

RIIO-3 Draft Determinations – Gas Distribution

Publication date:	01 July 2025
Response deadline:	26 August 2025
Contact:	Network Price Controls
Team:	RIIO-3
Telephone:	020 7901 7000
Email:	RIIO3@ofgem.gov.uk

The next set of price controls for the Electricity Transmission (ET), Gas Distribution (GD) and Gas Transmission (GT) sectors will cover the five-year period from 1 April 2026 to 31 March 2031 (RIIO-3). In December 2024 the network companies in these sectors submitted their RIIO-3 Business Plans for this period to us. We have now assessed these plans.

This document, and others published alongside it, set out our Draft Determinations for the RIIO-3 price controls. These are for consultation and we would like views from people with an interest in RIIO-3 by 26 August 2025. We particularly welcome responses from consumer groups and energy industry network users. We also welcome responses from other stakeholders and the public.

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](https://www.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.

© Crown copyright 2025

The text of this document may be reproduced (excluding logos) under and in accordance with the terms of the [Open Government Licence](#).

Without prejudice to the generality of the terms of the Open Government Licence the material that is reproduced must be acknowledged as Crown copyright and the document title of this document must be specified in that acknowledgement.

Any enquiries related to the text of this publication should be sent to Ofgem at:

10 South Colonnade, Canary Wharf, London, E14 4PU.

This publication is available at www.ofgem.gov.uk. Any enquiries regarding the use and re-use of this information resource should be sent to: psi@nationalarchives.gsi.gov.uk

Contents

RIIO-3 Draft Determinations – Gas Distribution	1
1. Introduction	6
Purpose of this document.....	6
What is gas distribution?.....	6
What are we consulting on?.....	6
Navigating the RIIO-3 Draft Determinations documents	7
2. RIIO-GD3 at a glance	9
We want GDNs to maintain a safe and resilient network, while managing uncertainty on the future of gas.....	9
Prioritising consumer needs and environmental sustainability... ..	10
With the lowest possible impact on bills.....	10
3. Outputs and incentives.....	12
Infrastructure fit for a low-cost transition to net zero	13
Environmental Action Plan and Annual Environment Report ODI-R.....	13
Advanced Leakage Detection (ALD) and the Digital Platform for Leakage Analytics (DPLA).....	18
7 and 28 Day Repair Standards ODI-F.....	22
Regional Energy Strategic Plan (RESP)	25
Secure and resilient supplies	25
Repex.....	26
Tier 1 Mains Decommissioned PCD	29
Tier 1 Services PCD.....	31
Tier 1 Iron Stubs PCD.....	33
Emergency Response Time Licence Obligation (LO) and ODI-R.....	36
Background	36
High quality of service from regulated firms	40
Vulnerability package	40
BAU Vulnerability and Carbon Monoxide Safety Activities.....	41
Vulnerability and Carbon Monoxide Allowance.....	42
Customer Satisfaction ODI-F	46
Disconnections Customer Satisfaction ODI-R.....	52
PSR Customer Satisfaction ODI-R.....	54
Complaints Metric ODI-F	55
PSR Customer Complaints ODI-R.....	58
Unplanned Interruptions ODI-F	59
Collaborative Streetworks ODI-F	64
Close out of the Domestic Load Connections Allowance	68
4. Managing uncertainty.....	70
Introduction.....	70
Infrastructure fit for a low-cost transition to net zero	71
Biomethane Connections UIOLI.....	71

Heat Policy Re-opener	73
Secure and resilient supplies	75
HSE Policy Re-opener	75
Tier 2A Mains and Services Replacement Volume Driver	79
Diversions and Loss of Development Claims Re-opener	81
High quality of service from regulated firms	82
Safety Disconnections Volume Driver	82
New Large Load Connections Re-opener	84
Specified Streetworks Costs Re-opener	86
GD specific pass-through costs	87
Background	88
UMs we propose to reject.....	89
CDSs	89
5. Cost of service.....	91
Chapter structure	92
Baseline totex	93
Assessment process	94
Cost assessment overview	95
Engineering assessment overview	95
Subject specialist technical reviews overview	97
Policy assessment overview	98
Approach to Cost Assessment	98
Questions	102
Proposed totex model for RIIO-GD3.....	102
Pre-modelling normalisations and adjustments	106
Overview.....	106
Regional factors.....	107
Company-specific factors	120
Exclusions	123
Cost and workload adjustments following technical reviews	125
Other normalisation adjustments.....	130
Questions	133
Totex Benchmarking	133
Overview.....	133
Totex regression model specification.....	133
Cost drivers	136
Econometric model results	146
Non-regression analysis.....	147
Overview.....	147
Catch-up efficiency challenge	153
Questions	154
Technically assessed costs.....	154

Technically assessed projects and cost activities	155
Bespoke outputs.....	159
Ongoing efficiency challenge	160
Disaggregation of allowances	161
Questions	161
Totex Incentive Mechanism (TIM)	162
Background	162
Business Plan Incentive	163
Business Plan Incentive - Stage B.....	163
Network level results.....	163
Assessment methodology	164
6. Your response, data and confidentiality	166
Consultation stages.....	166
How to respond	166
Your response, your data and confidentiality	166
General feedback.....	167
How to track the progress of the consultation.....	168
Appendix 1 – BAU Vulnerability and CO Safety activities to be funded through baseline allowances.....	169
Summary of BAU activities	169
Appendix 2 – Privacy notice on consultations	173
Personal data	173

1. Introduction

Purpose of this document

- 1.1 This document sets out our Draft Determination consultation positions for the Gas Distribution (GD) price control for the four Gas Distribution Networks (GDNs) in Great Britain (GB) covering the five-year period from 1 April 2026 to 31 March 2031 (RIIO-GD3). All figures in this document are in 2023/24 prices except where otherwise stated.

What is gas distribution?

- 1.2 The GDNs are responsible for transporting gas locally to approximately 22 million homes and businesses, to industry and power stations across GB.
- 1.3 Four GDNs own, operate and maintain the eight GB GD networks:
- Cadent Gas Ltd (Cadent) which incorporates East of England, North London, North West and West Midlands;
 - Northern Gas Networks Limited (NGN);
 - SGN Ltd (SGN) which incorporates Scotland and South East England; and
 - Wales and West Utilities Limited (WWU).

What are we consulting on?

- 1.4 In Chapter 2 we provide a summary of the key aspects of the RIIO-GD3 price control.
- 1.5 We explore the core outputs and incentives that we propose should underpin RIIO-GD3 in Chapter 3. This chapter sets out how we will enable GDNs to support consumers in vulnerable situations and outlines incentives to drive GDNs' behaviour that benefit consumers; such as providing excellent customer service and limiting the duration of unplanned outages. It also describes the outputs that we propose will be set in RIIO-GD3 to hold the GDNs accountable for delivering the replacement expenditure (repex) programme, which improves safety and resilience and reduces methane leakage.
- 1.6 Chapter 4 sets out how we propose to manage uncertainty during RIIO-GD3. It describes the suite of uncertainty mechanisms (UMs) we propose which are intended to ensure that RIIO-GD3 is flexible to manage the uncertainty around the future of gas and to provide funding where appropriate.
- 1.7 In Chapter 5 we outline how we have approached our assessment of the GDNs' costs and engineering justifications for the RIIO-GD3 period to ensure that there is sufficient investment to maintain a safe and reliable gas network, while

balancing the cost to consumers of delivering this considering the uncertain future of gas.

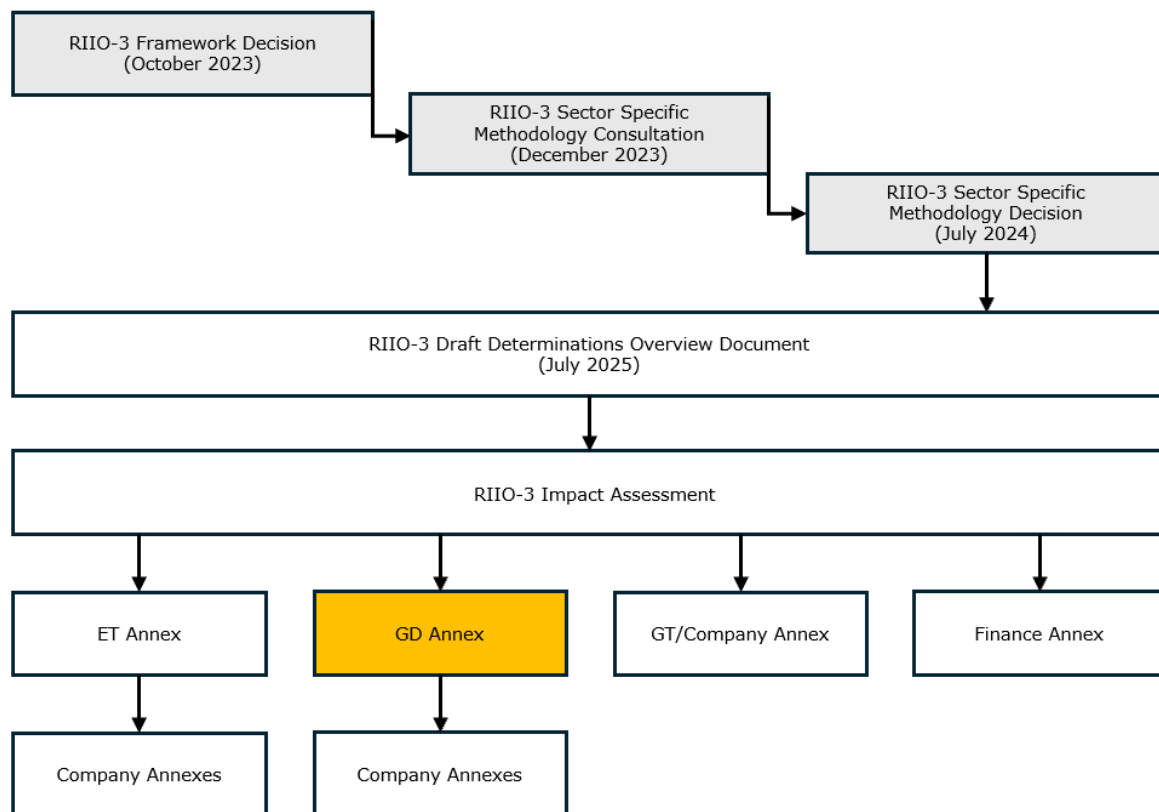
Navigating the RIIO-3 Draft Determinations documents

- 1.8 The RIIO-3 Draft Determinations are comprised of an Overview Document, a Finance Annex and sector annexes for ET, GD and GT. This document is the sector annex for GD. The sector annexes are underpinned by a RIIO-3 Impact Assessment, company annexes¹ and, where relevant, technical annexes. Figure 1 below maps all documents relevant to our suite of RIIO-3 Draft Determinations, including the framework and methodology documents that have preceded it.
- 1.9 Our Draft Determinations have considered all previous feedback and consultation responses from network companies and other stakeholders, including the reports from the Independent Stakeholder Groups (ISGs) that were established to challenge each of the network companies on their stakeholder engagement and business plans, and the feedback received in response to our RIIO-3 Call for Evidence.² Further details on our approach to embedding the consumer voice is set out in the RIIO-3 Overview Document.

¹ Throughout this document, 'company annexes' refers to the four GDN specific annexes to this document (their abbreviated names are Cadent Annex, NGN Annex, SGN Annex and WWU Annex).

² [Call for evidence on the electricity transmission, gas transmission and gas distribution business plans for RIIO-3 | Ofgem](#)

Figure 1: RIIO-3 Draft Determinations map



2. RIIO-GD3 at a glance

We want GDNs to maintain a safe and resilient network, while managing uncertainty on the future of gas...

- 2.1 While there remains significant uncertainty as to the pace and scale of the transition away from natural gas to meet the statutory net zero targets, we do not anticipate large-scale, systematic changes to the natural gas networks during the RIIO-3 price control period.
- 2.2 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 from climate change and cyber-attacks, remains a key priority for the RIIO-GD3 price control arrangements.
- 2.3 As such, RIIO-GD3 focuses on continuing to efficiently fund GDNs to deliver a secure, uninterrupted supply of energy to homes and businesses. To enable this, we propose £5.9bn of investment to replace deteriorating gas mains and services (repex), which is required by the Health and Safety Executive (HSE) to maintain safety and reduces leakage of methane into the atmosphere.
- 2.4 It is also vital that RIIO-GD3 is flexible enough to manage the uncertainty around the future of gas. We have therefore been conservative in only approving spending at this stage which is justified by a clear needs case and clear benefits to consumers. Further adaptability will be enabled through a suite of UMs that can flex funding up and down as need becomes clear, including in relation to government decisions on hydrogen heating and blending.
- 2.5 We will collaborate closely with government on its work to consider the future of the gas system, including looking at how best to pay for gas infrastructure. We know that without action, the fixed costs of paying for the gas network risk falling unfairly on a smaller population of future consumers. Therefore, pending the outcome of this work, we are taking steps to mitigate this risk by proposing that all new GD network investment is paid back by consumers by 2050. We consider this strikes an appropriate balance between protecting current and future consumers, while also managing the perceived risk of asset stranding for investors, in light of the uncertainty around the future of gas. This is a proportionate approach to a complex issue and aligns with actions to start accelerating depreciation being taken elsewhere in Europe, including in the

Netherlands and Germany. This approach is set out in Chapter 7 of the Overview Document and Chapter 8 of the Finance Annex.

Prioritising consumer needs and environmental sustainability...

2.6 We also want to maintain the progress seen in previous RIIO price controls in relation to GDNs providing services that consumers value, including supporting and protecting consumers in vulnerable situations, and delivering a network that is environmentally sustainable. As such RIIO-GD3 will include:

- A focus on reducing leakage by funding £52m of Advanced Leakage Detection technologies to enable the GDNs to more accurately detect leaks, as well as introducing a new incentive to drive the GDNs to repair methane leaks in a timely manner;
- A £165m dedicated allowance to support consumers in vulnerable situations and carbon monoxide safety, alongside additional funding within companies' upfront allowances for business as usual (BAU) vulnerability activities;
- Incentives to maintain the quality of service GDNs provide, including in relation to customer satisfaction and minimising the amount of time customers are affected during supply interruptions;
- An expansion of the incentive for GDNs to collaborate with other utilities on streetworks projects, broadening its scope from a London-specific incentive in RIIO-GD2 to apply it nationwide; and
- A £46m Network Innovation Allowance (NIA) across GD and access to portions of a £500m Strategic Innovation Fund (SIF) to support network innovation that contributes to net zero.

With the lowest possible impact on bills

2.7 To deliver these objectives as efficiently as possible we have proposed baseline totex allowances for all GDNs of £12.8bn, which is £3.8bn lower than business plan submissions, as detailed in Chapter 5.

2.8 This difference is due to three main factors. The first is totex reductions through our engineering and technical review where, based on our review of the evidence submitted to date, we do not consider the proposed investment to be justified - either in terms of overall need or the specific option being proposed. We have given particular scrutiny to work that is not driven by mandatory safety or wider legislative requirements. We think this is prudent in the context of an uncertain future of gas and the required scale of spending on electricity networks which we are also consulting on today.

- 2.9 The second is where we understand the need for the investment but we want GDNs to provide additional information in response to this consultation before we can settle on the level of allowances required.
- 2.10 The third driver of variation is where we have undertaken a robust assessment of proposed costs and set allowances at what we consider is the efficient level. This includes benchmarking totex to determine competitive costs for delivery of outputs, and the application of efficiency challenges, to incentivise less efficient networks to catch-up to the productivity levels of the most efficient ones (the 'catch-up' efficiency challenge), and to drive ongoing productivity improvement across the industry (the ongoing efficiency challenge).

3. Outputs and incentives

- 3.1 This chapter sets out our proposals for the package of outputs and incentives that will apply in RIIO-GD3, including Licence Obligations (LOs), Price Control Deliverables (PCDs), Use-It-Or-Lose-It (UIOLI) allowances and Output Delivery Incentives (ODIs).³ It focuses on the common outputs which will apply to all GDNs – for details of outputs which only apply to a single GDN, see the company annexes.
- 3.2 The outputs are set out under the headings of the RIIO-3 outcomes:
- Infrastructure fit for a low-cost transition to net zero;
 - Secure and resilient supplies; and
 - High quality of service from regulated firms.
- 3.3 Table 1 and Table 2 outline all the outputs and incentives we are proposing for RIIO-GD3 and set out where you can find full details.

Table 1: Cross-sectoral outputs and incentives RIIO-3

Output name	Output Type	Sector(s)	Further detail
Network Asset Risk Metric (NARM)	PCD, ODI-F and ODI-R	ET, GD, GT	Overview Document
Cyber Resilience	PCD and re-opener	ET, GD, GT	Overview Document
Environmental Action Plan and Annual Environmental Report	ODI-R and LO	ET, GD, GT	Overview Document
Strategic Innovation Fund (SIF)	UIOLI	ET, GD, GT	Overview Document
Network Innovation Allowance (NIA)	UIOLI	ET, GD, GT	Overview Document
Totex Incentive Mechanism (TIM)	ODI-F	ET, GD, GT	This document
Operational Transport Emissions Reduction	PCD	ET, GD	Overview Document
Biomethane Connections	UIOLI	GD, GT	This document

Table 2: Sector specific outputs and incentives RIIO-GD3

Output name	Output type	Further detail
7 and 28 Day Repair Standards	ODI-F	This document

³ ODIs can be either financial (ODI-F) or reputational (ODI-R).

Tier 1 Mains Decommissioned	PCD	This document
Tier 1 Services	PCD	This document
Tier 1 Iron Stubs	PCD	This document
Emergency Response Time	LO	This document
Vulnerability and Carbon Monoxide Allowance (VCMA)	UIOLI	This document
Customer Satisfaction	ODI-F	This document
Disconnections Customer Satisfaction	ODI-R	This document
PSR Customer Satisfaction	ODI-R	This document
Complaints Metric	ODI-F	This document
PSR Customer Complaints	ODI-R	This document
Unplanned Interruptions	ODI-F	This document
Collaborative Streetworks	ODI-F	This document

Infrastructure fit for a low-cost transition to net zero Environmental Action Plan and Annual Environment Report ODI-R

Purpose: Ensure GDNs have ambitious environmental commitments for RIIO-GD3 and report on their performance against these commitments annually.

Benefits: Drive the GDNs to be ambitious in providing a more environmentally sustainable network which focuses on mitigating emissions, limiting impact on the natural environment, and ensuring energy efficiency.

Consultation position and rationale

Background

- 3.4 The Environmental Action Plan (EAP) and Annual Environmental Report (AER) ODI-R is a cross-sector output. Our consultation positions on the cross-sector RIIO-3 EAP and AER policy design can be found in Chapter 4 of the Overview Document.
- 3.5 As set out in our RIIO-3 Business Plan Guidance (BPG), the common EAP areas for all sectors are Business Carbon Footprint (BCF), embodied carbon, biodiversity and natural capital, resource use, and supply chain. Shrinkage, leakage, hydrogen blending, and biomethane and other low gas connections are additional sector specific issues the GDNs must consider.
-

- 3.6 Feedback from Independent Stakeholder Groups (ISGs) and environmental groups in response to our Call for Evidence was generally supportive of the GDNs' EAP proposals - the majority of the EAPs were considered ambitious. However, an environmental group considered the GDNs' biodiversity plans to be relatively unambitious. They emphasised the importance of biodiversity, recommending that we provide flexibility to enable the GDNs to go further than their business plan proposals in RIIO-GD3. It also highlighted Ofwat's introduction of a financial incentive on biodiversity in its 2024 price review.
- 3.7 The GDNs' ISGs supported their respective GDN's shrinkage reduction target proposals. Additionally, an environmental group asked us to require reporting of observed emissions data in RIIO-GD3 to support the development of a robust shrinkage financial incentive in RIIO-GD4.

Summary of consultation position

Costs and commitments: Accept most of the GDNs' EAP costs, commitments and targets. We have proposed some modifications to align policy across the GDNs and/or other sectors, to suggest a different funding route, or due to a lack of evidence or clarity.

Business Carbon Footprint (BCF): Reject the GDNs' proposed BCF targets. We expect the GDNs to work together to apply a consistent methodology for setting BCF targets and to re-submit targets in their Draft Determination responses.

Biodiversity and natural capital: Accept the GDNs' baseline requests, commitments and targets.

Shrinkage: Accept the GDNs' shrinkage reduction targets. Require GDNs to report on both modelled and observed measures of shrinkage in their AERs once observed data becomes available.

