that the nature of the assessment is proportionate to the magnitude of costs involved. We welcome early views on the principles for cost exclusions and considerations for developing the technical assessment approach.

Non-regression analysis

5.68 As described in paragraph 5.49, in RIIO-GD2, we excluded cost activities from our totex regression modelling where variations across GDNs were not well represented by the regression cost drivers. We used different non-regression techniques for each activity, including quantitative and qualitative review of forecast costs. Cost activities assessed through non-regression analysis included:

- MOBs[84]: The varying and unique nature of many MOBs means the costs of maintaining and replacing/refurbishing risers varies significantly between location and GDN. Therefore, we did not include these costs within the regression and separately assessed both the repex and opex components of MOBs costs;
- Diversions: In some instances, GDNs are required to fund all or part of the costs of diversions projects. We therefore provided GDNs baseline allowances to cover expected diversion works. Adjustments were based on an assessment of GDN specific responses and further evidence as well as a review of resubmitted costs, volumes and unit costs against historical RIIO-GD1 run rates;
- Growth governors: We split out growth governors[85] costs from reinforcement for separate assessment due to the limited and irregular nature of governor data, and assessed using unit cost benchmarking;
- Streetworks: We decided to use each GDN's average historical and future costs for the assessment of streetworks, as we considered this approach

[84] MOBs cover various types of buildings where there are multiple properties, usually residential, being fed from a single riser feed (ie blocks of flats, high-rise buildings).
[85] Costs relating to the installation of new district and service governors associated with network reinforcement.

accounted for the highly diverse nature of streetworks costs between regions. We disallowed costs for fines and penalties;

- Smart metering: We modelled forecast smart metering costs based on an intervention rate of 2.5%;
- Land remediation: We reviewed forecast land remediation costs and considered them to be in line with historical costs. We therefore made no adjustments to GDN's forecast costs for this activity; and
- SIU opex: This refers to operating costs for five independent gas networks in Scotland owned by SGN. Following review, we accepted SGN's forecast costs.

5.69 We added our modelled view of these cost activities to the modelled totex assessed via our top-down regression model, prior to applying the catch-up efficiency challenge and ongoing efficiency.

5.70 In RIIO-GD3, we will continue to apply non-regression analysis and benchmarking as a tool for separate assessment where it is required to support our econometric modelling. However, the extent to which we use these techniques will depend on the development and design of our cost modelling approach. We may seek to increase the coverage of our totex assessment, through new or improved cost drivers, or the introduction of disaggregated modelling, enabling us to benchmark some of these costs with the rest of totex. We welcome early stakeholder views on the use of non-regression analysis as a tool for separately assessing certain costs in RIIO-GD3.

GDQ59. In your view, which cost areas will require separate technical assessment in RIIO-GD3?
GDQ60. What are your views on alternative technical assessment approaches for RIIO-GD3?
GDQ61. In your view, which cost areas will require separate non-regression analysis and benchmarking in RIIO-GD3?
GDQ62. Which separately assessed cost activities from RIIO-GD2 could potentially be included in totex benchmarking in RIIO-GD3?

**Pass-through costs**

5.71 In RIIO-GD2, we had five different types of uncertainty mechanisms, one of which was pass-through. Through this, we adjusted allowances for costs incurred by the network companies over which they have limited control.

5.72 Pass-through mechanisms such as business rates, bad debt, Ofgem license fee and pension scheme established deficit repair applied to more than one sector

and are covered in the Overview Document. Pass-through mechanisms that applied specifically to the GDNs are shown in Table 17.