Costs and commitments

- 3.8 We propose to accept most company proposals, however, there are some proposed modifications and rejections which we have set out in the company annexes. These are to:
- align policy across GD and/or other sectors;
 - to suggest a different funding route; or
 - because there is a lack of evidence or lack of output clarity.
- 3.9 For accepted proposals, we are provisionally accepting the GDNs' submitted costs, subject to regression modelling (our approach to cost assessment is set out in Chapter 5). These are higher than RIIO-GD2 costs, but we think this is

justified due to the need to drive significant behavioural changes across the GDNs to support the reduction of emissions in RIIO-GD3.

3.10 The specific areas where we consider increased costs to be justified include:

- a significant increase in shrinkage reduction activities;
- the rollout of the Digital Platform for Leakage Analytics (DPLA) and Advanced Leakage Detection (ALD) technologies;⁴ and
- an increase in costs associated with Zero Emission Vehicles (ZEV) commitments.

Business Carbon Footprint

3.11 We propose to reject the GDNs' submitted BCF targets due to a lack of comparability between the GDNs' methodologies. We expect the GDNs to work together to apply a consistent methodology for setting BCF targets and to resubmit targets in their Draft Determination responses.

3.12 In our BPG, we set our expectation for the GDNs to work alongside their ISGs to propose BCF targets in alignment with the Science Based Target Initiative (SBTi). All GDNs proposed RIIO-3 BCF reduction targets, as set out in Table 3. Some GDNs also proposed to seek SBTi accreditation, once an SBTi methodology for gas and oil companies is established.

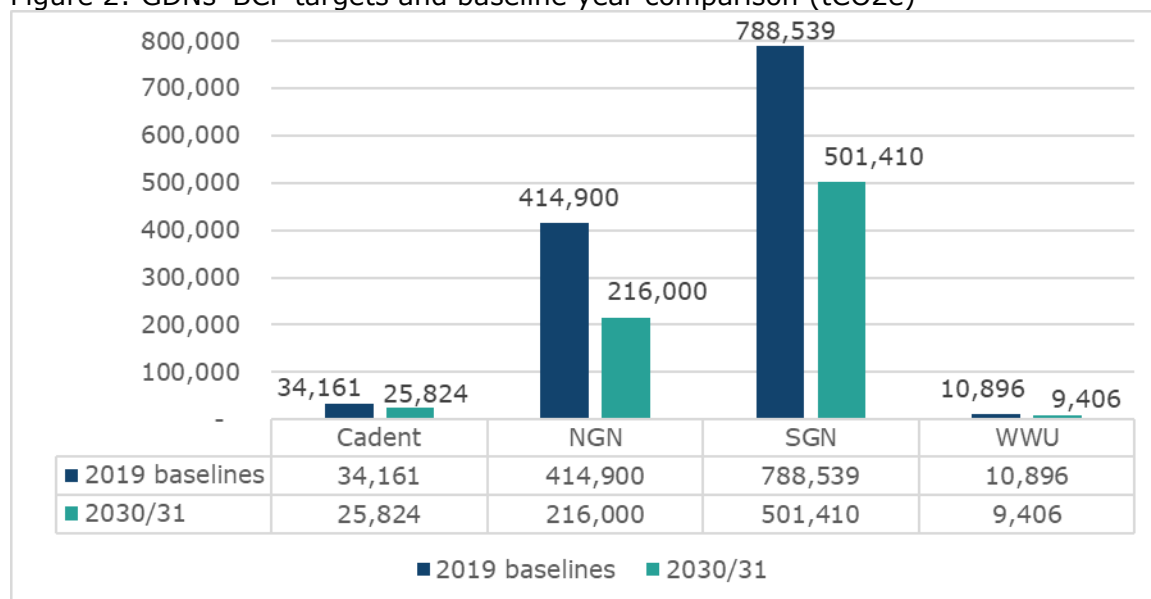
Table 3: Scope 1 and 2 BCF targets

GDN	Target	Baseline year	Target year	Inclusive of shrinkage
Cadent	13%	2018/19	2031	No
NGN	45%	2018/19	2031	No
SGN	46%	2019	2031	Yes
WWU	37.5%	2019	2031	No

3.13 However, there were significant inconsistencies in the methodologies used by the GDNs to set targets. For example, there were differences in the use of location-based or market-based approaches for projecting emissions and defining targets. Additionally, one GDN included shrinkage in its BCF targets, whereas the others did not. Figure 2 illustrates the contrast in the GDNs' BCF tCO₂e forecasts in RIIO-GD3, which we consider to be the result of inconsistent projections being used.

⁴ Further details on ALD and DPLA are set out later in this chapter.

Figure 2: GDNs' BCF targets and baseline year comparison (tCO₂e)



3.14 As a result, it is not possible to meaningfully compare the BCF ambitions set out in the RIIO-GD3 plans. We are therefore requiring the GDNs to collaborate and resubmit their targets using a fully aligned and consistent methodology in their Draft Determination responses.

Biodiversity and natural capital

3.15 We propose to accept the GDNs' biodiversity targets, proposed activities and costs for RIIO-GD3 as they meet the guidelines of the biodiversity net gain (BNG) legislation.⁵

3.16 We also propose that the GDNs collaborate with biodiversity experts, charities and consultants when preparing their AERs. We agree with the environmental group that the GDNs could go beyond their proposed projects and BAU activities to support BNG in RIIO-GD3. Engaging with biodiversity specialists will provide valuable insights into local biodiversity priorities, ensure projects are ambitious and encourage GDNs to identify additional, impactful opportunities to enhance biodiversity within the communities they serve.

Shrinkage

Targets

⁵ Understanding biodiversity net gain: <https://www.gov.uk/guidance/understanding-biodiversity-net-gain>

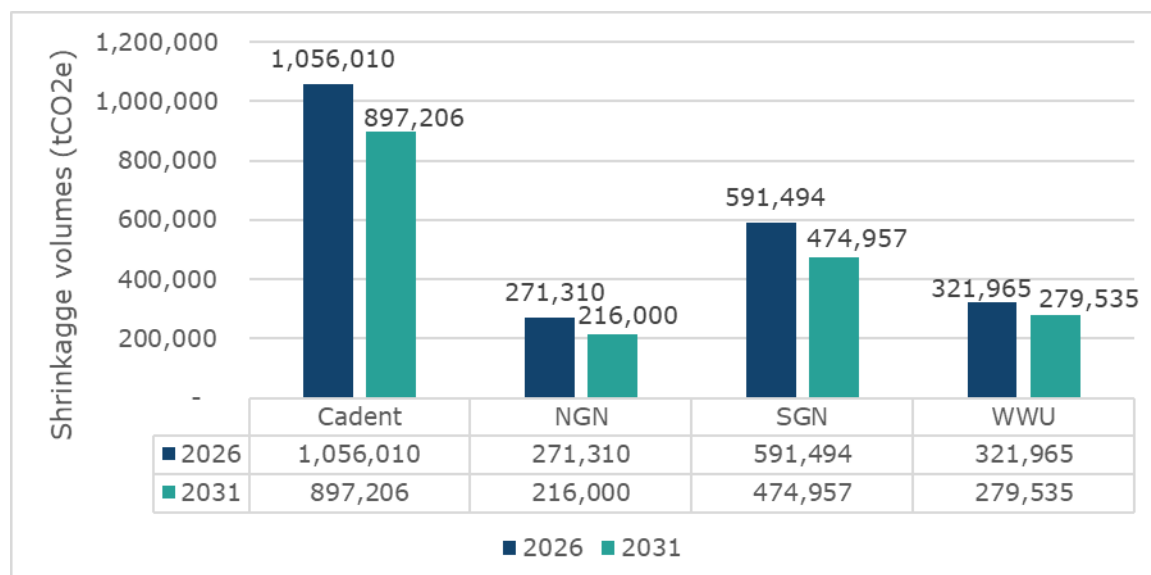
- 3.17 We propose to accept the GDNs' submitted shrinkage reduction targets. We consider their modelled shrinkage targets to be stretching and go sufficiently beyond their RIIO-GD2 ambitions.
- 3.18 In our SSMD, we asked the GDNs to work with their ISGs to propose shrinkage reduction targets for RIIO-GD3 (see Table 4) and to report on both modelled and observed measures of leakage, once observed measures become available. The GDNs used a range of methodologies to propose shrinkage targets based on the activities and projects they plan to deliver, including proactive leak detection, pressure management and control.

Table 4: GDN RIIO-GD3 shrinkage target proposals compared to RIIO-GD2 targets

GDN	RIIO-GD2 shrinkage targets (%)	RIIO-GD3 shrinkage reduction proposals (%)
Cadent	18	16
NGN	23	22
SGN	18	33
WWU	10	16

- 3.19 Figure 3 illustrates that the GDNs submitted targets, if met, would significantly reduce their shrinkage emissions by volume in RIIO-3.

Figure 3: GDNs' proposed RIIO-GD3 shrinkage volume reduction (tCO₂e)



- 3.20 While targets vary across GDNs and in comparison to RIIO-GD2, we consider the proposed activities to be ambitious and the targets to be stretching. In some cases, the proposed RIIO-GD3 shrinkage targets may appear less ambitious than those set in RIIO-GD2. However, we consider this reflects that some GDNs

have already implemented many of the most effective shrinkage reduction measures - such as pressure management and gas conditioning - during RIIO-GD2. We consider the variation in targets between GDNs also reflects differences in the type and scale of activities planned in RIIO-GD3. We also note the ISGs expressed support for the targets.

- 3.21 We encourage the GDNs to undertake additional shrinkage reduction activities through the Net Zero Re-opener Development Use It or Lose It Allowance (NZARD UIOLI) and through the Net Zero Pre-construction and Small Projects (NZASP) Re-opener to go beyond their RIIO-GD3 shrinkage reduction targets to drive consumer and environmental benefits. These UMs are discussed in Chapter 6 of the Overview Document.

AER reporting

As decided at SSMD, we will require GDNs to report on both modelled and observed measures of shrinkage in their AERs once observed data becomes available. We agree with the environmental group that reporting of observed emissions data in RIIO-GD3 could support the development of a robust shrinkage financial incentive in RIIO-GD4. As set out in our

- 3.22 DPLA section, we think it is important for the GDNs to roll out the DPLA on a consistent basis to deliver both benefits to consumers and to provide a sufficient data set to inform the development of a shrinkage incentive in RIIO-GD4.

Questions

GDQ1. Do you have any views on our proposed approach for the GD-specific environmental commitments, costs and targets?
--

Advanced Leakage Detection (ALD) and the Digital Platform for Leakage Analytics (DPLA)

Purpose: To enable the GDNs to rollout ALD technologies and the DPLA.

Benefits: ALD will enable the GDNs to detect and repair leaks on their network at a faster rate and the DPLA will enable the GDNs to optimise their maintenance and repair operations.

Background

- 3.23 ALD is the use of new technologies, such as leak detection mounted vehicles, to improve the accuracy of leak detection and measurements. The DPLA seeks to replace the existing Shrinkage and Leakage Model (SLM) to improve shrinkage reporting and to enable the GDNs to optimise their maintenance and repair operations to further reduce leakage.

- 3.24 In our SSMD, we decided to fund the rollout of ALD and the DPLA. We required the GDNs to include their rollout plans for ALD and the DPLA in their EAPs, including proposed costs, the types of ALD technologies they plan to adopt, implementation timescales and cost benefit analysis for the DPLA.
- 3.25 Feedback from our Call for Evidence noted concern about the delayed rollout of the DPLA across the GDNs. A stakeholder highlighted disparities in the proposed speed of deployment, which could lead to consumers outside of Cadent's network not seeing the benefits of the innovation until later in the price control. The stakeholder also flagged potential impacts on the development of any shrinkage incentive in RIIO-GD4, as a delayed rollout limits the quality of data available to us when setting targets.
- 3.26 SGN's ISG said that it would have liked to see more ambition on ALD within SGN's Business Plan. Both an environmental group and SGN's ISG suggested that we should urge the GDNs to accelerate progress on the DPLA and ALD, while identifying other ways to track leakage from above ground installations. A consumer group suggested that while leakage and emissions reduction is important, the timing of further investments in the gas network must be carefully balanced in the context of declining gas use.
- 3.27 The GDNs have suggested that rolling out ALD and the DPLA could increase their operational workload. An environmental group suggested that we should have an early discussion with HSE and the GDNs around how to manage the increased awareness of gas leaks.

Summary of consultation position

ALD funding: Fund the rollout of ALD through baseline allowances. Additional ALD can be funded through the NZARD UIOLI, if required.

DPLA funding: Fund the DPLA through baseline allowances for Cadent, and the NZASP Re-opener for NGN, SGN and WWU.

ALD

- 3.28 We propose to fund the rollout of ALD through baseline allowances for all GDNs, subject to them providing further information through their consultation responses on the associated costs and their chosen technology providers. We also propose to allow GDNs to fund additional ALD through the NZARD UIOLI if it is required to support the rollout of the DPLA in RIIO-GD3.
- 3.29 We have provisionally included costs in our regression model to fund the rollout of ALD as set out in Table 5. This reflects our view that rolling out ALD is

important to meet the new HSE requirements on condition monitoring through its Iron Mains Risk Reduction Programme (IMRRP).⁶

- 3.30 However, we currently lack sufficient detail to confirm whether these costs are efficient. Therefore, inclusion of these costs in our Final Determinations is subject to the GDNs providing us further information on:
- the details of their chosen technology and technology provider; and
 - a breakdown of costs attributed to the technology provider, vehicles, vehicle maintenance, drivers, projects managers, survey teams, project managers and IT integration.
- 3.31 All GDNs, except SGN, proposed that ALD should be funded through baseline allowances and said that rollout would begin in 2026. However, SGN proposed that we fund its rollout of ALD through the NZARD UIOLI due to potential workload increases to repair leaks during RIIO-GD3. We consider that baseline allowances are appropriate to fund ALD as HSE's expectation is that ALD should be rolled out for condition monitoring from 2026.
- 3.32 Since submitting its business plan, Cadent has submitted a RIIO-GD2 NZASP request to start rolling out vehicle-based ALD units, which overlaps with its RIIO-GD3 business plan proposal. We will consult on our RIIO-2 NZASP funding decision later this summer. For our Draft Determinations, we propose to lower Cadent's submitted costs by its full NZASP funding request to ensure there is no potential overlap in costs should we approve the NZASP funding request. We will take our NZASP decision into account when setting Cadent's allowances in our Final Determinations.
- 3.33 We note comments from the GDNs that increased proactive leak surveying could increase their operational workloads. Our expectation for the GDNs' use of ALD in RIIO-GD3 is to improve leak detection and to meet HSE's requirements on condition monitoring, but we do not expect this to materially increase operational workloads nor costs. However, we are continuing to engage with HSE and the GDNs to better understand the potential operational impact of ALD in RIIO-GD3.

⁶ Changes to the IMRRP are discussed later in this chapter. For further information see HSE's website: <https://www.hse.gov.uk/gas/supply/mainsreplacement/enforcement-policy-2026-2031.htm>

Table 5: GDN ALD cost proposals

GDN	GDNs' Business Plan costs proposals (£m)	RIIO-3 DD cost proposal (£m)
Cadent	47.71	27.37
NGN	4.90	4.90
SGN	12.43	12.43
WWU	7.10	7.10
Total	72.14	51.80

DPLA

- 3.34 We propose to provide baseline allowances for Cadent to rollout the DPLA. However, due to the high level of uncertainty surrounding costs and rollout plans for the other GDNs, we propose that funding for NGN, SGN, and WWU be provided through the NZASP Re-opener. See Chapter 6 of our Overview Document for more details on the NZASP Re-opener.
- 3.35 In its business plan, Cadent proposed £5.12m through baseline allowances to rollout the DPLA in the first year of RIIO-GD3. In RIIO-GD2, Cadent has led the DPLA SIF project so it has greater certainty of costs and timelines for implementing the DPLA in RIIO-GD3 than the other GDNs. Given the certainty of costs and maturity that Cadent has for this project, we consider baseline funding is appropriate. We encourage Cadent to continuously share its learning of the DPLA rollout with the other GDNs.
- 3.36 In their business plans, all the other GDNs cited a high level of uncertainty for the cost and rollout timescales for the DPLA and so proposed to fund this using UMs. Two GDNs highlighted difficulties in committing to a rollout timeframe because they say this will be determined by the outcomes of the DPLA SIF project which is not yet complete. In recent engagements, these GDNs said the uncertainty will not be resolved in time to include the costs in our Final Determinations. As a result, we propose the NZASP Re-opener should be used to fund the DPLA rollout for NGN, SGN and WWU.
- 3.37 It is important for the GDNs to roll out the DPLA consistently and as soon as possible to deliver benefits to consumers and to provide a sufficient data set to inform the development of a shrinkage incentive in RIIO-GD4. We expect GDNs to work together to coordinate a rollout timeline for the DPLA and we will engage with them to establish an appropriate timeline for triggering the re-opener during RIIO-GD3.

Questions

GDQ2. Do you have any views on our proposed funding for the DPLA and ALD?

7 and 28 Day Repair Standards ODI-F

Purpose: To incentivise the GDNs to meet common performance targets for completing outstanding gas escape repairs within 7 and 28 days.

Benefits: Repairing methane leaks in a timely manner will reduce the environmental impact of emissions and encourage efficient repairs work.

Background

- 3.38 Under current regulations,⁷ GDNs must repair gas escapes within 12 hours of being informed of them, unless they can prove that it is not reasonably practicable. If an escape persists beyond 12 hours, it must be monitored and repaired as soon as is practicable.
- 3.39 For RIIO-GD2, NGN proposed two bespoke ODI-Rs to increase the proportion of outstanding repairs that it completes within 7 days and 28 days of being informed of a gas escape. We did not include NGN's bespoke ODI-Rs in our RIIO-2 Final Determinations because it was not clear that its proposed targets were stretching. However, we decided to start collecting data on outstanding repairs from all GDNs through the Regulatory Reporting Packs (RRPs). Based on the data provided through the RRP, we have seen a dip in performance for some GDNs during RIIO-GD2.
- 3.40 In its RIIO-GD3 business plan, NGN proposed a common ODI-F for completing outstanding gas escape repairs within 7 and 28 days. It proposed setting common targets to complete:
- 89% of outstanding repairs within 7 days - with financial rewards above this target and financial penalties below 70%; and
 - 98% of outstanding repairs within 28 days - with no financial reward or penalty for this target.
- 3.41 We are proposing to introduce a common, penalty-only ODI-F, using different targets to those submitted by NGN.

⁷ Section 7 of the Gas Safety (Management) Regulations (GS(M)R) 1996:
<https://www.legislation.gov.uk/ukxi/1996/551/regulation/7/made>

Consultation position and rationale

Summary of consultation position

ODI type: Financial - penalty only.

Measurement: Repair of outstanding gas escapes completed within 7 and 28 days.

Targets: Two minimum performance targets to complete 75% of outstanding repairs in 7 days, and 90% in 28 days.

Incentive exposure: Penalty cap at 0.17% of Return on Regulated Equity (RoRE).⁸

Incentive value: Penalty applied linearly below the minimum performance target, up to 0.17% of RoRE, split equally across the two metrics.

Applies to: All GDNs.

ODI Type

- 3.42 We propose to introduce a common, penalty-only ODI-F to encourage better performance in this area. Financial penalties would apply when performance targets are not met for two equally weighted metrics: the completion of outstanding repairs within 7 days and within 28 days.
- 3.43 We consider that the prompt completion of outstanding repairs delivers environmental benefits by reducing the leakage of methane - a potent greenhouse gas - into the atmosphere. We think that applying the penalty-only ODI-F to all GDNs is appropriate as this is an area which has seen performance levels for some GDNs drop during RIIO-GD2.
- 3.44 NGN proposed that the 7 day metric should be subject to a reward and penalty ODI-F, while the 28 day metric should be reputational only. We do not support this approach, as we consider both metrics to be equally important and therefore both should be financially incentivised. We also disagree with including financial rewards through this ODI-F, as we see timely completion of repairs as an area where minimum standards should already be in place. Notably, all GDNs have historically performed well in this area without a financial reward, as evidenced by the information they submitted to us in response to our RIIO-2 Draft Determinations. We therefore consider a penalty-only ODI-F, with both metrics weighted equally, to be appropriate.

⁸ Please see Chapter 11 of the Finance annex for a breakdown of the RoRE figures.

Measurement

- 3.45 We propose to set common, static targets for all GDNs based on the two metrics outlined above: the number of outstanding gas escape repairs completed within 7 days and within 28 days. We consider that common targets are appropriate to guarantee a minimum standard of service for consumers regardless of where they live.

Targets

- 3.46 We propose to set two minimum performance targets to complete:
- 75% of outstanding repairs in 7 days; and
 - 90% of outstanding repairs in 28 days.
- 3.47 These minimum performance targets are set at the industry average based on GDN performance in the first three years of RIIIO-GD2. We consider this approach is appropriate as it sets a challenging yet achievable target for the lowest-performing GDNs by aligning them more closely with the sector average. For the 28 day target, we also note that each GDN has reached this level at least once during RIIIO-GD2. These proposed targets may be adjusted following the inclusion of 2025 RRP data.

Incentive exposure

- 3.48 We propose to set the maximum exposure for this incentive at the equivalent of 0.17% of RoRE. This is consistent with other penalty-only ODI-Fs, such as the Complaints Metric ODI-F and Unplanned Interruptions ODI-F.

Incentive value

- 3.49 We propose that financial penalties will be applied linearly below the minimum performance target with a maximum penalty equivalent to 0.17% of RoRE. See Table 6 below for a summary of the proposed penalty bands.

Table 6: Proposed 7 & 28 day repair penalty thresholds

	7 Day	28 Day
Penalty threshold	75%	90%
Penalty cap	65%	84%

- 3.50 The proposed penalty caps for both metrics are 1 standard deviation from the RIIIO-GD2 average industry score. We consider these penalty bands are appropriately stretching based on RIIIO-GD2 data. See Table 7 below for a summary of the key standard deviation values.

Table 7: 7 and 28 day repair standard deviation values⁹

St. Dev Value	7 Day	28 Day
0.5	5%	3%
1	11%	6%
1.5	16%	9%
GD2 Average	75%	91%

- 3.51 We propose that each metric is worth 50% of the overall penalty. We consider that this will encourage the GDNs to give equal weight to each metric.

Questions

GDQ3. Do you agree with our proposed design of the 7 and 28 Day Repair Standards ODI-F, including the proposed performance targets and incentive rate?

Regional Energy Strategic Plan (RESP)

Consultation position and rationale

- 3.52 Our SSMD asked GDNs to include costs for RESP coordination and engagement activities in their business plans. Following our assessment of these RESP submissions, we propose to fund lower materiality investments that are for the purposes of RESP coordination, engagement and preparation via the NZARD UIOLI and the NZASP Re-opener. Further details about these two UMs, and proposed decisions for their RIIO-3 scope, can be found in Chapter 6 of the Overview Document.
- 3.53 However, we consider a number of the RESP-related proposals submitted by the GDNs to be duplicative of the work we expect to be conducted by the National Energy System Operator (NESO) in its role developing the RESPs. We advise the GDNs to continue to work with NESO and ourselves to ensure that their RESP proposals do not duplicate, but instead support, the work of the RESPs. We will work with stakeholders to amend the NZARD and NZASP Governance Documents to clearly define the eligibility criteria for RESP-related projects.

GDQ4. Do you agree with our proposal to enable the GDNs to submit RESP coordination and engagement activities through NZARD and NZASP?

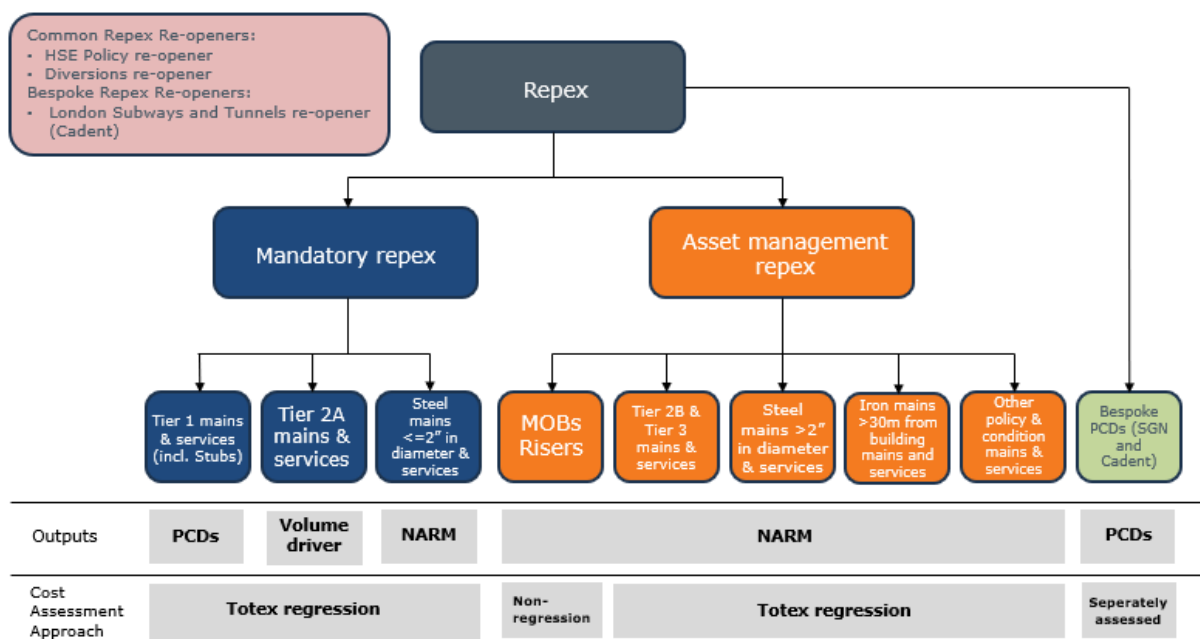
Secure and resilient supplies

⁹ Please note that due to rounding errors the thresholds and standard deviation values may not be aligned.

Repex

- 3.54 Repex refers to the long-term programme to replace old and deteriorating mains, services and risers. Figure 4 summarises our approach to outputs and cost assessment for repex in RIIO-GD3.

Figure 4 Overview of our approach to repex in RIIO-GD3



- 3.55 Typically, iron or steel gas mains and services are replaced with plastic pipes. Beyond improving health and safety, repex provides significant environmental and operational benefits by reducing methane leakage from the network.
- 3.56 Health and Safety Executive (HSE) requirements are the primary driver of repex. In RIIO-GD2, over 70% of repex spend is driven by the HSE's IMRRP, which requires the GDNs to manage the safety risk of iron mains that are within 30 metres of a building.¹⁰ Depending on their size, HSE's current IMRRP enforcement policy specifies that these iron mains must be managed either through decommissioning, remediation or condition monitoring.^{11,12} Specifically:

¹⁰ HSE, Iron Mains Risk Reduction:

<https://www.hse.gov.uk/gas/supply/mainsreplacement/index.htm>

¹¹ 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.

¹² Tier 2 pipes scoring below a risk-action threshold and Tier 3 pipes are subject to condition monitoring. Where pipes are found not to be in an efficient state, in efficient working order and in good repair, the GDNs should act to remedy this.

- Tier 1 Mains, those less than or equal to 8 inches in diameter, must be decommissioned by 2032;
- Tier 2A Mains, those greater than 8 inches and less than 18 inches in diameter, which are above a risk-action threshold,¹³ must be decommissioned or remediated over the period of the GDN's Approved Programme;¹⁴
- Tier 2B Mains, those greater than 8 inches and less than 18 inches in diameter, which are below a risk-action threshold, are subject to condition monitoring. Decommissioning can be funded if supported by cost-benefit analysis (CBA); and
- Tier 3 Mains, those equal to or greater than 18 inches in diameter, are subject to condition monitoring. Decommissioning can be funded if supported by CBA.

Mandatory Repex

3.57 In line with the HSE's IMRRP enforcement policy, we expect:

- all Tier 1 mains and services to be decommissioned by 2032; and
- GDNs to continue decommissioning Tier 2 mains which are above a risk-action threshold (Tier 2A mains) in line with their HSE Approved Programmes.

3.58 We consider the replacement of non-polyethylene (non-PE) services, steel pipes less than or equal to 2 inches in diameter and medium pressure ductile iron mains to be mandatory.

3.59 Feedback from our Call for Evidence suggests that stakeholders support the need for repex investment to comply with the IMRRP, as well as to comply with broader safety regulations. An environmental group suggested that we should engage with DESNZ and the HSE on how safety can be securely maintained at least-cost for the customer as we proceed through the energy transition.

3.60 We propose to continue funding the GDNs' mandatory repex programmes, whilst ensuring the costs are efficient. Please see the individual company annexes for further information.

¹³ The risk-action threshold is agreed between HSE and each GDN individually. There is currently a review of the GDNs risk-action thresholds taking place. We are engaging with GDNs and the HSE to understand the impact of this.

¹⁴ A GDN's Approved Programme is the programme agreed between the GDN and the HSE which details the measures and processes through which risk related to iron mains is to be managed.

Non-mandatory repex

- 3.61 The GDNs must also manage the risk of their assets that are not included within the HSE's mandatory programme. Therefore, the remaining repex spend is for asset management activities. This includes replacement of Tier 2B and Tier 3 mains, as well as the replacement of risers and mains made of other materials as required. Non-mandatory repex is covered by NARM and is justified through CBA, considering safety, operational and environmental benefits.
- 3.62 Responses to our Call for Evidence recognised that there is a judgement as to the level of safety risk for non-mandatory mains, but that GDNs have a statutory requirement to maintain safety. Stakeholders also mentioned the additional benefits such as reducing methane leakage and preventing future unplanned interruptions.
- 3.63 Most respondents, including two of the ISGs, supported non-mandatory repex as a way of driving additional environmental benefits through reduced leakage, with other responses supporting increased leakage reduction activities. However, a consumer group noted that careful consideration is needed by Ofgem to avoid too much investment in this area given the declining use of gas. Some stakeholders also suggested that improved data on asset health, for instance through the ALD programme, can inform longer term plans and reduce costs in other areas.
- 3.64 Further information about the GDNs' ALD programmes is included in the section on ALD and the DPLA (paragraphs 3.23-3.37).
- 3.65 Reflecting on this feedback, we assessed the level of non-mandatory repex spend with these objectives in mind:
- to ensure we are funding GDNs to meet their statutory and licence obligations to maintain a safe network; and
 - to ensure repex investment is justified and efficient in the context of future gas network usage uncertainty.
- 3.66 The overall assessment of non-mandatory workloads follows a three-step process:
- Stage 1 - Engineering assessment: reviewing the needs-case, optioneering and cost breakdowns.
 - Stage 2 - Cost Benefit Analysis: those workloads which pass Stage 1 must also pass a CBA which measures the costs to consumers against the benefits delivered.

- Stage 3 - Cost assessment: those workloads which pass Stage 2 are subject to robust comparative benchmarking.
- 3.67 In our SSMD, we said that as part of our business plan assessment we would consider what CBA payback cut-off period to apply to non-mandatory repex investment (Stage 2). We noted that this could be shorter than in RIIO-GD2 to reflect uncertainty in the future of gas. This is to ensure that the benefits of non-mandatory repex are carefully balanced with the costs.
- 3.68 As set out in paragraph 2.4, we plan to only approve spending which is justified by a clear needs case and benefits to consumers.
- 3.69 To reflect this, we propose to reduce the payback cut-off period from 16 years (as used in RIIO-GD2) to 11 years. This means that asset management programmes must demonstrate cumulative benefits that exceed billed costs after 11 years - ie by 2037, which is the same as the cut-off date used in RIIO-GD2 assessments.
- 3.70 The resulting workload adjustment brings RIIO-GD3 investment in non-mandatory repex closer to the total allowance approved for RIIO-GD2, so maintains consistency across the price control periods.
- 3.71 The remainder of the assessment of non-mandatory workloads, Stages 1 and 2, remains in line with the approach taken in RIIO-GD2.
- 3.72 We consider that this overall approach represents a good balance between enabling efficient investment in asset management and accounting for the long-term uncertainty surrounding the future of gas.
- 3.73 We intend to undertake further work with GDNs to determine the appropriate level of non-mandatory repex workloads for RIIO-GD3.

GDQ5. Do you have any feedback on our approach to assessing non-mandatory repex workloads?
--

Tier 1 Mains Decommissioned PCD

Purpose: To fund Tier 1 iron mains decommissioning and replacement activities.

Benefits: The PCD provides the GDNs with flexibility to manage the Tier 1 repex programme efficiently, whilst making sure that consumers only pay for the workloads that are delivered.

Background

- 3.74 In our SSMD, we decided to retain this PCD in RIIO-GD3. We said we would not remove the upward Allowance Adjustment Mechanism because it is needed to protect consumers from inefficient overspend. This feature adjusts allowances at close out to reflect the outturn workload mix based on ex ante unit costs. However, the GDNs raised concerns regarding cost pressures, in response we said we would consider whether to slightly increase the cap of the upward Allowance Adjustment Mechanism above 3% in our Draft Determinations.
- 3.75 Feedback from our Call for Evidence was mixed. There was some support for the GDNs' assertion that there is increased complexity of Tier 1 repex projects in the final stages of the IMRRP. However, one ISG noted that this may have been influenced by the choices taken by GDNs over time.

Summary of consultation position

Allowance Adjustment Mechanism: Any upward adjustment is restricted to 3% of the baseline cost allowance.

Baseline cost allowance: Allowances for each GDN to be determined in our Final Determinations.

Delivery date: 31 March 2031

Allowance Adjustment Mechanism

- 3.76 We propose to retain the cap of the upward Allowance Adjustment Mechanism at 3%, with any overspend beyond this going through the TIM. This is the same as the Allowance Adjustment Mechanism for this PCD in RIIO-GD2.
- 3.77 We do not consider that an increase in the upward Allowance Adjustment Mechanism is required for these reasons:
- Our analysis shows that only one GDN is forecast to slightly exceed the 3% upwards allowance adjustment in RIIO-GD2. Most other GDNs are forecast to fall well below the 3%.
 - The replacement programme for iron mains started in 2002,¹⁵ with the operational priorities for the Tier 1 workload having remained constant since 2013, leaving GDNs plenty of time to plan their workloads. We therefore do

¹⁵ Since 2002 the HSE's iron mains replacement programmes have been designed to decommission all 'at risk' pipes within a 30-year period (ie by 2032). HSE reviews its enforcement policy every 5 years. The enforcement policy which came into force in 2013 shifted the emphasis from wholesale decommissioning of 'at risk' iron pipes to targeted risk management using a tier-based approach which forms the current IMRRP.

not expect there to be significant changes to the workloads set out in the GDNs' business plans.

- We agree with the ISG's comment that much of the complexity and cost of delivering the final years of the IMRRP stems from earlier planning decisions made by the GDNs.
- We consider that enabling the GDNs to accelerate repex beyond this cap risks exacerbating labour market pressures and so potentially driving up costs further for other GDNs.
- We consider the existing TIM will appropriately share the cost of any overspend above the 3% cap between GDNs and consumers.

3.78 While there is no lower limit on adjustments to the baseline cost allowance, for RIIO-GD2 the GDNs must explain any variance in value over 2% below the baseline cost allowance. We propose to retain this obligation for RIIO-GD3, as we do not see any reason to change this.

Baseline cost allowance

3.79 Final allowances for Tier 1 mains works are determined through our top-down totex model. There is potential for our view of efficient totex to change in our Final Determinations due to updates to our modelling following consultation. Therefore, we will provide our final view of efficient allowances for Tier 1 mains in our Final Determinations.

Questions

GDQ6.	Do you have any comments on the proposed design of the Tier 1 Mains Decommissioned PCD, including the position to retain the 3% cap on the upwards Allowance Adjustment Mechanism?
-------	--

Tier 1 Services PCD

Purpose: To fund service interventions associated with Tier 1 mains decommissioning activities.

Benefits: The PCD provides the GDNs with flexibility to manage the Tier 1 repex programme efficiently, whilst making sure that consumers only pay for the workloads that are delivered.

Background

3.80 In our SSMD, we decided to retain this PCD in RIIO-GD3. We said we would not remove the upward Allowance Adjustment Mechanism because it is needed to

protect consumers from inefficient overspend. However, the GDNs raised concerns about increasing cost pressures so we said that we would consider slightly increasing the cap of the upward Allowance Adjustment Mechanism above 10%.

- 3.81 As with the Tier 1 Mains Decommissioned PCD, feedback from our Call for Evidence was mixed. There was some support for the GDNs' assertion that there is increased complexity of Tier 1 repex projects in the final stages of the IMRRP. However, one ISG noted that this may have been influenced by the choices taken by GDNs over time.

Consultation position and rationale

Summary of consultation position

Allowance Adjustment Mechanism: Any upward adjustment is capped at total workloads no more than 10% above the baseline workload target.

Baseline cost allowance: Allowances for each GDN to be determined in our Final Determinations.

Delivery date: 31 March 2031

Allowance Adjustment Mechanism

- 3.82 We propose to retain the cap of the upward Allowance Adjustment Mechanism at 10%, with any overspend beyond this going through the TIM. This is the same as the Allowance Adjustment Mechanism for this PCD in RIIO-GD2.
- 3.83 We do not consider that an increase to the upward Allowance Adjustment Mechanism is required for these reasons:
- Our analysis shows that none of the GDNs are forecast to exceed the 10% services upward adjustment mechanism cap in RIIO-GD2 or RIIO-GD3.
 - The replacement programme for iron mains started in 2002,¹⁵ with the operational priorities for the Tier 1 workload having remained constant since 2013, leaving the GDNs plenty of time to plan their workloads. We therefore do not expect there to be significant changes to the workloads set out in the GDNs' Business Plans.
 - We also agree with the ISG comment that much of the complexity and cost of delivering the final years of the IMRRP stems from earlier planning decisions made by the GDNs.
 - We also consider that accelerating repex beyond this cap could exacerbate existing pressures on the labour market, potentially driving up costs.

- We consider that the existing TIM will appropriately share the cost of any overspend above the 10% cap between GDNs and consumers.

3.84 While there is no lower limit on adjustments to the baseline target workload, for RIIO-GD2 the GDNs must explain any variance in value >10% below the baseline target workload. We propose to retain this obligation for RIIO-GD3, as we do not see any reason to change this.

Baseline cost allowance

3.85 Final allowances for Tier 1 services works are determined through our top-down totex model. There is potential for our view of efficient totex to change in our Final Determinations due to updates to our modelling following consultation. Therefore, we will provide our final view of efficient allowances for Tier 1 services in our Final Determinations.

Questions

GDQ7. Do you have any comments on the proposed design of the Tier 1 Services PCD, including the position to retain the 10% cap on the upwards Allowance Adjustment Mechanism?

Tier 1 Iron Stubs PCD

Purpose: To fund Tier 1 iron stubs work.

Benefits: The PCD provides funding for GDNs to deliver Tier 1 iron stubs activities, whilst making sure that consumers only pay for the workloads that are delivered.

Background

3.86 Tier 1 iron stubs are short lengths of Tier 1 iron mains attached to larger diameter parent mains.¹⁶ In our SSMD, we decided to remove the RIIO-GD2 Tier 1 Iron Stubs Re-opener because we consider the costs and workload are sufficiently well understood to set ex ante. We said we would consider a PCD for Tier 1 iron stubs based on business plan proposals, depending on the materiality of this workload. We said that if we determined that the volumes and costs were

¹⁶ Prior to RIIO-GD1, the IMRRP required the GDNs to decommission all iron mains regardless of diameter. Stubs were created when the GDNs replaced a 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 later. Under the current IMRRP, stubs joined to a Tier 2 or Tier 3 parent main are not considered Tier 1 pipes, providing they do not exceed a specified maximum length. However, if replacing the parent main is not economically justified through a cost-benefit analysis (CBA), individual stubs may still need to be addressed if their replacement is warranted.

relatively certain and the materiality was low, we may alternatively decide to fund these activities through baseline allowance funding only. We said we would consider whether a separate technical assessment on unit costs was required.

3.87 In Chapter 6 of our SSMD Overview Document, we set a default materiality threshold for PCDs at £15m. We also said we would reserve the right to assign PCDs to projects with a lower value than £15m which we deem to be in the wider interest of consumers and stakeholders.

3.88 While only three out of the four GDNs forecasted costs above the £15m materiality threshold, to maintain consistency in our treatment of these workloads we are proposing a new common PCD to fund Tier 1 Iron Stubs work in RIIO-GD3.

Consultation position and rationale

Summary of consultation position

PCD type: Mechanistic

Output to be delivered: Each GDN will have a target workload of Tier 1 Iron Stubs to complete in RIIO-GD3, see Table 8.

Baseline cost allowance: The baseline cost allowance will be set for each GDN in our Final Determinations.

Unit costs: Unit costs will be set for each GDN at Final Determinations.

Reporting: Annual reporting through the RRP.

Delivery date: 31st March 2031

Applied to: All GDNs

PCD type

3.89 We propose that this should be a mechanistic PCD. It will have an automatic clawback mechanism for any under delivery, which will ensure that consumers are not paying for work which is not undertaken.

3.90 In Cadent's Business Plan, it suggested a new volume driver to fund Tier 1 Iron Stubs work in RIIO-GD3. While we considered this proposal, we do not think a volume driver is the appropriate mechanism as the volumes of remaining Tier 1 iron stubs should already be well understood by all GDNs.

3.91 We propose that this mechanistic PCD will use unit costs, which will be set ex ante, and the actual workloads delivered to calculate an adjustment at the end of the price control period.