Table 1715: Pass-through mechanisms in RIIO-GD2.

| **Activity** | **Description** |
|---|---|
| Pension deficit charge adjustment | Costs incurred by NGT and subsequently charged to GDNs relating to the deferred and pensioner liabilities associated with NGT's former gas distribution employees. |
| Third-party damage and water ingress | 95% of costs incurred under GSOP1 (Supply restoration) and Section J of the Network Code as a result of third-party damage or water ingress. |
| Shrinkage | Costs related to purchase of replacement gas to cover volumes lost to shrinkage in the distribution network. |
| NTS exit capacity | Costs related to booking National Transmission System (NTS) exit capacity for each year to meet 1-in-20 obligations. |
| Theft of gas (supplier responsible) | Costs related to unsuccessful gas theft investigations by gas suppliers and work to make pipes safe at the request of suppliers following tampering or illegal reconnection. |
| Central data service provider services | Costs for central data service provider services used by Gas Transporters, except for NGT's costs relating to the Gemini System. |
| Miscellaneous | Minor uncontrollable costs incurred by GDNs that are not funded elsewhere in the price control. |
| Stranraer (bespoke - SGN only) | To recover non-controllable costs for the Stranraer Local Distribution Zone. |

5.73 For RIIO-GD3, our initial view is to retain the pass-through mechanisms for the cost items listed above.

GDQ63. What are your views on retaining the RIIO-GD2 pass-through cost items for RIIO-GD3?

### Disaggregation of allowances

5.74 While GDNs submit forecasts costs at an activity level, cost assessment approaches produce modelled allowances at a totex level. However, allowances ultimately need to be broken down into several cost categories for the Price Control Financial Model (PCFM). The introduction of volume drivers, PCDs, and other price control mechanisms, require allowances to be broken down at an activity/output level. It is also important to have allowances disaggregated at a cost activity level for comparison against submitted costs, and to monitor in-period performance.

5.75 In RIIO-GD2, we used a combination of bottom-up and top-down approaches to derive allowances for disaggregated cost categories across opex, capex and repex, and for specific activities related to PCDs and volume drivers.

- Where a cost activity was allocated an efficient unit cost explicitly in the design of a policy mechanism, we used a combination of this unit cost and allowed workloads to determine the final allowance.
- Where we did not have information from unit cost benchmarking, we disaggregated final efficient totex allowances using cost category proportions from normalised submitted costs.
- We only disaggregated allowances to a specific activity/output level for activities with an associated specific mechanism. The remaining allowance was separated into NARM and non-NARM components. We considered this maintained consistency with our approach of setting each GDN a totex allowance and did not unduly constrain company management when seeking to allocate expenditure in the most efficient way to deliver RIIO-GD2 outputs.

5.76 We recognise this is an important area of consideration for RIIO-GD3. However, it is ultimately dependent on the approach we take to modelling costs. The introduction of disaggregated modelling for example, would provide another source of information with which to break down final allowances. We welcome early views from stakeholders and we will continue to engage on this topic as we develop our RIIO-GD3 cost assessment approach.

GDQ64. What are your views on suitable approaches to the disaggregation of totex allowances for RIIO-GD3?

## Proposals for Business Plan Data Templates (BPDTs)

5.77 As highlighted in the Overview Document, we will develop Business Plan Guidance (BPG), Engineering Justification Paper (EJP) Guidance and Cost Benefit Analysis

(CBA) Guidance to ensure consistent and streamlined submission of Business Plans for RIIO-GD3. Alongside, we will develop the BPDTs and associated instructions that will enable data collection from GDNs. In this section, we set out some of our initial views about the development of BPDTs specific to the GD sector. The business plans should include historical and forecast values, if applicable.

5.78 We aim to issue BPDTs alongside the BPG in spring 2024 (with draft versions shared beforehand), ahead of network companies' Draft BPDT submissions in summer 2024. We reserve the right to revise BPDTs to reflect any changes we consider appropriate in light of the summer Draft BPDTs submissions.

**Approach**

5.79 We believe both the RIIO-GD2 BPDTs[86] and the RIIO-GD2 annual regulatory reporting packs (RRPs) should form the basis of the data templates for RIIO-GD3.

5.80 From this baseline, we propose to work with the GDNs over the coming months to develop a draft RIIO-GD3 BPDTs and associated BPG. In developing the BPDTs, we aim to strike the right balance between collecting the necessary information and ensuring this process is not too burdensome on GDNs.

5.81 When developing the RIIO-GD3 BPDTs we will aim to eliminate inconsistencies in reporting in RIIO-GD2 BPDTs and the interpretation of RIIO-GD2 RRPs. We will continue to work with the GDNs to add further clarification in the BPG to improve consistency for the BPDTs.

5.82 We will also work with the GDNs to ensure clarity of any costs and volumes, if any, relating to potential future repurposing of assets or use of hydrogen in their BPDTs to facilitate our cost assessment. It is important for the GDNs to consider, and develop, their reporting systems to be able to capture and separate this information from their work on natural gas.

**BPDT content**

5.83 Our aim is for the BPDTs to be simple, closely aligned with the RRPs and to capture relevant information necessary for a robust and fair cost assessment. We recognise that not all data submitted will input into our approach, however, it will still serve as a source of insight to inform the RIIO-GD3 price control review.

[86] Ofgem (2019), RIIO-2 final data templates and associated instructions and guidance, subsidiary documents, RIIO-GD2 final data templates and associated instructions and guidance, RIIO-GD2 BPDT v3.1 excel file.

5.84 At this stage, we expect to ask for similar data in the RIIO-GD3 BPDTs to that which we collect annually in RIIO-GD2 RRPs and that were collected in the RIIO-GD2 BPDTs. Some areas that potentially could change are:

- data that helps inform policy, for example to enable us to assess costs associated with proposed PCDs, to determine output targets and to implement indexation for RPEs if this is what we decide;
- data that helps inform how we develop our cost assessment approach, for example additional data required for a disaggregated modelling approach or data that helps capture new cost drivers;
- where we think context or the level of uncertainty has changed from RIIO-GD2 to RIIO-GD3 with consequences on what data we need in order to assess costs, for example on repex;
- the BPDTs format that will adapt reporting requirements while improving our cost analysis process and aligning with best practices; and
- reporting requirements in selected categories to improve our cost assessment approach and reduce the burden across stakeholders and Ofgem, for example on streetworks and network asset risk metric (NARM).

5.85 One of the ways we propose to challenge Business Plans in RIIO-GD3 is by utilising the historical data that we have available, where appropriate to do so. We propose that the BPDT data reporting period for RIIO-GD3 will include 11 years of historical data from the RIIO-GD1 and RIIO-GD2 price controls, as well as forecast data.

5.86 In recent CAWG engagement we have focused on identifying high priority areas of potential reporting inconsistencies that need to be addressed in RIIO-GD3 BPDTs development. Areas raised to investigate included riser asset data, streetworks cost coverage, and other publicly reported escapes. We will continue to work with GDNs to identify and investigate further data reporting issues so that these can be rectified ahead of the RIIO-GD3 BPDTs. Another issue raised in the CAWG was the treatment of ongoing efficiency in the reporting of cost information. We propose that the treatment of ongoing efficiency will be the same as in RIIO-ED2. This means that GDNs will report submitted cost information exclusive of any estimate of ongoing efficiency for RIIO-3.

GDQ65. In your view what are the high-priority areas of reporting inconsistency between GDNs within the RIIO-GD2 BPDTs and RRPs, and how can these be addressed for RIIO-GD3?

GDQ66. We invite views on current reporting requirements and reporting structure at the cost activity level and how this may be adapted to better suit RIIO-GD3 and related development of BPDTs.