Output to be delivered

3.92 We are proposing that the target workload is aligned with the GDNs' forecasts for iron stubs workload from their business plans, as set out in Table 8.

Table 8: Tier 1 iron stubs workload (number) by each GDN, per year

GDN	2027	2028	2029	2030	2031	Total for RIIO-GD3
NGN	458	458	458	0	0	1374
Cadent	1771	1771	1771	1771	1771	8855
SGN	168	168	168	157	149	810
WWU	516	516	516	516	518	2582

3.93 For the purposes of the target workloads in Table 8, we have included forecasts for both stubs decommissioned - where an intervention is used to remove, replace or otherwise make the stub safe - and 'stubs not found'. 'Stubs not found' are instances where the GDN identifies the location of an iron stub, but upon digging down to the pipe, it is not located and further intervention (ie decommissioning) is not needed.

Unit costs

3.94 GDNs submitted costs within their business plans for different iron stubs decommissioning intervention types. However, there are significant cost differences between:

- interventions of different types; and
- any type of intervention and the cost of 'stubs not found'.

3.95 For some GDNs, a significant proportion of the total iron stubs decommissioned is forecast to be 'stubs not found', which is a concern. We are working to understand the method which GDNs use to identify the location of their Tier 1 iron stubs. We intend to see if this identification could be made more accurate, thus reducing the incidents of 'stubs not found'.

3.96 Given the significant uncertainty and inconsistency in the submitted costs provided by the GDNs, we have not included any forecasts for iron stubs costs in our Draft Determinations. This is explained in further detail in paragraphs 5.296 - 5.300.

3.97 We need more information to understand the cost variances. We therefore ask that the GDNs submit through their consultation responses:

- a further breakdown of costs to enable us to understand the key drivers and potential reporting inconsistencies between GDNs;

- an explanation of the types of activities which fall under the 'Other techniques' label, and when these might be used;
- information about the process used to identify where Tier 1 iron stubs are located and how the forecasted number of 'stubs not found' is estimated; and
- the total remaining population of Tier 1 iron stubs.

Questions

GDQ8. Do you agree with the proposed design of the Tier 1 Iron Stubs PCD?

Emergency Response Time Licence Obligation (LO) and ODI-R

Purpose: To ensure the GDNs respond to 97% of reported gas escapes within one hour for uncontrolled escapes, and within two hours for controlled escapes.

Benefits: Requiring the GDNs to attend unplanned gas escapes quickly ensures their networks are safe.

Background

- 3.98 In our SSMD, we decided to retain the Emergency Response Time Licence Obligation (ERTLO) with an annual minimum performance standard. We also decided to increase reporting requirements to include monthly and annual performance data in the annual RRP, and to require the GDNs to proactively provide us with a detailed explanation if their performance falls below 97% in any given month.
- 3.99 While there was limited feedback in response to our Call for Evidence, SGN's ISG supported the need for SGN to be able to respond to emergencies during extreme winter peaks and suggested more could be done to triage calls to focus efforts on genuine emergencies.
- 3.100 We are now proposing to introduce an ODI-R in addition to the LO and new reporting requirements set out in our SSMD.

Consultation position and rationale

Summary of consultation position

ODI type: ODI-R

Measurement: Reporting metrics including:

- (i) the total number of ERTLO failures (with a month-by-month breakdown);
- (ii) the mean, median and mode duration of ERTLO failures;

- (iii) the maximum duration of a ERTLO failure;
- (iv) the number of ERTLO failures within specified time bands (to be agreed);
- (v) a monthly breakdown of the number of ERTLO failures by reason for failure; and
- (vi) an accessible commentary to provide context and insight on cases which exceed the ERTLO minimum performance standards.

Reporting: The GDNs must publish their ODI-R metric data annually on their respective websites, and we will publish collated data in our Annual Reports.

Applied to: All GDNs

Licence Obligation amendments: Update the LO to prevent the GDNs from reclassifying uncontrolled gas escapes as controlled gas escapes.

ODI type

- 3.101 We propose to introduce an ODI-R to mandate the GDNs to publicly report data in cases where they fail to meet their obligations under the ERTLO. While we previously proposed in our SSMD to require only enhanced reporting in this area, we now consider a reputational incentive to be more suitable to drive positive behaviours and to protect the interests of consumers. While some GDNs have questioned the benefit of providing us with additional information given their existing obligations to the HSE,¹⁷ we consider that additional information could provide us with greater insights to better ensure customer safety where gas escapes are not attended within the 1- or 2-hour minimum performance standards.
- 3.102 We are concerned about the quality of service some GDNs are delivering for consumers in these cases and the risk this could pose to public safety, should remaining gas escapes not be attended within a reasonable time. The greater oversight and accountability provided through the ODI-R will enable us, stakeholders and consumers to gain improved insights, and encourage GDNs to deliver high levels of performance in these cases.

Measurement

- 3.103 During our recent RIIO-GD2 enforcement investigations into two GDNs for breaches of the ERTLO,¹⁸ we identified a need for increased reporting to better understand the GDNs' performance in responding to emergency gas escapes

¹⁷ Regulation 7(4) of the Gas Safety (Management) Regulations 1996: <https://www.legislation.gov.uk/ukxi/1996/551/contents/made>

¹⁸ Ofgem Press Release, 30 May 2025, "[Three gas distribution operators to pay £8m for missing callout targets](#)"

which exceed the 1- and 2-hour LO minimum performance standards. While the GDNs have assured us that they do not delay attending emergency gas escapes in such cases, we are concerned that the current framework may create a perverse incentive to prioritise attending incidents still within the ERTLO time limits to meet the 97% standards. Given the safety risks associated with delayed attendance at emergency gas escapes, we consider it necessary to mandate the reporting of additional consistent and comparable data to improve transparency, accountability, and understanding of how these cases are handled.

- 3.104 Therefore, under this ODI-R, we propose to require GDNs to report annually on metrics including:
- the total number of ERTLO failures (with a month-by-month breakdown);
 - the mean, median and mode duration of ERTLO failures;
 - the maximum duration of a ERTLO failure;
 - the number of ERTLO failures within specified time bands (to be decided);
 - a monthly breakdown of the number of ERTLO failures by reason for failure; and
 - an accessible commentary to provide context and insight on cases which exceed the ERTLO's target times.
- 3.105 We will engage with the GDNs to determine what, if any, other reporting metrics should be included in the ODI-R. This data will be reported separately for controlled and uncontrolled gas escapes.
- 3.106 In the absence of historical data in this area, we do not intend to set ODI-R targets for RIIIO-GD3. However, directly comparable data will enable us, stakeholders and consumers to assess and contrast the GDNs' performance against the metrics.
- 3.107 The GDNs should account for consumer vulnerability in their response to emergency gas escapes, especially where this may affect the safety and wellbeing of the consumer. To monitor performance in this area, we propose to also require GDNs to separately report on the metrics outlined in paragraph 3.104 for consumers in vulnerable situations.

Reporting

- 3.108 We propose that the GDNs should publish their network(s) data for each of the ODI-R metrics in accessible format in an easy-to-find location on their respective websites. We propose that, wherever possible, the GDNs include the previous

three years of data for each metric to enable stakeholders to monitor their performance over this time period.

- 3.109 We also propose to require the GDNs to submit the ODI-R metric data through their annual RRP. We intend to collate and publish the ODI-R data in our Annual Reports to enable stakeholders to easily compare the networks' performance and further incentivise the GDNs to attend gas escapes in a timely manner.

Licence Obligation amendments

- 3.110 We propose to update the LO to prevent GDNs from retrospectively reclassifying gas escapes from 'uncontrolled' to 'controlled' after the initial classification by the National Gas Emergency Service. The current LO does not explicitly prevent this practice, which could allow a GDN to deprioritise its attendance at a gas escape initially identified as 'uncontrolled' if it is later determined to be 'controlled' following a remote risk assessment carried out with the customer over the phone. This recategorisation would move the response time target from 1-hour (uncontrolled) to 2-hours (controlled), potentially improving the GDN's performance under the ERTLO metrics without reflecting the original urgency of the incident.
- 3.111 While this downward reclassification could enable prioritisation of the highest risk workloads during peak periods, we are concerned that some consumers may not be able to assess the situation appropriately, could take unnecessary risks which pose a danger to themselves or others, or could feel under actual or perceived pressure to minimise their concerns about a gas escape. Therefore, we propose to update the licence to prevent the downward reclassification of gas escapes.
- 3.112 In addition, we propose to amend the licence to require the GDNs to provide us with a detailed identification of each instance where the ERTLO minimum standards have been exceeded. This would go beyond the reporting we propose to require through the ODI-R. While this would not be published, it would further our understanding of the drivers of delayed attendance at emergency gas escapes. We will engage with the GDNs to define the specific reporting requirements.
- 3.113 Furthermore, in line with the GDNs' LO to treat domestic customers fairly,¹⁹ we consider that the National Gas Emergency Service should proactively identify

¹⁹ Standard Special Condition D21

consumers in vulnerable situations, including those on the Priority Services Register (PSR). The GDNs must account for this in their response to gas escapes. We will work collaboratively with stakeholders to consider what, if any, updates to the ERTLO are required to consolidate this.

Questions

- GDQ9. Do you agree with our proposal to update the Emergency Response Time LO to prevent the downward reclassification of gas escapes?
- GDQ10. Do you agree with our proposed design of the ERTLO ODI-R?

High quality of service from regulated firms

Vulnerability package

- 3.114 Supporting and protecting consumers in vulnerable situations continues to be a priority, particularly given the cumulative impacts of the COVID-19 pandemic, the continuing cost of living crisis, and the need to deliver a just transition to net zero. To reflect this, we have recently updated our Consumer Vulnerability Strategy.²⁰
- 3.115 Following our review of the GDNs' business plans and in response to strong stakeholder feedback received through our Call for Evidence, we propose to maintain the overall RIIIO-GD3 consumer vulnerability funding package at a significant and impactful level. This reflects the ongoing and substantial levels of consumer need. As part of this, we propose to retain substantial funding for the Vulnerability and Carbon Monoxide Allowance (VCMA) in RIIIO-GD3. This will continue to enable the GDNs to proactively anticipate and respond to evolving consumer need through funding vulnerability and carbon monoxide (CO) safety programmes that go beyond BAU activities. Activities that are now considered BAU will be funded through baseline allowances, further embedding these responsibilities into the core operations of the GDNs.

Next steps

- 3.116 Ahead of our Final Determinations, we will engage with the GDNs and other stakeholders to collaboratively update the VCMA Governance Document to enhance reporting and increase transparency and accountability. These discussions will include, but are not limited to, developing:

²⁰ Ofgem Consumer Vulnerability Strategy <https://www.ofgem.gov.uk/sites/default/files/2025-04/Final%20CVS%2015042025-20250414111309.pdf>

- individual and joint-GDN vulnerability strategy requirements, including how to monitor progress against these;
- annual consumer vulnerability reporting requirements, including on CO awareness metrics and on BAU vulnerability and CO safety activities;
- VCMA project requirements (including enhanced targeting of support; stakeholder involvement; cross-sector strategic alignment; increased collaboration; and monitoring, evaluation, accountability and learning measures) to deliver improved outcomes for consumers in vulnerable situations;
- requirements for the annual showcase event; and
- reporting requirements for the Priority Services Register (PSR) Customer Satisfaction ODI-R and PSR Customer Complaints ODI-R through the annual consumer vulnerability reports.

3.117 We will consult on an updated version of the VCMA Governance Document following our Final Determinations.

BAU Vulnerability and Carbon Monoxide Safety Activities

Purpose: To fund specific vulnerability and CO safety activities that are now considered BAU through baseline allowances.

Benefits: Embeds these specific activities into BAU, provides confidence for longer-term project planning, and enables the VCMA to be spent on initiatives which proactively respond to specific or emerging consumer needs.

Background

3.118 In our SSMD, we decided to allow the GDNs to place specific vulnerability and CO safety activities that are now considered BAU into their baseline allowances. Our intention was to further embed these activities, enable confidence for project planning, and enable the VCMA UIOLI to be spent on eligible initiatives which proactively respond to specific or emerging consumer needs. We also stated our intention to exclude these BAU activities from VCMA funding and indicated we would consider introducing additional reporting requirements to facilitate transparency and accountability.

Common list of BAU vulnerability and CO safety activities

3.119 In our SSMD, we required the GDNs (in collaboration with their ISGs, Project Partners and other stakeholders) to develop and submit to us a list of common

BAU vulnerability and CO safety activities that they considered suitable to undertake through baseline allowances.

- 3.120 Following our review in the autumn of 2024, we issued guidance to the GDNs to inform the development of their business plans, providing a revised list of common BAU activities we considered suitable for baseline allowance funding. In determining this list, we considered the GDNs' core responsibilities, licence obligations, commonly undertaken activities, and the relationship between these activities and VCMA projects.
- 3.121 The list of activities we consider appropriate for baseline funding, along with summary justifications for our decisions, is provided in Appendix 1.
- 3.122 The GDNs have reflected this in their business plans by submitting costs for the activities outlined in our guidance. We have reviewed these costs in coming to our Draft Determinations. Further information on our approach to cost assessment can be found in Chapter 5.

Enhanced Reporting

- 3.123 We will engage with the GDNs and wider stakeholders ahead of our Final Determinations to consider how best to ensure baseline allowance-funded BAU activities have accountability and transparency through enhanced reporting.
- 3.124 We intend to work collaboratively to develop a set of common metrics for these activities, enabling consistent monitoring the GDNs' delivery and, where possible, comparison across the networks. We propose that GDNs should report on these metrics in their annual consumer vulnerability reports. These reporting requirements will be set out in the VCMA Governance Document.

Vulnerability and Carbon Monoxide Allowance

Purpose: To fund consumer vulnerability and CO safety programmes that go beyond BAU activities funded through other price control mechanisms or required through minimum standards.

Benefits: Enables the GDNs to provide bespoke services to support consumers in vulnerable situations and raise awareness of CO.

Background

- 3.125 The VCMA was introduced as a UIOLI allowance in RIIO-GD2 to enable the GDNs to fund vulnerability and CO safety initiatives and flexibly respond to changing consumer vulnerability need. RIIO-GD2 VCMA funding was initially set at £60m,

however, in July 2023 we repurposed unspent funds from the Fuel Poor Network Extension Scheme (FPNES) to increase total funding to £171m.

3.126 In our SSMD, we decided to retain the VCMA as a UIOLI allowance in RIIO-GD3. We decided that VCMA funding will continue to be allocated to networks based on the total number of customers served, with 25% of funding ringfenced for collaborative projects between two or more GDNs.

3.127 We also stated our intention to reduce VCMA funding to a level significantly below RIIO-GD2, setting it at an impactful yet sustainable level whilst balancing the wider bill impact. This complemented our decision to move some BAU activities that had previously been funded through the VCMA into baseline allowances. We also wanted to encourage GDNs to focus on initiatives within their defined role and where they are best or uniquely placed to support those in vulnerable situations. While we initially proposed VCMA funding of roughly £74.2m in our SSMC, in our SSMD we stated we would consider the evidence provided in the GDNs' business plans before setting the VCMA funding level.

3.128 In response to our Call for Evidence, most respondents disagreed with our proposal to reduce the size of the allowance. However, one consumer group supported reducing funding for RIIO-GD3.

Consultation position and rationale

Summary of consultation position

Funding level: Set VCMA funding at £165m, allocated to the GDNs in proportion to the number of domestic customers they serve.

Governance document: Requirements will be set out in an updated VCMA Governance Document.

Applied to: All GDNs

Funding level

3.129 We propose to set VCMA funding at £165m in RIIO-GD3, allocated to the GDNs in proportion to the forecast number of domestic gas customers served in the first year of RIIO-GD3. In coming to this consultation position, we have reconsidered the balance of the overall bill impact with consumer benefit in response to the feedback we received through the GDNs' business plans and stakeholders' responses to the Call for Evidence.

3.130 In their business plans, the GDNs submitted VCMA funding proposals which cumulatively totalled £163.4m. All GDNs committed to increasing VCMA project reach and impact in comparison to RIIO-GD2, which they indicated was possible

due to previous investment and lessons learned from RIIO-GD2. The ISGs were supportive of their respective GDN's VCMA proposals.

- 3.131 Table 9 provides a comparative overview of the GDNs' RIIO-GD2 enhanced VCMA funding and the GDNs' RIIO-GD3 business plan proposals, alongside our proposed VCMA total funding for RIIO-GD3.²¹

Table 9: Comparative overview of RIIO-GD2 and RIIO-GD3 VCMA funding (£m)

GDN	RIIO-GD2 enhanced VCMA funding (18/19 prices)	RIIO-GD2 enhanced VCMA funding (23/24 prices)	GDNs' RIIO-GD3 VCMA business plan proposals (23/24 prices)	Proposed RIIO-GD3 VCMA funding (23/24 prices)
Cadent	84.98	104.79	84.00	81.85
NGN	19.67	24.31	15.90	19.13
SGN	46.45	57.41	43.50	44.79
WWU	20.36	25.17	20.00	19.23
Total	171.46	211.68	163.40	165.00

- 3.132 Our proposed VCMA funding level is significantly higher than our initial proposal outlined in our SSMC. In reaching this proposal, we have carefully considered the strong stakeholder feedback received through business plans, our Call for Evidence and working groups. Notably, the GDNs' ISGs, VCMA partner organisations and most consumer groups disagreed with our SSMD position and advocated for maintaining funding at or near to the enhanced RIIO-GD2 VCMA level. These stakeholders cautioned against a major reduction in funding, highlighting continued high levels of consumer vulnerability, the limited sources of alternative project funding, and the positive impact of the VCMA in RIIO-GD2. Several stakeholders also emphasised the unique position of the GDNs to identify and support vulnerable customers. Given this strong support, we consider it appropriate to align VCMA funding with the total amount requested in the GDNs' business plans.
- 3.133 However, one consumer group recommended reducing VCMA funding from the enhanced RIIO-GD2 level to ensure that the GDNs do not deviate from their

²¹ These figures include the GDNs' company specific project allowances (75% of VCMA funding), and collaborative project allowances for collaborations between 2 or more GDNs (minimum of 25% of VCMA funding). The GDNs are also able to spend their company specific allowance on collaborative VCMA projects.

core responsibilities or duplicate the efforts of other voluntary organisations. It encouraged the GDNs to demonstrate how certain projects can be scaled down. We agree that the GDNs' role in addressing consumer vulnerability should remain focused and within their existing areas of competence, activity, and consumer interaction, and should not extend to the delivery of energy efficiency measures. However, we are persuaded that the potential negative consequences for consumers in vulnerable situations of significantly reducing funding outweighs the benefit of lower bills through reduced allowances.

- 3.134 In developing our proposal, we have considered the overall RIIO-GD3 consumer vulnerability package and its bill impact. While we propose a lower VCMA funding level than in RIIO-GD2, we consider that our overall consumer vulnerability package - including both the VCMA and BAU vulnerability and CO safety activities - will continue to provide substantial support for vulnerability initiatives in RIIO-GD3. In addition, investments made by the GDNs in RIIO-GD2 have built the infrastructure and capacity to help sustain support for vulnerable consumers in RIIO-GD3.
- 3.135 As decided in our SSMD, the funding will be allocated based on the number of customers served by each network. In implementing this, we acknowledge that some GDNs will receive marginally more than they proposed in their business plans, while others will receive marginally less. However, we continue to consider this to be the most appropriate way to allocate funds to distribute funding fairly across GB.
- 3.136 We expect the GDNs to deliver on their commitments to seek further opportunities for collaboration with other GDNs, sectors, and funding sources to maximise the available allowance and to enable greater project reach and impact within a holistic approach to addressing consumer vulnerability.

Next steps

VCMA Governance

- 3.137 We will engage with GDNs and with other stakeholders to develop and consult on an updated VCMA Governance Document in time for Final Determinations.
- 3.138 Given our proposals to maintain VCMA funding at a substantial level, we will ensure the principles of greater transparency and accountability are embedded into the VCMA Governance Document requirements. As outlined in our SSMD, we will consider ways to encourage increased stakeholder input into project design, promote collaboration beyond the 25% ringfenced minimum, and enhance the reporting of project and partner learnings. These measures will

ensure that VCMA projects in RIIO-GD3 are more impactful, cost-effective and aligned with cross-sector approaches to addressing consumer vulnerability.