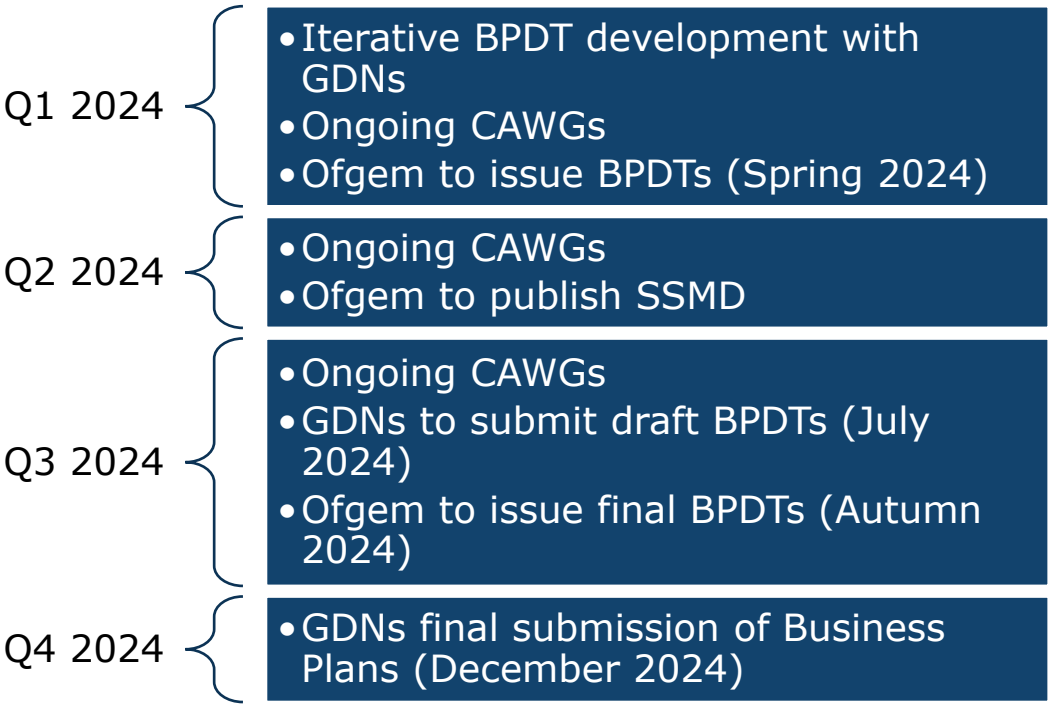
## Next steps

5.87 We will continue holding CAWGs in 2024. Details of these meetings and how to engage will be shared with stakeholders. We will use the working groups to help us develop our approach to RIIO-GD3 cost assessment.

5.88 We will not decide on our final approach to RIIO-GD3 assessment of efficient costs until after we have received final Business Plan submissions in December 2024, as Business Plan evidence may warrant a different approach.

5.89 The figure below summarises next steps for cost assessment. Please refer to Chapter 3 of the Overview Document for a more holistic scope of our timeline.

Figure 12: Next steps for cost assessment in 2024 (calendar year).



# Appendix 1 - Privacy notice on consultations

## Personal data

The following explains your rights and gives you the information you are entitled to under the General Data Protection Regulation (GDPR).

Note that this section only refers to your personal data (your name address and anything that could be used to identify you personally) not the content of your response to the consultation.

**1. The identity of the controller and contact details of our Data Protection Officer**

The Gas and Electricity Markets Authority is the controller, (for ease of reference, "Ofgem"). The Data Protection Officer can be contacted at dpo@ofgem.gov.uk

**2. Why we are collecting your personal data**

Your personal data is being collected as an essential part of the consultation process, so that we can contact you regarding your response and for statistical purposes. We may also use it to contact you about related matters.

**3. Our legal basis for processing your personal data**

As a public authority, the GDPR makes provision for Ofgem to process personal data as necessary for the effective performance of a task carried out in the public interest ie a consultation.

**4. With whom we will be sharing your personal data**

We will not share your personal data with any other person or organisation.

**5. For how long we will keep your personal data, or criteria used to determine the retention period.**

Your personal data will be held for 12 months after the end of the project.

**6. Your rights**

The data we are collecting is your personal data, and you have considerable say over what happens to it. You have the right to:

- know how we use your personal data
- access your personal data
- have personal data corrected if it is inaccurate or incomplete
- ask us to delete personal data when we no longer need it

- ask us to restrict how we process your data
- get your data from us and re-use it across other services
- object to certain ways we use your data
- be safeguarded against risks where decisions based on your data are taken entirely automatically
- tell us if we can share your information with 3rd parties
- tell us your preferred frequency, content and format of our communications with you
- to lodge a complaint with the independent Information Commissioner (ICO) if you think we are not handling your data fairly or in accordance with the law. You can contact the ICO at https://ico.org.uk/, or telephone 0303 123 1113.