Supplementary VCMA funding of BAU activities

- 3.139 The GDNs have indicated that there may be situations related to the activities outlined in Table 34 in Appendix 1 where they need to go beyond BAU delivery. Several GDNs stated that where the BAU activity is delivered as part of a VCMA project, using VCMA funding would help streamline costs. For example, this might apply where a VCMA project also provides CO safety education. Another GDN stated that access to VCMA funding for these activities would enable it to respond to changes in legislation, messaging or technological advancements that are not accounted for in its submitted costs - ensuring that customers aren't left behind.
- 3.140 In our SSMD, we stated that we would exclude BAU vulnerability and CO safety initiatives funded through baseline allowances from receiving additional VCMA funding, to avoid the risk of double funding. While we will continue to exclude the double funding of initiatives, we now intend to engage further with the GDNs and other stakeholders to reconsider whether there may be specific circumstances in which VCMA funds could appropriately supplement or compliment BAU activities funded through baselines allowances. We will consult on how to ensure GDNs can maximise the value of VCMA funding to enhanced the impact of activities delivered through BAU as part of the upcoming update to the VCMA Governance Document.

Questions

GDQ11. Do you agree with our proposed design of the VCMA UIOLI mechanism?

Customer Satisfaction ODI-F

Purpose: To incentivise the GDNs to maintain and consolidate high quality customer service.

Benefits: Rewards will encourage GDNs to continue to deliver exceptional customer service while penalties will ensure performance does not deteriorate.

Background

- 3.141 In our SSMD, we decided to retain the RIIO-GD2 Customer Satisfaction (CSAT) ODI-F incentive design in RIIO-GD3, with the incentive cap and collar set at the equivalent of 0.17% of RoRE. We also decided to:

- retain the three existing, equally weighted survey areas (planned work, unplanned/emergency work, and connections);
- retain static, annual targets; and
- introduce a requirement for GDNs to report a month-by-month breakdown of their CSAT performance.

3.142 We also noted that we would consider developing a trigger to remove the connections survey and/or introduce a disconnections survey should customer response levels reach a pre-determined level.

3.143 In response to our Call for Evidence, NGN's ISG supported NGN seeking continuous improvements in customer service performance. Cadent's ISG encouraged it to deepen its understanding of the drivers of its CSAT score improvements and ensure the transfer of knowledge between network regions. Sustainability First supported our proposals for a common disconnections CSAT metric and encouraged the GDNs to develop a disconnections-specific good practice customer journey.

Consultation position and rationale

Summary of consultation position

Targets: Set common survey target scores and deadbands for all GDNs for each of the three survey areas.

Connections survey minimum thresholds: Introduce common, minimum thresholds to be eligible to receive a reward or penalty for the connections survey element of the CSAT ODI-F. In any given regulatory year, 1000 surveyable connections jobs must be undertaken and 240 or more connections survey responses must be received.

Survey areas and weightings: We propose that the financial incentive applied to each of the three survey areas is fixed at an absolute weighting of 33.33% of the overall CSAT ODI-F.

Incentive exposure: A cap on rewards and penalties of 0.17% of RoRE.²²

Incentive Value: Rewards and penalties applied linearly between the penalty/reward score and the maximum penalty/reward score. Rewards and penalties split equally between three survey areas.

Applied to: All GDNs

²² Please see Chapter 11 of the Finance annex for a breakdown of the RoRE figures.

Targets

- 3.144 We propose to update the CSAT target scores, penalty and reward scores and maximum penalty and reward scores for each of the three survey areas. Table 10 shows the GDNs' average CSAT performance in the first three years of RIIO-GD2.
- 3.145 We have proposed provisional targets in Table 11, which are calculated using the RIIO-GD2 average scores and will be updated in our Final Determinations following review of the 2024/25 RRs. We intend to raise the penalty bands significantly with the aim of consolidating performance and discouraging deterioration, while we propose to set higher reward bands to ensure that only CSAT performance which is exceptional relative to RIIO-GD2 performance is rewarded. As in RIIO-GD2, the rewards or penalties would be applied incrementally between the penalty/reward scores and the maximum penalty/reward scores.

Table 10: GDNs' average CSAT scores in first 3 years of RIIO-GD2

	Planned Work	Unplanned Work	Connections
GDNs' average RIIO-GD2 performance	8.92	9.55	9.03

Table 11: RIIO-GD2 CSAT targets and provisional RIIO-GD3 CSAT targets

CSAT survey	Price control	Penalty score	Max. penalty score	Target score	Reward score	Max. reward score
Planned work	RIIO-GD2 Targets	7.9	8.35	8.51	8.69	9.13
Planned work	Proposed RIIO-GD3 Targets	8.63	8.75	8.92	9.09	9.17
Unplanned work	RIIO-GD2 Targets	8.85	9	9.37	9.43	9.58
Unplanned work	Proposed RIIO-GD3 Targets	9	9	9.55	9.65	9.71
Connections	RIIO-GD2 Targets	7.43	8.11	8.38	8.65	9.33
Connections	Proposed RIIO-GD3 Targets	8.82	8.88	9.03	9.18	9.22

- 3.146 In its RIIO-GD3 business plan, Cadent stated it would maintain high levels of customer service, committing to upper-quartile customer satisfaction levels in each CSAT survey area and unplanned work scores of 9.3 out of 10. WWU and SGN committed to an average RIIO-GD3 CSAT score of greater than 9 out of 10, while NGN aimed to keep its average CSAT score above 9.2 out of 10.
- 3.147 In RIIO-GD2, average performance data from a 6 month survey trial was used to set a target. Penalty and reward scores were set at 0.5 standard deviations from the target, with the maximum penalty and reward caps set at 1.75 standard deviations.
- 3.148 We propose to set the target score as the average performance score from RIIO-GD2. We have then applied a standard deviation calculation to this for the respective survey area to determine our proposed CSAT penalty/reward scores and the maximum penalty/reward scores. Reflecting on the significant increases in GDN performance in RIIO-GD2, we no longer consider using data from RIIO-GD1 for target setting best supports consumers' interests.
- 3.149 Table 12 below shows the range of standard deviation values and their CSAT score values across the three survey areas. The values in the table reflect the fact that the GDNs performance has converged significantly, which has resulted in smaller deadbands and reward/penalty bands when compared to RIIO-GD2.

Table 12: CSAT Score Standard Deviation Values

St. Dev Value	Planned Work	Unplanned Work	Connections
0.5	0.08	0.05	0.1
1	0.17	0.1	0.19
1.5	0.25	0.16	0.29
1.75	0.29	0.18	0.34
GD2 Average Score	8.92	9.55	9.03

- 3.150 For all 3 survey areas, we propose to set the reward score at 1 standard deviation from the average RIIO-GD2 score, with the maximum reward score set at 1.5 standard deviations. While this increase in the reward score is stretching relative to RIIO-GD2 to ensure only exceptional performance is rewarded, the relatively narrow reward band means that the GDNs will receive a greater financial reward for each increment between the collar and cap. While the GDNs say they need to continually improve and invest in their customer

service provision to maintain their current high performance levels, we have not seen strong evidence to suggest customer expectations will increase significantly in RIIO-GD3.

- 3.151 For planned and connections work, we propose to set the penalty score at 1 standard deviation and the maximum penalty score at 1.75 standard deviations from the average RIIO-GD2 score. We consider this to be stretching, discouraging the GDNs from deteriorating performance whilst encouraging further convergence to better performance so that customers receive similarly high levels of customer service across the GB network. Our proposal to set the maximum penalty score at 1.75 standard deviations for these 2 survey areas recognises that the GDNs' performance levels are already high and means that each incremental increase in a network's penalty will be less than its relative reward increment.
- 3.152 For the unplanned work survey area, we continue to consider it would be inappropriate to apply a penalty for scores above 9. However, we intend to apply the maximum penalty for any score below 9. This reflects both the importance of maintaining excellent customer service when delivering unplanned work and the significant level of performance deterioration necessary for a GDN to achieve a score below 9.
- 3.153 For RIIO-GD3, our proposed target setting methodology results in large deadbands with smaller reward and penalty bands. We consider this approach will prevent consumers from overpaying for service levels they have already rewarded in RIIO-GD2, while ensuring the GDNs are rewarded appropriately for significant improvement and penalised for decreasing performance.
- 3.154 Several GDNs have raised concerns that the proposed removal of the Domestic Load Connections Allowance (DLCA) could potentially increase costs, lower connection quotation acceptance rates and impact connections survey scores. The GDNs commissioned research aimed at understanding how the connections survey CSAT scores might be affected if the customer charge doubled following the removal of the DLCA. They argue that according to their research, some customers would have been unable to proceed with the connection due to cost. While 29% of surveyed customers indicated that their CSAT score would not have changed, the GDNs suggest that average connection survey CSAT scores could fall by 3.49, from 9.55 to 6.06 out of 10.
- 3.155 In our SSMD, we acknowledged there could be changes in customer expectations due to the removal of the DLCA but considered these effects are

difficult to quantify and include target recalibration. We still consider this to be the case. We do not consider the research presented by the GDNs to be methodologically robust. Our understanding is that this included asking customers who had already received a connection how they would score the networks' performance had they been charged twice as much. As such, the responses appear to reflect consumers' resistance to paying more for a new connection, rather than a genuine reassessment of the GDN's customer service performance. Consequently, we have not considered this evidence in developing our proposed targets.

Connections survey minimum thresholds

- 3.156 We propose to introduce common, minimum thresholds to ensure the statistical reliability of CSAT data and protect consumers from paying financial rewards for relatively low volumes of work. We therefore propose that, if a network undertakes fewer than 1000 surveyable connections jobs or receives fewer than 240 connections survey responses in any given regulatory year, it will be ineligible to receive rewards or penalties for the connections survey element of the CSAT ODI-F.
- 3.157 We propose that the maximum incentive exposure available for each of the three survey areas is fixed at an absolute weighting of 33.33% of the overall CSAT ODI-F. Under this approach, if a network does not meet the minimum thresholds in any regulatory year, it would only be eligible for up to 66.66% of the total CSAT ODI-F rewards and penalties in that year (ie for the planned work and unplanned work surveys). This fixed-weighting approach is designed to protect consumers from potentially over-rewarding networks, while also safeguarding the networks from unfair penalties that could arise under an alternative approach to reallocate the connections survey weighting to increase the value of the planned and unplanned work survey areas to 50% each.
- 3.158 As a result of ongoing uncertainty in devolved government policy regarding the future of gas, there are significant challenges in forecasting the volumes of connections work in RIIO-GD3. While the connections survey measures customer satisfaction for both new connections and alterations, there is a risk that response volumes could fall below statistically reliable levels for one or more networks during RIIO-GD3.
- 3.159 We do not consider it to be in consumers' interest to reward or penalise GDNs based on statistically unreliable data, nor to provide a financial incentive where connections work volumes drop below a meaningful threshold. We propose setting a minimum threshold of 1000 surveyable connections jobs per year. This

strikes a balance between incentivising a high-quality connections service and avoiding disproportionate financial rewards for a relatively small number of jobs. Some GDNs proposed a common minimum survey return threshold of 240 responses, while others suggested setting separate response thresholds for each network area. Based on current survey return rates, we consider that 240 responses would ensure a statistically reliable sample for all network areas.

- 3.160 Should a network's annual connections survey area fall below either of the minimum thresholds in any given regulatory reporting year, we propose this CSAT survey element will become an ODI-R only for that individual network. If the network's connections survey responses or connections volumes meet or exceed the minimum thresholds in a subsequent year, this survey element will be reinstated in its CSAT ODI-F for that regulatory year. The connections survey would be added or removed from a network's ODI-F on an individual basis and, where a minimum threshold is not met, the network would not be eligible for the financial incentive associated with the connections survey.

Questions

GDQ12. Do you agree with our proposed design of the Customer Satisfaction ODI-F?
--

Disconnections Customer Satisfaction ODI-R

Purpose: To incentivise the GDNs to deliver high quality customer service when delivering gas disconnections.

Benefits: The reputational incentive will encourage GDNs to deliver high quality customer service and enable understanding of GDN performance in this area.

Background

- 3.161 As a result of the energy transition to net zero, disconnections from the gas network are forecast to increase as consumers move to lower-carbon alternatives. In our SSMD, we decided to introduce a disconnections survey to ensure that households receiving a gas disconnection received a high quality of customer service. We stated our intention to work with stakeholders to develop and implement a pilot survey for this area, with the GDNs initially reporting performance scores through the RRP. We suggested incorporating the disconnections survey into the CSAT ODI-F in RIIIO-GD3 should responses reach a pre-agreed, statistically reliable level, and considered how this might be implemented.

Consultation position and rationale

Summary of consultation position

ODI type: Reputational

Measurement: Two disconnections surveys to measure customer satisfaction.

Survey scope and methodology: One survey for customer-led, paid disconnections and a separate survey for safety-driven, socialised disconnections.

Reporting: GDNs should publicly report their network(s) performance on their websites. We will also collate and publish the GDNs performance under this ODI-R in our annual reports.

Applied to: All GDNs

ODI Type

3.162 Following stakeholder discussions, we propose to introduce disconnections CSAT surveys as an ODI-R in RIIO-GD3. This will ensure we are able to measure and monitor customer satisfaction levels in this area of increasing activity and develop informed baseline targets for RIIO-GD4.

3.163 We considered options for incorporating the disconnections surveys into the CSAT ODI-F during RIIO-GD3. However, uncertainty around forecast disconnections volumes, potential changes in charging policy in this area, and the absence of historical data from which to set baseline targets informed our decision to propose an ODI-R at this time. We consider an ODI-R would still incentivise the GDNs to focus on developing the right behaviours to benefit consumers, with public reporting enabling accountability and analytical insights.

Survey scope and methodology

3.164 We propose to introduce two, separate disconnections surveys as part of the ODI-R to measure customer satisfaction in this area.

3.165 Following our SSMD decision, the GDNs have developed a disconnections survey for a customer-led, paid disconnections only. The GDNs maintain that customers receiving safety-driven, socialised disconnections may score the service they receive differently - eg where they do not want their gas connection removed - and therefore consider these customers should not be included in this disconnections survey. We have not seen strong evidence to support this assumption and consider all customers should receive high levels of service for disconnection work.

- 3.166 We therefore propose to introduce two disconnections surveys under this ODI-R: one survey to measure customer satisfaction for consumer-led, paid disconnections, and another survey for consumers receiving a safety-driven, socialised disconnection carried out by the GDNs as part of their responsibilities under the Pipeline Safety Regulations. To ensure consumers in vulnerable situations receive a similar level of service to those in the GDNs' wider customer base, the GDNs should ensure it is possible to separately analyse data for PSR customers. We will work with GDNs and stakeholders to design and develop both surveys and consider how these should be distributed.

Reporting

- 3.167 To strengthen the reputational incentive associated with the disconnections surveys in RIIO-GD3, we intend to require the GDNs to publicly report their ODI-R performance in an accessible format in an easy-to-find location on their websites. When possible, the GDNs should publish this alongside comparable data from previous years, up to and including the 3 years preceding the most recently submitted RRP. This will enable consumers and other stakeholders to monitor and hold the GDNs accountable for their disconnections customer satisfaction performance.
- 3.168 To facilitate cross-network comparison, we propose to require the GDNs to submit their performance data as part of their annual RRP. We intend to collate and publish this data as part of our annual reports to ensure stakeholders can monitor performance across GB and provide a further incentive for the GDNs to deliver high quality service in this growing area.

GDQ13. Do you agree with our proposed design of the Disconnections Customer Satisfaction ODI-R?

PSR Customer Satisfaction ODI-R

Purpose: To ensure that the GDNs provide an equally high level of customer satisfaction for those customers on the PSR and in their general customer base.

Benefits: The ODI-R will provide stakeholders with standardised information to hold the GDNs accountable for their customer service for PSR customers.

Background

- 3.169 In our SSMD, we decided to introduce a PSR Customer Satisfaction ODI-R to hold the GDNs accountable for delivering an equally high level of customer satisfaction for those customers on the PSR to those in their general customer

base. We proposed that the ODI-R annual targets would be the same as those in the CSAT ODI-F, with the GDNs providing standardised information for stakeholders.

Consultation position and rationale

Summary of consultation position

Targets: Common targets set at the same levels as the CSAT ODI-F for each of the three survey areas.

Reporting: Via the GDNs' annual consumer vulnerability reports.

Applied to: All GDNs

Targets

3.170 As decided in our SSMD, we will set the PSR Customer Satisfaction ODI-R targets at the same levels as the CSAT ODI-F to ensure consumers in vulnerable situations receive a similar standard of customer service as the general consumer base. The provisional proposed targets are set out in Table 11 and will be updated following review of the 2024/25 RRP.

Reporting

3.171 We propose to require the GDNs to report PSR Customer Satisfaction scores in an accessible format in their annual Consumer Vulnerability Reports, providing an informed commentary to explain differences in performance. This data should be provided for the three survey areas alongside their CSAT ODI-F scores to enable stakeholders to compare performance across PSR and non-PSR customers. This reporting requirement would be set out in the VCMA Governance Document.

Questions

GDQ14. Do you agree with our proposed design of the PSR Customer Satisfaction ODI-R?
--

Complaints Metric ODI-F

Purpose: To ensure the GDNs maintain and consolidate effective performance in their handling of complaints.

Benefits: Retaining a penalty-only incentive will ensure consumers' complaints are dealt with quickly and effectively.

Background

3.172 In our SSMD, we decided to retain the penalty-only Complaints Metric ODI-F design in RIIO-GD3, with an updated static minimum performance level and the incentive exposure set at the equivalent of 0.17% of RoRE, which is consistent with the RIIO-GD2 incentive. We also decided that GDNs should report in their RRP:

- a monthly breakdown of their Complaints Metric ODI-F performance;
- the volume of complaints received as a percentage of the total number of customers served; and
- the number of complaints unresolved after D+14.

3.173 In response to our Call for Evidence, SGN's ISG stated that, while it supports a 'getting it right first time' approach to complaints, it is important to be mindful of unintended consequences (such as discouraging the recording of complaints). We note that we would take any evidence of discouraging the recording of complaints very seriously.²³ NGN's ISG welcomed NGN's proposals to voluntarily monitor and report complaints received on social media, and to treat these in the same way as complaints received through other channels.

Consultation position and rationale

Summary of consultation position

Target: Set a common, static minimum performance level of 3.5.

Incentive exposure: Penalty cap at 0.17% of RoRE.²⁴

Incentive value: Penalties are applied linearly above the minimum acceptable performance level, with the maximum penalty for scores of 5 or above.

Target

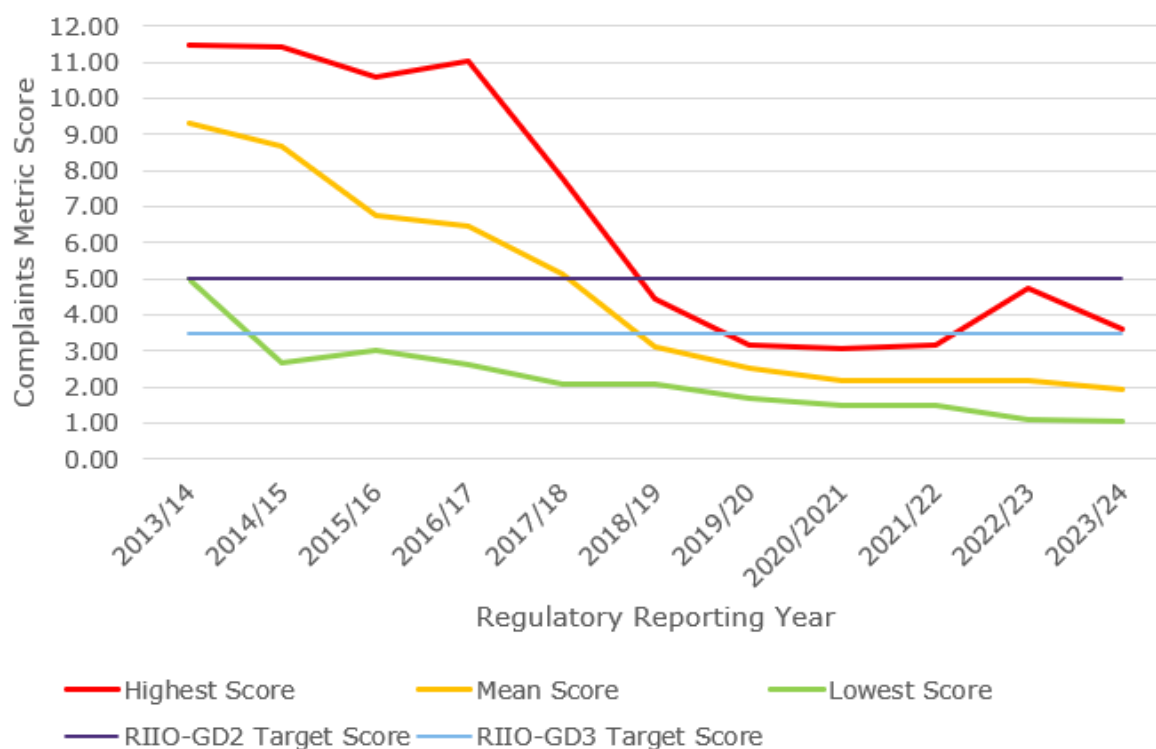
3.174 We propose to set a common, static Complaints Metric minimum performance level of 3.5, above which the GDN will receive a penalty. This is a tightening of the RIIO-GD2 minimum performance level of 5 to consolidate improvements in complaints handling, discourage regression, and drive improvements from the lowest performing GDNs. The GDNs' mean, highest and lowest performance for each year of RIIO-GD1 and RIIO-GD2 performance so far is shown in Figure 4.