**7. Your personal data will not be sent overseas**.

**8. Your personal data will not be used for any automated decision making.**

**9. Your personal data will be stored in a secure government IT system.**

**10. More information** For more information on how Ofgem processes your data, click on the link to our "ofgem privacy promise".

# Appendix 2 RIIO-GD2 GSOPs

Table 16: Interruptions GSOPs

| GSOP description | Standard | January 2023 Payment level and cap |
|---|---|---|
| GSOP 1: Gas supply restoration | GDNs must restore customers' gas supplies within 24 hours following an unplanned interruption | Domestic customers: £70<br>Non-domestic customers: £115<br>Further payment each subsequent 24-hour period the failure continues.<br>No cap. |
| GSOP 2:<br>Reinstatement of consumer's premises | Following the completion of work, GDNs are required to reinstate premises:<br>• within five working days or;<br>• three working days for PSR customers. | Domestic customers: £115<br>Non-domestic customers: £230<br>Further payments each subsequent period of five working days for regular customers, or three working days for PSR customers, the failure continues.<br>No cap. |
| GSOP 3: Priority domestic customers | In the event of an interruption, the GDN must provide alternative cooking and heating facilities to priority domestic customers:<br>• within four hours, or;<br>• within eight hours where more than 250 customers are affected and the GDN has not notified the customer of a service interruption.<br>Where the interruption affects 250 or more customers and lasts longer than 48 hours, the GDN should offer (after the initial 48 hours):<br>• access to a hot meal every 24 hours to all priority domestic customers; and<br>• access to hot water every 24 hours where customers are medically dependent on showering and water | £55<br>Further payment each subsequent 24 hour period during which the failure continues, up to a cap of £570 per customer. |

| GSOP description | Standard | January 2023 Payment level and cap |
|---|---|---|
| | dependent for medical reasons. | |
| GSOP 13: Notice of planned interruptions | Where a GDN intends to carry out planned work that will cause an interruption to the supply of customers' premises, it must give each affected customer no less than seven working days' notice of when the interruption is expected to commence. | Domestic customers: £45<br>Non-domestic customers: £115<br>No cap (one payment) |

Table 17: Consumer communication GSOPs

| GSOP description | Standard | January 2023 Payment level and cap |
|---|---|---|
| GSOP 12: Timely payment to customers under these GSOPs | GDNs must make any payment due to a customer under any of the GSOPs within 10 working days. | £45<br>No cap (one payment). |
| GSOP 14: Timely response to complaints | When a GDN receives a complaint, it shall provide a substantive response:<br>• within five working days, or;<br>• within 10 working days if a site visit is required. | £45<br>Further payments (of the same amount) for each subsequent period of five working days during which the failure continues will be due, up to a maximum of £230. |

Table 18: Connection GSOPs

| GSOP description | Standard | January 2023 Payment level and cap |
|---|---|---|
| GSOP 4: Provision of standard quotations | GDNs are required to provide a standard quotation within four working days of receiving a quotation request for a new connection or an alteration to an existing connection up to and including 275kWh per hour, or a disconnection less than 2 bar gauge. | £25 per working day.<br>Further payment each subsequent working day the failure continues, up to a cap of £570 per customer or the quotation sum (excluding VAT), whichever is lower. |