²³ Our requirements on recording of complaints are set out in the Regulatory Instructions and Guidance.

²⁴ Please see Chapter 11 of the Finance annex for a breakdown of the RoRE figures.

- 3.175 In their business plans, none of the GDNs proposed strengthening the Complaints Metric ODI-F minimum performance level. However, some GDNs did make additional commitments to a high quality complaints service, including NGN's commitment to report the percentage of social media complaints as a percentage of overall complaints.
- 3.176 We consider it in consumers' interest to lower the minimum performance level to reflect current performance and to consolidate timely and effective complaints handling. We have considered SGN's ISG's concerns, but given the significant improvements in performance over RIIIO-GD2 we do not consider the new target to be unreasonable. The networks' mean Complaints Metric ODI-F score in the first 3 years of RIIIO-GD2 is 2.09, while their median score is 1.66. We accept, to some degree, the argument made by the GDNs that a relatively small number of complaints under a higher weighted metric could disproportionately affect their overall Complaints Metric ODI-F scores. Therefore, we consider a minimum performance level of 3.5 appropriate to maintain high levels of performance and discourage backsliding while allowing for small variations in performance under higher weighted metrics.

Figure 4: Complaints Metric scores through RIIIO-GD1 and RIIIO-GD2



Incentive value

- 3.177 Financial penalties will be applied linearly above the minimum performance level with a maximum penalty equivalent to 0.17% of RoRE for scores of 5 and

above. This is equivalent to the RIIO-GD2 incentive exposure but is a strengthening of the RIIO-GD2 maximum penalty score from 10.

- 3.178 With 6 of the 8 networks consistently scoring 2.83 or below in every year since 2020/21 (and below a score of 2 since 2022/23), we consider it appropriate to lower the maximum penalty score to encourage consistent performance across the networks.
- 3.179 No GDN has scored above 5 since 2017/18. A maximum penalty level of 5 would reduce the penalty band between the minimum performance level and the maximum penalty score, meaning financial penalties will increase more sharply than in RIIO-GD2. This will significantly increase the strength of the ODI-F and further encourage networks which are performing below the networks' average score to improve their performance.

Next Steps

- 3.180 As decided in our SSMD, we will continue to require all the GDNs to apply the definition of "complaint" as defined in the Complaints Handling Regulations.²⁵ To ensure consistency and comparability across GDNs, we have engaged - and will continue to engage - with the GDNs and other stakeholders to ensure a common interpretation and application of this definition, including clarity on when a complaint should be considered to be resolved. We will consider updating the RIGs to provide additional detail and clarity where needed.

Questions

GDQ15. Do you agree with our proposed design of the Complaints Metric ODI-F?
--

PSR Customer Complaints ODI-R

Purpose: To ensure that the GDNs provide an equally good level of complaints handling service for customers on the PSR and those in their general customer base.

Benefits: The ODI-R will provide stakeholders with standardised information to hold the GDNs accountable for their performance in relation to customer complaints for consumers on the PSR.

Background

- 3.181 In our SSMD, we decided to introduce a separate PSR Customer Complaints ODI-R to require the GDNs to publicly report a breakdown of their PSR-only

²⁵ The Gas and Electricity (Consumer Complaints Handling Standards) Regulations 2008

complaints scores. We decided that this ODI-R will have the same performance target as the Complaints Metric ODI-F and will provide stakeholders with consistent, comparable data. This will help to hold the GDNs accountable for delivering equally high standards of complaints handling for PSR customers as they do for their wider customer base and will enable insights to ensure we can continue to protect consumers on the PSR.

Consultation position and rationale

Summary of consultation position

Target: Set a common target at the same level as the Complaints Metric ODI-F (3.5).

Reporting: Via the GDNs' annual consumer vulnerability reports.

Target

3.182 We propose to set the PSR Customer Complaints ODI-R target at 3.5. This is at the same level as the Complaints Metric ODI-F as consumers in vulnerable situations should receive an equally high standard of complaint handling and resolution as the general consumer base.

Reporting

3.183 We propose to require the GDNs to report PSR Customer Complaints scores in an accessible format in their annual consumer vulnerability reports. This should be alongside their Complaints Metrics ODI-F scores, including a breakdown of the four weighted indicators and an informed commentary to explain differences in performance. This will enable consumers and other stakeholders to compare performance across PSR and non-PSR customers. This requirement will be set out in the VCMA Governance Document.

Questions

GDQ16. Do you agree with our proposed design of the PSR Customer Complaints ODI-R?
--

Unplanned Interruptions ODI-F

Purpose: To protect consumers by incentivising companies to minimise the duration of unplanned interruptions.

Benefits: Managing the duration of interruptions reduces negative impact on customers, ensuring they do not experience prolonged periods without gas.

Background

- 3.184 In RIIO-GD2, we introduced the penalty-only Unplanned Interruptions ODI-F. This incentivises the GDNs to ensure their performance in getting customers back on gas following an unplanned interruption does not deteriorate. This ODI-F monitors average durations of unplanned interruptions during each year, with companies penalised for failing to meet their targets.
- 3.185 We established separate ODI-F targets for Multiple Occupancy Buildings (MOBs) and non-MOBs across Cadent's networks in RIIO-GD2, as the average restoration time for unplanned interruptions in Cadent's North London MOBs had increased significantly in RIIO-GD1. However, for SGN, WWU, and NGN, we implemented a single ODI-F target covering both MOBs and non-MOBs, as their networks have fewer MOBs than Cadent and there was no evidence of performance deterioration.
- 3.186 In our SSMD, we decided to:
- retain the Unplanned Interruptions ODI-F in RIIO-GD3, continuing to exclude major incidents from it;²⁶
 - introduce separate non-MOB and MOB measures for all GDNs to provide a consistent and comparable measure of the GDNs' unplanned interruption performance;
 - set the incentive exposure at the equivalent to 0.085% of RoRE for each performance measure (ie non-MOB and MOB unplanned interruptions), which is equivalent to the RIIO-GD2 incentive used for Cadent's RIIO-GD2 ODI-Fs;
 - set a common industry non-MOB performance level for RIIO-GD3 as we considered non-MOBs restoration to be comparable across the GDNs.
- 3.187 We asked the GDNs to work with stakeholders to propose non-MOB and MOB minimum performance levels (MPLs) and excessive deterioration levels (EDLs) through their business plans. The MPL is the point at which a penalty will be incurred under the ODI-F and the EDL is the point at which the maximum penalty through the ODI-F is incurred.
- 3.188 Feedback from our Call for Evidence suggests that ISGs were supportive of their companies' respective Unplanned Interruptions ODI-F target proposals. Cadent's

²⁶ A major incident is 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.

ISG also noted concerns on how to account for the wide range of complex circumstances within non-MOBs unplanned interruptions. It noted that non-MOBs are a 'catch all' classification for anything that is not a single occupancy building.

- 3.189 In the development of their business plans, GDNs also received feedback emphasising that reducing the number and duration of unplanned interruptions, ensuring fast restoration times, and providing good communication and flexibility were areas of importance for their customers.

Consultation position and rationale

Summary of consultation position

Targets:

- (i) Set a common non-MOB MPL target of 13 hours (at which point a penalty will be incurred) and an EDL of 18 hours (at which point the maximum penalty will be incurred).
- (ii) Set network-specific MOB targets.

Measurement: The average duration of an unplanned interruption in the GDNs network in the relevant regulatory year, measured in hours, for two metrics: non-MOBs and MOB.

Incentive exposure: Penalty cap at 0.17% of RoRE for both measures.²⁷

Incentive value: The penalty will increase linearly above the MPL with a cap at the EDL.

Applied to: All GDNs

Targets

Non-MOB performance targets

- 3.190 We propose to reject the GDNs' proposed non-MOB targets and instead set targets using the highest annual average duration recorded by the GDNs from the first three years of RIIIO-GD2. This provides a common MPL of 13 and an EDL of 18. We consider it appropriate to set a target that reflects the collective performance of the GDNs.

GDNs' proposed non-MOB performance targets

- 3.191 The GDNs used different methodologies to propose non-MOB unplanned interruptions targets in their business plans, as set out in Table 13.

²⁷ Please see Chapter 11 of the Finance annex for a breakdown of the RoRE figures.

Table 13: The GDNs' proposals for non-MOB Unplanned Interruptions ODI-F targets

GDN	Proposed MPL (hours)	Proposed EDL (hours)
Cadent	15	20
NGN	10	17.5
SGN	19	26
WWU	10	15

- 3.192 WWU and NGN proposed targets based on their network's highest annual average duration to maintain their RIIO-GD2 performance. While this is stretching, it is higher than the sector average and we note the intent of the ODI-F is to prevent performance dropping below current acceptable levels.
- 3.193 SGN and Cadent reviewed all the GDNs' highest annual average duration in RIIO-GD2 and excluded some data.²⁸ We do not consider it appropriate to exclude data when setting the target because it is not representative of the GDNs' performance in this area, which could therefore skew the GDNs deterioration levels for RIIO-3.
- 3.194 Cadent proposed that we should retain our RIIO-GD2 approach to set network-specific targets for non-MOBs and proposed specific targets for each of its networks. It said there are significant regional differences, particularly in the number of complex non-MOBs, which mean non-MOB unplanned interruptions are not comparable across the GDNs. We disagree with Cadent's proposed approach and maintain our SSMD position to set common non-MOB targets. Given the relatively small spread of performance across the industry, we consider non-MOB unplanned interruptions work to be broadly similar across the GDNs.

MOB performance targets

- 3.195 We propose to set network-specific MOB unplanned interruption targets as set out in Table 14.

²⁸ Cadent's proposed target excluded years where a GDN received a penalty for its highest annual duration. SGN's proposed target accounted for increased repairs from larger-diameter pipes and repairs on its Southern network due to regional productivity factors.

Table 14: RIIO-GD3 proposed MOB Unplanned Interruptions ODI-F targets

GDN	EOE	Lon	NW	WM	NGN	Sc	So	WWU
MPL (Hrs)	410	593	342	388	212	549	212	212
EDL (Hrs)	601	793	542	588	412	749	412	412

3.196 For Cadent and SGN, we propose to set the MPL and EDL targets based on the lowest value of:

- the highest annual average duration for each network since 2019/20; or
- the proposals put forward in its business plan.

3.197 This method will prevent Cadent and SGN's performance dropping below levels delivered in RIIO-GD2 and aligns with their customers' expectations that GDNs will reduce the number and duration of unplanned interruptions.

3.198 For WWU and NGN, we propose to set the same MPL and EDL as for SGN Southern, which is based on the highest annual average duration for its network. While these are higher than NGN and WWU's RIIO-GD2 annual average durations, we acknowledge they have a limited number of MOBs and low unplanned interruption durations in RIIO-GD2. As a result, we think that basing their targets on their RIIO-GD2 data could leave them vulnerable to significant performance swings from a single large incident. We consider that using SGN Southern's targets for NGN and WWU will take this into account while ensuring that their consumers receive a level of service comparable to others around the country.

GDNs' proposed MOB performance targets

3.199 Table 15 shows the GDN's business plan proposals, which were based on six years of data from RIIO-GD1 and RIIO-GD2 for each of the GDNs.

Table 15: The GDNs' RIIO-3 business plan proposals for MOB unplanned interruptions

GDN	EoE	Lon	NW	WM	NGN	Sc	So	WWU
MPL (Hrs)	454	593	342	467	504	549	243	500
EDL (Hrs)	654	793	642	667	756	969	434	750

3.200 Cadent proposed separate targets for each of its networks, which we consider to be broadly reasonable. We have accepted its proposed targets for its London and North West networks as these are the same as its highest annual duration

in RIIO-GD2. The targets proposed for East of England and West Midlands were slightly higher than the highest average duration from RIIO-GD2. We do not propose to accept these, as we do not consider performance should be lower than what has been achieved in RIIO-GD2.

- 3.201 SGN proposed targets for its two networks based on the duration of a single incident that occurred on its Scotland network. We do not consider this to be an appropriate target setting methodology as it unreasonably skews the target. We think each network area should be assessed based on their whole asset base and historical performance.
- 3.202 NGN proposed MOB targets based on Cadent London's data due to limited incidents in its own region. We do not think NGN is comparable to Cadent London as it has significantly fewer MOBs, and we therefore do not consider it appropriate to set NGNs target using this data.
- 3.203 WWU proposed a target of 500 hours based on its estimate of the impact of a significant incident. This target would be one of the least stretching and we don't consider this to be appropriate given WWU's historical performance in this area. WWU also committed to an average of 31 hours unplanned interruption time achieved for 90% of its customers. While our proposed targets aim to set a balanced approach for the ODI-F, we encourage WWU to continue to strive to meet its own stretching commitment.

Questions

GDQ17. Do you have any views on the proposed approach to setting unplanned interruption targets for both non-MOBs and MOBs through the Unplanned Interruptions ODI-F?

Collaborative Streetworks ODI-F

Purpose: To incentivise the GDNs to collaborate with other utilities for the delivery of streetworks projects.

Benefits: To reduce the frequency and duration of streetworks by coordinating projects between the GDNs and other utilities. We also expect it to promote knowledge sharing amongst utilities on best practice.

Background

- 3.204 The RIIO-GD2 reward-only Collaborative Streetworks ODI-F incentivises SGN and Cadent to carry out collaborative projects with other utilities when

undertaking streetworks in Greater London. These projects are facilitated by the Greater London Authority (GLA), which carries out a central coordinator role. In RIIO-GD2, Cadent and SGN receive a reward of £0.305m per completed collaborative streetworks project that meets the eligibility criteria.

- 3.205 In our SSMD, we decided to retain the ODI-F in Greater London for RIIO-3. We decided not to extend the incentive beyond this area because we had not seen evidence that other local authorities were willing, able and suitable to deliver the central coordinator role outside of Greater London. We decided to set the incentive exposure at the equivalent of 0.17% of RoRE, which is equivalent to the RIIO-GD2 ODI-F. We also decided to implement incentive rate reward bands based on the complexity and social value of a project, with each band having a flat incentive rate.
- 3.206 In its business plan, Cadent proposed to expand the incentive across its entire network. However, it did not provide evidence of local authorities which were interested in overseeing the incentive. Cadent's ISG was supportive of Cadent's proposal, saying that it presented a clear benefits case and had undertaken wider engagement activities with local authorities. We have subsequently engaged with the Greater Manchester Combined Authority (GMCA), which is supportive of extending the ODI-F into Greater Manchester.

Consultation position and rationale

Summary of consultation position

Scope: Rewards are available across GB where: the local authority meets the eligibility criteria to carry out the central coordinator role for the area; and the GDN submits estimated collaboration costs and delivers a minimum number of projects annually.

Target: A minimum threshold of five projects must be completed per year before rewards are achieved.

Incentive exposure: Reward cap at 0.17% of RoRE.²⁹

Incentive value: £75,000 for projects meeting the minimum criteria, and £125,000 for projects identified to be of strategic importance by the central coordinator.

Applies to: All GDNs meeting the eligibility criteria.

²⁹ Please see Chapter 11 of the Finance annex for a breakdown of the RoRE figures.

Scope

- 3.207 We propose to rollout the Collaborative Streetworks ODI-F across GB, providing an incentive for all GDNs to work with local authorities to undertake collaborative streetwork projects. GDNs will be able to access the ODI-F for a region within its network once a local authority is formally identified and meets the defined eligibility criteria to carry out the central coordinator role. The central coordinator role would be the same as that undertaken by GLA in London, and it would be required to:
- coordinate utilities to identify strategic projects;
 - direct coordination efforts across stakeholders;
 - provide us with an annual submission of project summaries; and
 - adopt a tool to consistently measure the value and benefits of the collaborative projects, ensuring alignment with the GLA monitoring and evaluation (M&E) tool for comparability.³⁰
- 3.208 To be eligible for the ODI-F once a central coordinator has been appointed, the GDN would be required to:
- submit estimated collaboration costs; and
 - deliver a minimum number of projects annually.
- 3.209 Expanding the ODI-F across GB is a change from our SSMD decision because we have now seen greater evidence of interest from local authorities outside of London. We considered only expanding the incentive to Greater Manchester as the GMCA is currently the only local authority which has provided us evidence that it has the capability and willingness to take on the central coordinator role. However, we are proposing to expand the incentive across GB to provide the same opportunities nationally. We consider this to be fair to promote consistent, strategic coordination across all regions in RIIO-GD3.
- 3.210 We expect collaborative streetworks to become BAU over time, as GDNs and other utility companies embed collaborative working practices. This expectation is shared by Cadent which acknowledged in its business plan that collaborative streetworks are likely to become BAU after the RIIO-GD3 period. We would therefore expect the GDNs to have the maturity and processes in place to deliver both strategic and minimum criteria projects without the need for an ODI-F, enabling a transition to an ODI-R, in the next price control period.

³⁰ <https://www.london.gov.uk/programmes-strategies/better-infrastructure/infrastructure-coordination/streets-service/performance-and-results>

Target

- 3.211 We propose to set a minimum annual threshold of five collaborative streetworks projects that need to be delivered before rewards can be achieved in each regulatory year. We propose that projects can count towards the minimum threshold if they meet the incentive minimum criteria or they are identified as projects of strategic importance by the central coordinator.³¹
- 3.212 Our proposed annual threshold of five projects is based on the combined average number of minimum and strategic projects delivered by Cadent and SGN in London in the first three years of RIIO-GD2. This annual threshold will apply to all GDNs which have met the incentive eligibility criteria set out in the previous section.
- 3.213 We consider introducing a minimum annual threshold for collaborative streetworks project is appropriate to start embedding collaboration into BAU. It is also consistent with Ofwat's approach in its 2024 price review, which applies a minimum threshold of 20 over the course of PR24 for Thames Water's collaborative streetworks incentive.³² Establishing a minimum threshold for GDNs helps ensure a consistent and fair approach across utilities.

Incentive rate

- 3.214 We propose to set separate incentive rates for projects that meet the minimum criteria and projects identified by the central coordinator as of strategic importance, as set out in Table 16.

Table 16: Proposed incentive rates for the Collaborative Streetworks ODI-F in RIIO-GD3

Minimum	Strategic
£75,000	£125,000

- 3.215 We consider having separate incentive rates for minimum and strategic projects is appropriate to incentivise the GDNs to focus on more strategic and complex projects that offer higher social benefits.
- 3.216 We have based our proposed incentive rates on analysis using Cadent's and SGN's RIIO-GD2 reported data on collaboration costs. These rates cover the cost of collaboration as well as including a small financial reward based on the

³¹ The minimum criteria is that the streetworks project is: 0.2km minimum length; level 2 collaboration at a minimum; fulfilled by a minimum of two collaborating utilities; a permanent solution, not a temporary fix; and completed by the end of RIIO-GD3.

³² For further information on Thames' Water collaborative project, please see: <https://www.ofwat.gov.uk/wp-content/uploads/2024/12/PR24-final-determinations-Thames-Water-%E2%80%93-Outcomes-appendix.pdf>

average value delivered by a collaborative streetworks project. The overall incentive rate for each type of project has been set at a level that ensures the benefits to consumers and the local communities outweigh the incentives. While these incentive rates are lower than in RIIO-GD2, we consider they better reflect the cost of collaboration, based on the data we have collected.

Questions

- GDQ18. Do you have any views on the proposed expansion of the Collaborative Streetworks ODI-F across GB?
- GDQ19. Do you have any views on the proposed minimum threshold, the methodology used to set it, and the incentive reward rate for the Collaborative Streetworks ODI-F?

Close out of the Domestic Load Connections Allowance

Background

- 3.217 The Domestic Load Connections Allowance (DLCA) is a contribution the GD price control provides towards the cost of installing gas connections from the main to a domestic premise. This socialises the cost of laying the first 10m of pipe in public land,³³ and is set out in the GDNs' licences.³⁴
- 3.218 In our SSMD, we decided to remove the DLCA, and the associated Domestic Connections Volume Driver, to align with government ambitions to achieve net zero targets by facilitating more effective competition among low carbon energy options and natural gas.
- 3.219 The GDNs have said there are challenges in implementing the removal of the DLCA. Specifically, they have cited difficulties in coordinating the timing of updates to their connection charging methodologies and determining when to stop issuing connection quotes including the DLCA. These challenges stem from the need to align with the SSMD policy intent to remove the DLCA from the start of RIIO-GD3 on 1 April 2026.
- 3.220 One GDN has also stated that, in its opinion, the removal of the DLCA would require an amendment to the Gas Act 1986 in addition to modifying its licence.

³³ To receive 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 Fuel Poor Network Extension Scheme.

³⁴ Standard Condition 4B: 'Connection Charging Methodology', Gas Transporter licence, paragraph 1.

Next steps

- 3.221 To implement our SSMD decision, we will amend Standard Licence Condition 4B of the GDNs' licences to remove the ban on charging for pipe laid more than 10 metres from the relevant main. We note the suggestion that an amendment to the Gas Act 1986 may also be needed. However, our position remains that the Gas Act 1986 does not need to be amended and that modifying the LO is sufficient as the DLCA policy only sits within the licence itself.
- 3.222 We will continue to work with the GDNs over the summer to determine the most appropriate transitional arrangements to implement the removal of the DLCA with minimal administrative burden.

4. Managing uncertainty

Introduction

- 4.1 Business plans and price controls are based on a set of assumptions of what is required over the forthcoming period. There may be significant uncertainty over some of these assumptions, and where appropriate it may be better to use mechanisms that adapt certain elements of the price control during the period. These are referred to as UMs.
- 4.2 This chapter sets out our proposals for each UM that will apply to all the GDNs during the RIIO-GD3 price control period. For details of our proposals for UMs that only apply to a single GDN, see the company annexes.
- 4.3 As set out in the Overview Document, the UMs that we will use in RIIO-3 are volume drivers, re-openers, UIOLIs, pass-through, and indexation mechanisms. Table 17 and
- 4.4 Table 18 outline the UMs we are proposing for RIIO-GD3 and set out where you can find full details on each. UMs specific to a particular company are covered in that company's respective annex.

Table 17: Cross-sectoral UMs in RIIO-3

UM name	UM type	Sector(s)	Further detail
Business Rates (prescribed rates)	Pass-through	ET, GD, GT	Finance Annex
Cost of debt indexation	Indexation	ET, GD, GT	Finance Annex
Cost of equity indexation	Indexation	ET, GD, GT	Finance Annex
Inflation Indexation of RAV and Allowed Return	Indexation	ET, GD, GT	Finance Annex
Ofgem licence fee costs	Pass-through	ET, GD, GT	Finance Annex
Pension Scheme Established Deficit	Pass-through	ET, GD, GT	Finance Annex
Tax Review	Re-opener	ET, GD, GT	Finance Annex
Real Price Effects (RPEs)	Indexation	ET, GD, GT	Overview Document
Digitalisation	Re-opener	ET, GD, GT	Overview Document
Resilience	Re-opener	ET, GD, GT	Overview Document
Cyber Resilience	Re-opener	ET, GD, GT	Overview Document
Co-ordinated Adjustment Mechanism (CAM)	Re-opener	ET, GD, GT	Overview Document
Net Zero	Re-opener	ET, GD, GT	Overview Document

UM name	UM type	Sector(s)	Further detail
Net Zero Pre-construction Works and Small Net Zero Projects (NZASP)	Re-opener	GD, GT	Overview Document
Net Zero And Re-opener Development Fund (NZARD)	UIOLI	GD, GT	Overview Document
Biomethane Connections	UIOLI	GD, GT	This document and GT Annex

Table 18: Sector-specific UMs in RIIO-GD3

UM name	UM type	Further detail
Heat Policy	Re-opener	This document
HSE Policy	Re-opener	This document
Tier 2A Mains and Services Replacement	Volume driver	This document
Diversions and Loss of Development Claims	Re-opener	This document
Complex Distribution Systems	Re-opener	This document
Safety Disconnections	Volume driver	This document
New Large Load Connections	Re-opener	This document
Specified Streetworks	Re-opener	This document
Central Data Service Provider (CDSP) Costs	Pass-through	This document
Miscellaneous	Pass-through	This document
NTS exit capacity	Pass-through	This document
Pension deficit charge adjustment	Pass-through	This document
Shrinkage	Pass-through	This document
Theft of gas (supplier responsible)	Pass-through	This document
Third-party damage and water ingress	Pass-through	This document

Infrastructure fit for a low-cost transition to net zero

Biomethane Connections UIOLI

Purpose: To support biomethane connections by providing partial funding for activities carried out by the GDNs during the connection process.

Benefits: This mechanism will reduce the cost of biomethane connections thereby encouraging more producers to connect to the gas distribution network.

Background

- 4.5 Government has set up the Green Gas Support Scheme (GGSS) which aims to increase the proportion of green gas in the GB gas grid by providing tariff support to incentivise the deployment of new anaerobic digestion (AD) biomethane plants. Tariffs are calculated to compensate plants for the building of new infrastructure to produce biomethane and for ongoing operation costs. This includes connection costs. The GGSS is due to close to new applicants in March 2028. Whilst government has not announced details yet, a consultation on a future policy framework for biomethane is expected later this year. We are working closely with DESNZ to ensure the relevant mechanisms complement each other.
- 4.6 In its Business Plan, Cadent proposed a pass-through mechanism to subsidise up to £2m per connection application for the reinforcement costs associated with new biomethane connections.
- 4.7 We are proposing to instead introduce a UIOLI to support biomethane connections in a manner that is consistent across transmission and distribution networks while being flexible enough to work for all stakeholders. This funding will be targeted to ensure that it does not result in the double funding of activities intended to be supported by the GGSS or other government funding mechanisms.

Consultation position and rationale

Summary of consultation position

UM type: UIOLI

Scope: Capex costs associated with connections for biomethane producers (if no government funding has been received).

Funding level: £15m UIOLI fund per GDN in RIIO-GD3, with an individual funding cap of £1m per biomethane connection.

Reporting: Annual RRP reporting on connection capex costs.

Governance Document: No

Applied to: All GDNs and National Gas Transmission (NGT)

UM type and scope

- 4.8 We propose to introduce a UIOLI to provide funding for the GDNs to partially cover the capital expenditure associated with biomethane connections, on condition that these connections (and the parties involved ie a biomethane

producer and relevant GDN) have not received the GGSS or any other government funding. We consider this will aid the connection of commercially viable biomethane plants, while ensuring consumers do not pay twice. This mechanism will also be available to NGT, as set out in Chapter 3 in the GT Annex. We do not want the UIOLI to introduce distortions to where and how biomethane producers connect onto either the distribution or the transmission network, which is why we propose the mechanism to apply equally to the GDNs and NGT. Aligning the mechanisms means the potential connectors will be able to choose the best option for them without losing out on any potential support.

- 4.9 We do not consider Cadent's proposal of a pass-through mechanism to be appropriate, as the GDNs have control over the capex associated with new connections. Pass-through mechanisms are used when costs are outside of the network company's control or subject to separate price control measures, neither of which applies in this case.
- 4.10 We note that the varying connection procedures across the GDNs have been highlighted by biomethane producers as a significant barrier for entry. We encourage the GDNs to collectively engage with the biomethane industry to streamline and align connection processes to remove this barrier. We will monitor progress of this alignment in the EAP (see paragraphs 3.4 to 0 for further detail on our EAP proposals).

Funding level

- 4.11 We propose to set the total UIOLI funding level at £20m per GDN in RIIO-GD3, which can provide up to £1m of funding per biomethane connection. We consider this to be an appropriate funding level as full uptake of this funding would lead to ~50% increase in biomethane connections across the networks. We consider this to be a good balance between encouraging biomethane connections and avoiding overburdening consumers.

Questions

GDQ20. Do you agree with the introduction of the proposed Biomethane Connections UIOLI, including with the proposed scope and funding caps?

Heat Policy Re-opener

Purpose: To enable us to increase or decrease allowances as appropriate in response to changes to specific regulations and connection charging methodologies that support the transition to low carbon heat.

Benefits: RIIO-GD3 allowances and outputs reflect changes to specific regulations and connection charging methodologies to support the timely decarbonisation of heat.

Background

4.12 In our SSMD, we decided to retain the Heat Policy Re-opener as we consider it to be an appropriate mechanism to manage the ongoing heat policy uncertainty in RIIO-GD3, including in relation to government's heat decision expected in 2026. We decided to remove the trigger associated with new obligations for the GDNs to promote energy efficiency as we no longer considered this to be an area of uncertainty. We also decided that the re-opener should only be Authority-triggered in RIIO-GD3.

Consultation position and rationale

Summary of consultation position

UM type: Re-opener

Scope: The re-opener can be triggered in response to a government decision on hydrogen for heat and/or changes to specific regulations and connection charging methodologies that support the transition to low carbon heat. It enables both upward and downward adjustments.

Authority triggered: Yes

Materiality threshold: 0.5% of ex ante base revenue - in line with the default set out in Chapter 6 of the Overview Document.

Applied to: All GDNs

Scope

4.13 We propose to retain our SSMD position on the scope of the re-opener, including the ability to adjust costs both upwards and downwards. The Heat Policy Re-opener allows GDNs to adjust costs in response to changes in heat policy, specifically:³⁵

- government's hydrogen for heat decision, which is expected in 2026;
- changes to connection charging arrangements for distributed entry connections or domestic premises; and

³⁵ This includes cases where such obligations are introduced or clarified retroactively, requiring the networks to adjust costs in response to those changes.

- changes to requirements on the quality and composition of gas.
- 4.14 In its Business Plan, Cadent proposed an additional re-opener trigger for costs that GDNs may incur from their property portfolio as a result of any heat policy decision. We consider the current scope of the re-opener already covers costs that may arise as a result of the government's hydrogen for heat decision expected in 2026, including property portfolio costs, so we do not propose to include this additional trigger.

Questions

GDQ21. Do you have any views on our proposed design of the Heat Policy Re-opener?

Secure and resilient supplies

HSE Policy Re-opener

Purpose: To provide GDNs with the opportunity to recover costs resulting from changes in HSE policy that lead to a material change in repex costs or workloads.

Benefits: Provides appropriate protection for consumers and GDNs by enabling upward or downward adjustments to allowances and outputs in response to changes in repex-related HSE policy.

Background

- 4.15 In our SSMD, we decided to retain this re-opener in RIIO-GD3. We decided to retain the trigger relating to changes in HSE policy or legislation surrounding repex-related licenced activity. We thought that the current scope of this trigger was sufficiently broad to ensure that GDNs can fund essential repair and replacement work should there be any material changes to HSE policy that impact the repex programme. However, we decided to remove the trigger relating to managing fatigue for shift workers since we do not anticipate further changes to HSE policy in this area.
- 4.16 Having reviewed the suggestions for scope changes from GDNs within their business plans, we are proposing to retain the existing design of this re-opener. We do not consider that there is sufficient evidence to change the scope.

Consultation position and rationale

Summary of consultation position

UM type: Re-opener

Scope: The re-opener would enable both upwards and downward adjustments. It would be triggered by material changes to GDNs repex costs that occur as a result of changes to repex related HSE Policy or legislation.

Number and date of re-opener windows: We propose two reopener windows:

25 January 2027 - 31 January 2027

25 January 2029 - 31 January 2029

Authority triggered: Yes

Materiality threshold: 0.5% of ex ante base revenue - in line with the default set out in Chapter 6 of the Overview Document.

Applied to: All GDNs

Scope

- 4.17 We maintain our SSMD position for the re-opener to be triggered by material changes to the GDNs' repex that occurs as a result of changes to repex-related HSE Policy or legislation.
- 4.18 We propose for the re-opener to enable both upwards and downwards adjustments to allowances. This is a continuation of the RIIO-2 scope as we think it is important that consumers can benefit from any changes that could result in costs reducing materially, as well as providing additional funding for GDNs where there are material cost increases.
- 4.19 In their business plans, the GDNs proposed a number of additions to the scope of this re-opener, which we are not proposing to include in the scope. These are discussed below.

Changes to the HSE IMRRP Enforcement Policy, specifically in relation to Tier 2A Risk Action Thresholds

- 4.20 We are currently engaging with the GDNs and the HSE to assess the impact of the changes to the Tier 2A Risk Action Threshold on workloads and costs for this asset category. However, we consider that any approved uplift in Tier 2A workloads can be adequately covered by the existing Tier 2A Volume Driver (discussed later in this chapter). GDNs should be able to forecast updated costs for the Tier 2A work and should submit these to us this summer. This will enable us to set efficient unit costs for the Tier 2A Volume Driver in our Final Determinations.

- 4.21 We consider that any further changes to the HSE IMRRP Enforcement Policy during RIIO-GD3 that result in material increases in repex costs or workloads will already be captured by the existing scope of the HSE Policy Re-opener.

Multiple Occupancy Buildings (MOBs)

- 4.22 All GDNs submitted workloads relating to the replacement of risers on MOBs and, if approved, these workloads are funded through NARM. Please see the engineering review sections of the company annexes for more information about these workloads.
- 4.23 SGN and WWU raised concerns that there is additional uncertainty in the application of the Building Safety Regulations to MOBs during the price control period. We have not been able to verify this. However, we consider that changes to the Building Safety Regulations,³⁶ which materially impact repex costs for MOBs (ie costs associated with mains, risers or services replacements), would be covered by the existing scope of this re-opener.
- 4.24 GDNs provided examples of potential additional MOBs maintenance costs which may result from future changes to the Building Safety Regulations, such as replacing missing mandatory signage, vehicle impact protection, or additional fire stopping. These would not be covered under the current scope of this re-opener and we do not have sufficient evidence to consider changing the scope to account for these maintenance costs. We consider that these maintenance and upkeep costs can be funded through existing opex allowances.

Complex Distribution Systems (CDSs)

- 4.25 Several GDNs referred to workloads relating to CDSs in their business plans, and Cadent and SGN proposed for it to be included in the scope of this re-opener. These assets are broadly defined as large commercial buildings such as shopping centres or hospitals, where supplies are to two or more primary meter points. We agree that the GDNs need to complete surveys of these assets, if they have not already in RIIO-GD2, and that CDSs may need significant repex work in RIIO-GD3 based on condition.
- 4.26 However, as CDS repex does not relate to a change in HSE policy, we are not proposing to include it under the scope of this re-opener. We address our decisions around funding CDS workloads in paragraphs 4.69 to 4.75.

Legacy safety disconnections

³⁶ Including changes implemented by HSE or the devolved governments in Wales and Scotland.

- 4.27 The GDNs have a practise of performing disconnections on disused pipes either on behalf of suppliers, or to make safe a disconnection where a supplier has failed to meet their duties under Gas Safety (Installation and Use) Regulations (GS(IU)R).
- 4.28 In GDNs' business plans these disconnections were referred to as legacy GS(IU)R disconnections, however it is our understanding that the GDNs work is performed in order to comply with the Pipeline Safety Regulations.³⁷ It is our understanding that these Pipeline Safety Regulation disconnections are not paid for by the supplier, and that the GDNs currently claim the costs through their maintenance allowances.
- 4.29 HSE has indicated that it is not satisfied with the standard of delivery of some legacy safety disconnections. GDNs suggested that the cost of remediating improperly undertaken disconnections, if mandated by HSE, should be included in this re-opener. We disagree. Customers have previously paid for the GDNs to carry out these disconnections through the price control. It is the GDNs' responsibility to perform these disconnections to the standard set by the HSE, and we do not consider that consumers should pay inefficient costs to remediate work that the GDNs have not delivered to an appropriate standard. We are therefore not proposing to include these costs within the scope of this re-opener, or anywhere else.

Mains in Gardens

- 4.30 WWU proposed this as an additional area of uncertainty during the price control, stating that this is a forward-looking requirement that mains situated in private land will need to be moved, for instance from under gardens and driveways into footpaths or roads. This does not appear to extend to previously replaced mains. We consider that this requirement would likely constitute a change to repex-related HSE policy, as it relates to the safety driven replacement of mains, meaning it would already be covered in the existing scope of this re-opener. Therefore, we do not consider the scope of the re-opener needs to include mains in gardens.

Time allowed to repair all leaks within 12 hours

³⁷ Regulation 14 of The Pipelines Safety Regulations 1996 '(1) The operator shall ensure that a pipeline which has ceased to be used for the conveyance of any fluid is left in a safe condition. (2) The operator of a pipeline shall ensure that work done in discharge of the duty contained in paragraph (1) is performed safely.'

- 4.31 WWU proposed this as an additional area of uncertainty during the price control. We consider that gas escape repairs fall outside the definition of repex, and allowances for repairs are already included within GDNs' operational cost allowances. Therefore, we propose that these costs should not be covered under the scope of this re-opener.

Number and date of re-opener windows

- 4.32 We propose two re-opener windows:
- 25 January 2027 - 31 January 2027
 - 25 January 2029 - 31 January 2029
- 4.33 We think that having one window within the first year of the price control period and one two years later will adequately account for material changes that trigger the re-opener throughout the price control period. The Authority also has the ability to trigger the re-opener at other times during the price control period.

Questions

GDQ22. Do you agree with our proposed scope of the HSE Policy Re-opener?
--

Tier 2A Mains and Services Replacement Volume Driver

Purpose: To fund mains replacement for mandatory Tier 2A mains and associated services.

Benefits: This volume driver adjusts allowances based on the actual workloads delivered, protecting customers and GDNs from incorrect volume assumptions and ensuring GDNs are funded to undertake any additional Tier 2A mandatory replacement which emerges during the price control period.

Background

- 4.34 In our SSMD we decided to retain the Tier 2A Volume Driver to manage volume uncertainty. We noted that HSE was still considering potential changes to the Tier 2 programme as part of its review of the IMRRP Enforcement Policy. We said we would consider if any changes were required once HSE has made its final decision. We also said we would review the proposed unit rates as part of our business plan assessment.
- 4.35 In its updated 'Enforcement policy for the iron mains risk reduction programme 2026 to 2031',³⁸ HSE requires GDNs to submit to it a methodology for setting

³⁸ <https://www.hse.gov.uk/gas/supply/mainsreplacement/enforcement-policy-2026-2031.htm>

the Tier 2 risk-action threshold and to explain how it has been applied. HSE requires that the methodology used should address the concerns about the previous methodology that it outlined in its 'Research Report: Review of progress of the Iron Mains Risk Reduction Programme (IMRRP) 2013 to 2023'.³⁹ The outcome of this is that the GDNs are changing their Tier 2 risk-action thresholds.

- 4.36 We are continuing to engage with the GDNs and HSE to assess the impact of the Tier 2 risk-action threshold update on Tier 2A workloads and costs. While WWU have submitted updated workloads and costs, for the other three GDNs the impact of these updates has not yet been finalised. Therefore, we expect to update the GDNs' allowances and unit costs for Tier 2A between Draft Determinations and Final Determinations.

Consultation position and rationale

Summary of consultation position

UM Type: Volume Driver

Scope: To fund mains and services replacement for above risk-action threshold Tier 2 mains (otherwise known as Tier 2A mains).

Unit costs: Network specific unit costs will be set for different diameter bands in our Final Determinations.

Reporting: Annual reporting through RRP.

Applied to: All GDNs

Unit costs

- 4.37 We intend to set network specific unit costs for different diameter bands in our Final Determinations. These will be determined by the outcome of our totex modelling. We intend to incorporate updated Tier 2A allowances and workloads into our modelling ahead of Final Determinations, subject to receiving updated forecasts from the GDNs over the summer.
- 4.38 We have been actively engaging with the GDNs to understand their updated workload and cost forecasts reflecting HSE's updated enforcement policy. However, due to the timelines we haven't been able to include these adjustments at Draft Determinations.

³⁹ <https://www.hse.gov.uk/research/rrhtm/rr1216.htm>

Next steps

- 4.39 We are continuing to engage with the GDNs on this topic. We expect to receive Tier 2A workloads and costs from all GDNs ahead of their Draft Determination responses (noting that WWU has already provided this). We are also intending to have a working group in the summer to address this and other repex related topics. As part of this engagement, we will be investigating the potential to create a consistent risk-action threshold across GDNs.

Questions

GDQ23. Do you agree with our proposed design of the Tier 2A Volume Driver?
--

Diversions and Loss of Development Claims Re-opener

Purpose: Enables the GDNs to recover costs related to diverting and rerouting the network that could not be recovered from third parties.

Benefits: To protect consumers and the GDNs from uncertain volumes and scope of diversion works, if costs cannot be recovered from third parties.

Background

- 4.40 In our SSMD, we decided to retain this re-opener, including retaining the widened scope for work needed due to environmental factors outside of the GDNs' control which we introduced in May 2024.

Consultation position and rationale

Summary of consultation position

UM Type: Re-opener

Scope: Costs for: (i) non-recoverable diversion costs or the cost of reasonable alternative solutions that avoid diversion costs; (ii) loss of development claims; or (iii) costs of diverting gas assets due to adverse environment factors.

Authority Triggered: No

Re-opener window: 25 January 2029 - 31 January 2029

Materiality threshold: 0.5% of ex ante base revenue - in line with the default set out in Chapter 6 of the Overview Document.