| **GSOP description** | **Standard** | **January 2023 Payment level and cap** |
|---|---|---|
| GSOP 5: Provision of non-standard quotations (≤275kWh, disconnections < 2 bar gauge) | GDNs are required to provide a non-standard quotation within 11 working days of receiving a request for a quotation for a new connection, or an alteration to an existing connection up to and including 275kWh per hour and other disconnections less than 2 bar gauge. | £25 per working day.<br>Further payment for each subsequent working day during which the failure continues, up to a cap of £570 per customer or the quotation sum (excluding VAT), whichever is lower. |
| GSOP 6: Provision of non-standard quotations (>275kWh, disconnections ≥ 2 bar gauge, diversions) | GDNs are required to provide a non-standard quotation within 21 working days of receiving a request for a quotation for a new connection, or an alteration to an existing connection exceeding 275kWh per hour, diversions and a disconnection greater than or equal to 2 bar gauge. | £45 per working day.<br>Further payment each subsequent working day during which the failure continues, up to a cap of £1140 per customer or the quotation sum (excluding VAT), whichever is lower. |
| GSOP 7: Challenges to the accuracy of quotations | GDNs must refund any overcharge that has been paid by customers who receive and challenge inaccurate quotations for a new connection or the alteration of an existing connection. | Refund any overcharge.<br>Cap and payments reflected by GSOPs 4, 5 or 6. |
| GSOP 8: Responses to land enquiries | GDNs must respond to a land enquiry in respect of a new connection, the alteration of an existing connection or a disconnection within five working days. | £90<br>Further payment each subsequent working day during which the failure continues, up to a cap of:<br>• £570 per customer, for connections ≤275kWh per hour, or a disconnection less than 2 bar gauge with no site visit required; or<br>• £1140 per customer, for connections >275kWh per hour, or other disconnections greater than or equal to 2 bar gauge. |

| GSOP description | Standard | January 2023 Payment level and cap |
|---|---|---|
| GSOP 9: Provision of commencement and substantial completion dates (≤275kWh) | GDNs must provide customers with dates for the commencement and substantial completion of the work within 17 working days of receipt of acceptance of a quotation for a new connection or the alteration of an existing connection of up to and including 275kWh per hour. | £45<br>Further payment for each subsequent working day the failure continues up to a cap of £570 or the contract sum (excluding VAT), whichever is lower. |
| GSOP 10: Provision of dates for the substantial completion of work (>275kWh) | GDNs must provide customers with dates for the commencement and substantial completion of the work within 20 working days of receipt of acceptance of a quotation for a new connection or the alteration of an existing connection exceeding 275kWh per hour. | £90<br>Further payment for each subsequent working day the failure continues up to a cap of £1140 or the contract sum (excluding VAT), whichever is lower. |
| GSOP 11(i): Substantial completion by agreed date (contract value ≤£1k) | GDNs are required to substantially complete connections on the date agreed with the customer.<br>A job is deemed to be substantially complete when the connection to the premises has been installed, commissioned and left safe. | £45<br>Compensation payments are capped at £455 or the contract sum (excluding VAT), whichever is lower. |
| GSOP 11(ii): Substantial completion by agreed date (contract value over £1k and ≤£4k) | GDNs are required to substantially complete connections on the date agreed with the customer.<br>A job is deemed to be substantially complete when the connection to the premises has been installed, commissioned and left safe. | £230 or 5% of contract sum, whichever is lower.<br>Compensation payments are capped at 50% of the contract sum (excluding VAT). |
| GSOP 11(iii): Substantial completion by agreed date (contract value over $4k and ≤£20k) | GDNs are required to substantially complete connections on the date agreed with the customer.<br>A job is deemed to be substantially complete when the connection to the premises has been installed, commissioned and left safe. | £230<br>Compensation payments are capped at 50% of the contract sum (excluding VAT). |
| GSOP 11(iv): Substantial completion by agreed date (contract value over £20k and ≤£50k) | GDNs are required to substantially complete connections on the date agreed with the customer.<br>A job is deemed to be substantially complete when the connection to the premises has been installed, commissioned and left safe. | £230 per day<br>Compensation payments are capped at £11,420. |

| **GSOP description** | **Standard** | **January 2023 Payment level and cap** |
|---|---|---|
| GSOP 11(v): Substantial completion by agreed date (contract value over £50k and ≤£100k) | GDNs are required to substantially complete connections on the date agreed with the customer.<br>A job is deemed to be substantially complete when the connection to the premises has been installed, commissioned and left safe. | £345 per day<br>Compensation payments are capped at £20,555. |

# Appendix 3 Consultation Questions

### Proposed RIIO-GD3 specific outputs and uncertainty mechanisms

GDQ1. What are your views on our proposal to remove the shrinkage ODI-R as a separate output?

GDQ2. What are your thoughts on the options we have set out for the shrinkage ODI-F and on the design of this incentive?

GDQ3. If we provide baseline funding or a UIOLI allowance for shrinkage, can you provide examples of initiatives that could be funded, indicative cost, and why these activities would not go ahead without specific price control funding?

GDQ4. If the Digital Platform for Leakage Analytics is rolled out to all GDNs in RIIO-GD3, what would be the indicative cost and timescales for this?

GDQ5. If up to 20% hydrogen is blended into the distribution network, what would be the impact on operational practices and shrinkage?

GDQ6. What are your views on the options we have laid out for the heat policy re-opener, including whether this should be combined with other RIIO-3 net zero mechanisms?

GDQ7. What are you views on our proposed approach for managing uncertain costs relating to regional energy strategic planning?

### RIIO-GD2 outputs and UMs proposed for removal

GDQ8. What are your views on our proposal to remove the Commercial fleet electric vehicle PCD in RIIO-GD3?

GDQ9. What are your views on our proposal to remove SGN's bespoke Biomethane improved access rollout PCD in RIIO-GD3?

GDQ10. What are your views on our proposal to remove SGN's bespoke remote pressure management PCD in RIIO-GD3?

GDQ11. What are your views on our proposal to remove SGN's bespoke Gas escape reduction PCD in RIIO-GD3?

GDQ12. What are your views on our proposal to remove SGN's bespoke Intermediate pressure reconfigurations PCD in RIIO-GD3?

GDQ13. What are your views on our proposal to remove Cadent's bespoke HyNet Front End Engineering Design PCD in RIIO-GD3?

**Proposed RIIO-GD3 specific outputs and uncertainty mechanisms**

GDQ14. What are your views on the benefits of repex that we have identified, how well the repex programme is currently working, and what evidence we should consider as part of the joint repex review?

GDQ15. Do you consider there to be alternative approaches that could deliver mandatory repex at least cost to the consumer whilst maintaining the legislative safety standards?

GDQ16. What are your views on our proposal to keep the HSE policy re-opener, but to reduce its use to a single trigger?

GDQ17. What are your views on the design of the Tier 1 mains decommissioned PCD?

GDQ18. What are your views on the proposed design of the Tier 1 services PCD?

GDQ19. What are your views on the design of the Tier 2A mains and services replacement volume driver?

GDQ20. What are your views on the design of the London medium pressure PCD (Cadent North London only)?

GDQ21. What are your views on our proposal to retain the diversions and loss of development claims re-opener in RIIO-GD3, and whether all the cost areas are still uncertain in RIIO-GD3?

GDQ22. What are your thoughts on our proposal to continue the emergency response time LO and whether the target should be set monthly, quarterly or annually?

**RIIO-GD2 outputs and uncertainty mechanisms proposed for removal**

GDQ23. What are your views on our proposal to remove the Tier 1 iron stubs re-opener in RIIO-GD3 and our approach for the costs to be included in the baseline allowances?

GDQ24. What are your views on our proposal to remove the Capital projects PCD in RIIO-GD3?

GDQ25. What are your views on our proposal to remove the Gas holder demolitions PCD in RIIO-GD3?

GDQ26. What are your views on our proposal to remove the Multiple Occupancy Buildings safety re-opener in RIIO-GD3?

GDQ27. What are your views on our proposal to remove NGN's bespoke job completion lead-time including re-instatement ODI-R in RIIO-GD3?

**Proposed RIIO-GD3 specific outputs and uncertainty mechanisms**

GDQ28. What are your views on our proposed position on the role of GDNs in relation to vulnerability, and how can they support a just transition to net zero?

GDQ29. What are your views on our proposal for GDNs to develop individual and joint-GDN vulnerability strategies?

GDQ30. Do you agree with our proposal to retain the RIIO-GD2 vulnerability minimum standards is sufficient to ensure customers in vulnerable situations are protected and treated fairly?

GDQ31. What are your views on our proposal to retain the use of the VCMA UIOLI allowance, on the alternative option to incentivise vulnerability through an ODI-F, and on which activities to support vulnerability could be funded through baseline allowances?

GDQ32. At what level should VCMA funding be set to ensure its effectiveness and sustainability, and what percentage should be ringfenced for collaborative projects?

GDQ33. How should VCMA funding be allocated to ensure maximum impact for consumers in vulnerable situations?

GDQ34. How can learnings from VCMA projects better inform the GDNs' organisational approaches to consumer vulnerability?

GDQ35. What are your views on the options we've set out to incentivise customer satisfaction during RIIO-GD2?

GDQ36. What are you views on how the complaints metric can ensure customers' complaints are resolved quickly and effectively?

GDQ37. What changes, if any, are required to the GSOPs?

GDQ38. What are your views on our proposed options for the unplanned interruption ODI-F?

GDQ39. What are your views on the options we have set out for the Collaborative Streetworks ODI-F?

GDQ40. What are your views on whether the new, large load connections re-opener is still needed in RIIO-GD3?

GDQ41. What are your views on whether the specified streetworks costs re-opener is still needed in RIIO-GD3?

**RIIO-GD2 outputs and uncertainty mechanisms proposed for removal**

GDQ42. What are your views on our proposal to remove the Fuel Poor Network Extension Scheme in RIIO-GD3?

GDQ43. What are your views on our proposal to remove the consumer vulnerability ODI-R in RIIO-GD3?

GDQ44. How can the annual VCMA event be improved?

GDQ45. What are your views on our proposal to remove the DLCA, and do you see any challenges that might arise if it were to be removed?

GDQ46. What are your views on our proposal to remove the domestic connections volume driver? If you think it should be retained, what changes do you recommend for its design?

GDQ47. What are your views on our proposal to remove the smart metering rollout costs re-opener in RIIO-GD3?

GDQ48. Should personalising welfare services continue to be supported under RIIO-3 and, if so, how should it be funded?

GDQ49. What are your views on our proposal to remove Cadents' bespoke High-rise building plans ODI-R from RIIO-GD3?

**Options for evolving our cost assessment approach for RIIO-GD3**

GDQ50. What are your views on the potential advantages of using multiple totex regression models in RIIO-GD3?

GDQ51. What alternative cost drivers and model specifications would you propose for early testing?

GDQ52. What are your views on the potential of middle-up modelling in RIIO-GD3?

GDQ53. What are your views on the potential of disaggregated modelling in RIIO-GD3?

GDQ54. In your view, what is the most suitable configuration of cost activities for middle-up or disaggregated modelling, that once combined, could form a complete bottom-up assessment of totex?

GDQ55. What do you think would be appropriate criteria for determining cost exclusions for RIIO-GD3?

GDQ56. What are your views on the modelling treatment of workload adjustments for RIIO-GD3?

GDQ57. What are your views on the approach to regional factors for RIIO-GD3?

GDQ58. What are your views on the approach to company-specific factors for RIIO-GD3?

GDQ59. In your view, which cost areas will require separate technical assessment in RIIO-GD3?

GDQ60. What are your views on alternative technical assessment approaches for RIIO-GD3?

GDQ61. In your view, which cost areas will require separate non-regression analysis and benchmarking in RIIO-GD3?

GDQ62. Which separately assessed cost activities from RIIO-GD2 could potentially be included in totex benchmarking in RIIO-GD3?

GDQ63. What are your views on retaining the RIIO-GD2 pass-through cost items for RIIO-GD3?

GDQ64. What are your views on suitable approaches to the disaggregation of totex allowances for RIIO-GD3?

**Proposals for Business Plan Data Templates (BPDTs)**

GDQ65. In your view what are the high-priority areas of reporting inconsistency between GDNs within the RIIO-GD2 BPDTs and RRPs, and how can these be addressed for RIIO-GD3?

GDQ66. We invite views on current reporting requirements and reporting structure at the cost activity level and how this may be adapted to better suit RIIO-GD3 and related development of BPDTs.