Applied to: All GDNs

Scope

- 4.41 As set out in our SSMD, we are proposing to keep the scope of the re-opener the same as in RIIIO-GD2. We consider that this scope is appropriate as these costs are uncertain and largely unavoidable. In order for a GDN to trigger the reopener, it must evidence that the costs are efficient, not already funded through baseline allowances and cannot be fully recovered from third parties.

Re-opener window

- 4.42 We propose to set a single re-opener window between 25 January 2029 and 31 January 2029. We consider that having the re-opener window in the latter half of the price control is appropriate because, where accepted, GDNs have baseline allowances for their forecast diversions work. This also provides a reasonable amount of time to put together a request for further funding, where appropriate, including for those GDNs which do not have baseline allowances. If diversions costs are incurred after the trigger window, they may be considered as part of RIIIO-GD3 close out.

Questions

GDQ24. Do you agree with the scope of our Diversions Re-opener?

High quality of service from regulated firms

Safety Disconnections Volume Driver

Purpose: To fund disconnections carried out under the Pipeline Safety Regulations by adjusting cost allowances to reflect differences between outturn workloads and baseline forecasts during RIIIO-GD3.

Benefits: To protect consumers and GDNs by adjusting allowances based on the actual workloads delivered, because of the uncertainty on the volumes of safety disconnections.

Background

- 4.43 In our SSMD, we committed to a review of the disconnections framework to determine if regulatory change was required. We have since published a Call for Input asking for information and views, which closed in March.⁴⁰ We are still considering the responses to the Call for Input, and do not expect to implement changes to the gas disconnections framework before the start of RIIIO-GD3.

⁴⁰ <https://www.ofgem.gov.uk/call-for-input/exercising-consumer-choice-review-gas-disconnections-framework>

- 4.44 We propose to implement a volume driver for disconnections carried out in line with the Pipeline Safety Regulations. This proposal does not prejudge the outcome of our review. We will work closely with government and industry to ensure that any changes to the disconnections framework are equitable and appropriately funded.
- 4.45 Feedback from our Call for Evidence suggests that a holistic view of disconnections is required and that a volume driver may be appropriate given the uncertainty around the number of disconnections.

Consultation position and rationale

Summary of consultation position

UM type: Volume driver

Scope: To fund new disconnections carried out by the GDNs as part of their responsibilities under the Pipeline Safety Regulations. Enables upwards and downwards adjustments of cost allowances to reflect differences between outturn workloads and baseline forecasts during RIIO-GD3.

Unit costs: Network specific unit costs

Reporting: Annual reporting through RRP.

Applied to: All GDNs

UM type

- 4.46 We propose to introduce a volume driver for safety-related disconnections carried out under the Pipeline Safety Regulations. Using a volume driver will enable us to manage the uncertain workload around the volume of disconnections, ensuring consumers only pay for safety-related disconnections work that is delivered.

Scope

- 4.47 We propose that this volume driver will enable upwards and downwards adjustments of cost allowances to fund new disconnections carried out as part of the GDNs' obligations under the Pipeline Safety Regulation. The specificity of this volume driver means that if disconnection processes or obligations change following our review, then the volume driver will cease providing funds as the Pipeline Safety Regulations is no longer the driving new disconnection activities.
- 4.48 Given this, we anticipate that the volume driver mechanism will be flexible to adjust cost allowances if the outcome of our disconnections framework review

leads to changes in the number of disconnections carried out under the Pipeline Safety Regulations.

- 4.49 This mechanism will not provide funding for legacy disconnections currently being reviewed by the HSE. As set out in paragraph 4.29, we do not consider it reasonable for customers to pay inefficient costs for GDNs to remediate work they have not delivered to an appropriate standard.

Unit costs

- 4.50 We propose to set network specific unit costs. The unit costs will cover labour and materials but not overheads. We propose to exclude overhead costs because we consider that these are linked to several other activities such as connections and customer-led disconnections, as well as safety-driven disconnections. We intend to fund these overhead costs through baseline allowances instead.
- 4.51 Due to past reporting structures there is limited evidence available to calculate unit rates. To determine unit rates, we analysed data provided in the business plans as well as in responses to our recent Call for Input on disconnections. This analysis showed that estimated unit rates for safety disconnections range from ~£300 to ~£1800. We think this wide range reflects inconsistencies in reporting, both across and within GDNs. As a result, it is not currently possible to determine a robust unit rate. We will work with the GDNs over the coming months to determine an appropriate unit rate ahead of our Final Determinations.

Reporting

- 4.52 We propose that the GDNs will report a breakdown of disconnection costs and volumes will be reported in the annual RRP.

Questions

GDQ25. Do you agree with our proposed design and unit rates for the Safety Disconnections Volume Driver?
--

New Large Load Connections Re-opener

Purpose: Enable the GDNs to recover costs incurred from network reinforcements required by new large load connections, eg power stations, distilleries, new industrial developments and new housing estates.

Benefits: To protect consumers and GDNs by adjusting allowances based on the actual workloads delivered, as connection numbers are largely driven by customers and therefore uncertain and difficult to forecast.

Background

- 4.53 New large load connections refers to either new connections or significant alterations to existing connections for the purpose of entering or offtaking gas from the distribution network. To qualify as a large load, an offtake connection must have a minimum capacity of 1500 standard cubic metres per hour (scm/h). Typical examples include connections for power stations, distilleries, new industrial developments and housing estates. GDNs incur costs in delivering these connections as they often require substantial upgrades or extensions to the existing gas network to accommodate the increased demand.
- 4.54 In our SSMD, we decided to retain this mechanism for RIIO-GD3 with the same scope as in RIIO-GD2, including retaining the demand threshold within the definition of large load connection for offtaking gas.

Consultation position and rationale

Summary of consultation position

Type: Re-opener

Scope: Costs relating to:

- (a) network reinforcements required by new large load connections; or
- (b) significant alterations to an existing connection

that are subject to the Economic Test,⁴¹ and for the purpose of:

- (i) entering gas onto the distribution network; or
- (ii) offtaking gas from the distribution network with a maximum offtake capacity in excess of 1500 scm/h.

Authority Triggered: No

Re-opener window: 25 January 2029 - 31 January 2029

Materiality threshold: 0.5% of ex ante base revenue - in line with the default set out in Chapter 6 of the Overview Document.

Apply to: All GDNs

⁴¹ The Economic Test, as defined in the RIIO-GD2 licence, is a financial assessment tool operated by the GDNs that is designed to identify new connections where the level of investment would be considered 'uneconomic'.

Scope

- 4.55 We propose to use this re-opener to fund general reinforcement work and new large load connections. However, we consider that general reinforcements activities fit within the existing scope of the re-opener, so we are not proposing any changes to its scope to accommodate them.
- 4.56 General reinforcements are work carried out by the GDNs to increase capacity and reliability across their networks. We consider this work is similar to new large load connections as it is also uncertain and heavily reliant on customer demand.
- 4.57 All GDNs except WWU proposed allowances for reinforcements work in their business plans. However, we have concerns over the justification for some of the proposed reinforcement workloads and costs, given uncertainty over need during RIIO-GD3 - as outlined in the engineering review sections of the company annexes. Where we have outlined concerns, we are not proposing to fund the costs through baseline allowances but instead consider funding through this reopener as certainty over the need increases.

Questions

GDQ26. Do you agree with the proposed design of the New Large Load Connections Re-opener, including our proposal to include general reinforcement projects in its scope?

Specified Streetworks Costs Re-opener

Purpose: Enable the GDNs to recover efficient costs associated with new permit and lane rental schemes or new requirements introduced by public bodies after the RIIO-GD3 price control is set.

Benefits: To protect consumers by avoiding the inclusion of uncertain streetworks spend in baseline allowances and provide an opportunity for GDNs to request funding for additional efficient costs within RIIO-GD3, if they arise.

Background

- 4.58 In our SSMD, we decided to retain this re-opener for RIIO-GD3 and said we would work alongside the GDNs to ensure the scope of the re-opener reflects new uncertainties relating to streetworks requirements, including costs associated with changes to the Environment Agency's requirements on waste management.

Consultation position and rationale

Summary of consultation position

Type: Re-opener

Scope: Costs relating to new requirements placed on GDNs by streetworks legislation including new permit, lane rental or congestion charging schemes.

Authority Triggered: No

Re-opener window: 25 January 2029 - 31 January 2029

Materiality threshold: 0.5% of ex ante base revenue - in line with the default set out in Chapter 6 of the Overview Document

Applied to: All GDNs

Scope

- 4.59 We consider that keeping the existing scope is appropriate for RIIIO-GD3. This allows the GDNs to recover costs associated with new obligations arising from streetworks legislation, including new permit schemes, lane rental charges or congestion charging schemes.
- 4.60 While the GDNs' business plans highlight ongoing uncertainties regarding new permit and lane rental schemes, they have not expressed specific concerns about the current scope of the re-opener. Additionally, no issues have been raised - either through their business plans or other engagement - regarding the existing re-opener scope in relation to changes in the Environment Agency's requirements around waste management. Therefore, we do not consider any changes to the re-opener scope to be necessary at this time.

Questions

GDQ27. Do you agree with our proposal to retain the RIIIO-GD2 scope of the Specified Streetworks Costs Re-opener?

GD specific pass-through costs

Purpose: Where GDNs have costs that are substantially outside of their control we use pass-through mechanisms. For these items, any change in the GDNs' costs is recovered fully from customers.

Benefits: To protect the companies from costs that are outside of their control.

Background

4.61 This section covers GD sector specific pass-through costs. In our SSMD we decided to retain the following GD specific pass-through mechanisms. We are not consulting on these because our position is unchanged:

- Pension deficit charge adjustment;
- Third-party damage and water ingress;
- Shrinkage;
- NTS exit capacity;
- Theft of gas (supplier responsible);
- Central Data Services Provider (CDSP) costs;
- Miscellaneous; and
- Stranraer (SGN only)

Consultation position and rationale

4.62 Three of the GDNs proposed new pass-through mechanisms through their business plans. We are not proposing to accept these pass-through mechanisms in RIIO-GD3 as set out below.

Connecting entry gas

4.63 Cadent proposed a pass-through, with an ex-post review of efficient costs, for costs associated with actions to facilitate the biomethane connections.

4.64 We are not proposing to treat this as a pass-through as we are instead proposing to fund this work via the Biomethane Connections UIOLI set out in paragraphs 4.5 to 4.11.

GDQ28. Do you agree with our proposal to reject Cadent's proposed pass-through to facilitate biomethane connections?

Joint Office of Gas Transporters

4.65 SGN proposed a pass-through for costs relating to the delivery of Joint Office of Gas Transporters (JO) services.

4.66 We are not proposing to treat this as a pass-through because, while the JO has been transferred to a new limited company, the JO is still funded and governed by the GDNs and National Gas, as required in the licence. We therefore consider these costs to be mostly in their control and should continue to be funded through baseline allowances. This is in line with our SSMD position.

GDQ29. Do you agree with our proposal to reject SGN's proposed pass-through for Joint Office of Gas Transporters services?

Plant protections services

- 4.67 WWU proposed for the annual fee it expects to be required to pay for the National Underground Asset Register (NUAR) maintenance to be allowed as a pass-through cost. The NUAR will be a digital map of underground pipes and cables in England, Wales and Northern Ireland that is being built by the Geospatial Commission (part of the Department for Science, Innovation and Technology).⁴² The NUAR will be enacted through the Data (Use and Access) Bill, which is still making its way through Parliament.
- 4.68 We are not proposing to treat costs relating to the NUAR as a pass-through as we do not yet have sufficient information regarding the level of associated costs for the GDNs, nor the method by which fees will be charged. We also note that the intention of the NUAR is to increase efficiency of data sharing and excavations, leading to fewer accidental strikes on underground pipes and cables, and reduced disruptions for the public and businesses. We therefore consider it is likely the cost of NUAR will be offset by the efficiency benefits.

GDQ30. Do you agree with our proposal to reject WWU's proposed pass-through for plant protection services?

UMs we propose to reject

CDSs

Consultation position and rationale

- 4.69 CDSs are defined in WWU's business plan as "MOBs which consist entirely of industrial and/or commercial units that do not meet the classification of either a High-rise or Medium-rise building, where supplies are to more than two primary meter points, for example a shopping centre with three or more meter points that are supplied by risers/laterals."⁴³
- 4.70 In their business plans, Cadent and SGN proposed to include CDS workloads within the scope of the HSE Policy Re-opener, which we have responded to in paragraphs 4.25 to 4.26. In response to our Call for Evidence, SGN's ISG agreed

⁴² <https://www.gov.uk/guidance/national-underground-asset-register-nuar>

⁴³ Wales and West Utilities Asset Health Engineering Justification Framework: Multiple Occupancy Buildings & Complex Distribution Systems

that the use of a re-opener to deal with CDSs makes sense given the early stage of SGN's thinking on this distinct asset type.

- 4.71 WWU and SGN included CDS workloads in their MOB's Engineering Justification Papers. However, as set out in the summary of engineering review sections in each of the company annexes, more information was required on the scope of works, specific site details and planned interventions. Therefore, these workloads are too uncertain to justify funding at this time.
- 4.72 NGN did not submit any workloads or UM proposals in relation to CDSs through its business plan.
- 4.73 We consider that GDNs will need to do replacement work on CDSs in RIIO-GD3 to ensure they are in safe working order. We understand that all GDNs have done some level of surveying of these assets in RIIO-GD2.
- 4.74 Based on the information provided in the GDNs' business plans, we do not think a re-opener is needed as:
- We would expect WWU and SGN, which had submitted CDS workloads in their business plans, to have the information needed to better define and justify these projects. If these workloads are resubmitted and we consider them to be justified, we propose to fund these through NARM.
 - For the GDNs which did not submit workloads for CDSs, we think that the cost of addressing necessary CDS work during RIIO-GD3 will not be material when compared to allowances granted for MOB's work through NARM. We therefore propose that these GDNs will be able to redirect their NARM allowance towards CDS work, where necessary.
 - Finally, we do not have sufficient evidence that the workloads for CDSs are uncertain or likely to change significantly during RIIO-GD3, so do not consider that a re-opener is an appropriate mechanism.
- 4.75 Therefore, we do not consider that a new bespoke re-opener for CDS work is needed. We propose in the first instance to fund any approved resubmitted CDS workloads through NARM. Any resubmitted work plans for CDSs should be well justified and costed.

GDQ31. Do you agree with our proposal to not introduce a CDS Re-opener and instead fund any resubmitted workloads through NARM, if approved?
--

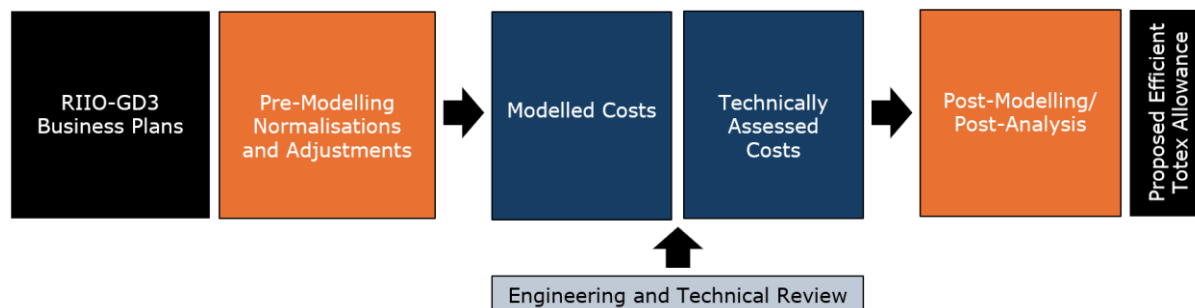
5. Cost of service

- 5.1 A critical part of RIIIO-GD3 is setting baseline allowances for each licensee. The objective of cost assessment is to ensure that these allowances reflect an efficient level of costs that enables GDNs to carry out their activities and deliver an appropriate level of outputs for consumers.
- 5.2 Consistent with our RIIIO-GD2 approach, we propose to use a toolkit of methodologies to assess the different categories of costs that make up totex. While developing our approach, we followed the principles for cost assessment set out in our Framework Decision and in the SSMC and we have evolved our RIIIO-GD2 approach by focusing on maintaining the robustness of the existing methodologies while also considering new evidence where this has been presented. Overall, we consider that our approach strikes a balance between incentivising cost efficiency and maintaining a safe, reliable and resilient gas distribution network.
- 5.3 We have proposed baseline totex allowances for all GDNs to deliver work where we are satisfied that the need is clearly demonstrated and there is sufficient certainty regarding the efficient cost of delivery.
- 5.4 In developing the proposed approach, we have drawn on a range of information sources, including:
- Business plans and Business Plan Data Templates (BPDTs) submitted by licensees in December 2024;
 - Responses to supplementary questions (SQs);
 - Stakeholder feedback received through the RIIIO-3 SSMC;
 - Engagement with stakeholders through Cost Assessment Working Groups (CAWGs); and
 - Independent reviews and reports commissioned by Ofgem.
- 5.5 Where the justification for the proposed costs and associated needs cases is not adequately evidenced or robust, we have removed these costs from baseline allowances. In selected cases, we have provisionally allowed funding at Draft Determinations subject to receiving further information from the GDNs to support the needs case justification or the proposed control mechanism. Our rationale for requesting further information is set out in relevant sections in this chapter. In instances where we consider there is currently significant uncertainty over the needs case and/or associated costs, but where further clarity may emerge during the price control period as further information becomes available, we have allocated costs to uncertainty mechanisms.

Chapter structure

5.6 Figure 5 provides a simplified overview of the cost assessment process we have followed for RIIO-GD3.

Figure 5: Simplified overview of RIIO-GD3 cost assessment process



5.7 Our overall cost assessment process follows a logical flow to arrive at efficient allowances. We start with cost, volume and technical data inputs (taken from the BPDTs), proceed through pre-modelling adjustments and the application of different modelling approaches, before applying post-modelling adjustments, to conclude with an efficient totex allowance for RIIO-GD3.

5.8 Our view of efficient totex feeds into price control financial models to determine the allowed revenues for the GDNs in RIIO-GD3.

5.9 We have structured this chapter to align broadly with the cost assessment process as set out in Figure 6. The chapter is structured as follows:

- Firstly, we explain our overall cost assessment, including the different lenses through which we review the Business Plans submitted by the licensees (eg engineering review, cost assessment review).
- We then discuss our overall approach to cost assessment, covering our overarching approach to modelling for RIIO-GD3, and our assessment of the alternative options that were considered.
- The pre-modelling normalisations and adjustments section then sets out our review of the different pre-modelling adjustments that we considered and are proposing. This includes: regional factors; company-specific factors; exclusions, and; cost and workload adjustments following the technical review.
- There are then sections on Totex Benchmarking, Non-regression analysis and Technically assessed costs, that all provide details on the specific modelling approaches we are proposing for different cost activities. We also cover our approach to applying catch-up efficiency. Collectively, these

determine our modelled view of efficient totex, prior to post-modelling adjustments.

- We then discuss the post-modelling application of the ongoing efficiency challenge, which determines our final view of efficient totex, and our approach to disaggregating totex allowances to activity-level allowances, where it is necessary to do so.
- The chapter finishes with our proposed approach to setting the totex incentive mechanism (TIM) sharing factor.

5.10 In each of these sections, we have set out our proposed approach and rationale for RIIIO-GD3 cost assessment. This includes our views on relevant proposals included within the GDNs' Business Plans. This chapter should be read alongside the Company Annexes.

Baseline totex

5.11 The baseline totex referenced in this section comprises forecast net controllable costs, including both direct and indirect operating expenditure (opex), capital expenditure (capex), and replacement expenditure (repex). These figures incorporate both catch-up efficiency and an ongoing efficiency challenges. However, the figures exclude real price effects (RPEs) to enable a like-for-like comparison with the submissions provided by GDNs.

5.12 Non-controllable costs, while included in the total allowed revenue recoverable by GDNs, are excluded from baseline totex and are assessed separately. Baseline totex also excludes pass-through costs.

5.13 Where we present submitted totex, this represents forecast net controllable costs, including our cost exclusions and reallocations, but excluding ongoing efficiency, RPEs, non-controllable costs and pass-through costs, unless otherwise stated.

5.14 Table 19 compares the baseline requests from the BPDs submitted in December 2024 with our proposed baseline totex for RIIIO-GD3.

Table 19: RIIO-GD3 Submitted totex compared to proposed totex (£m, 2023/24 prices)

Network company	GDN	Submitted totex Dec '24 (£m)	Ofgem proposed totex (£m)	Difference DD vs Dec '24 baseline request (£m)	Difference (%)
Cadent	EoE	2610.5	2092.2	-518.3	-20%
	Lon	2193.8	1676.6	-517.2	-24%
	NW	1853.4	1397.5	-456.0	-25%
	WM	1362.2	1116.2	-246.0	-18%
NGN	NGN	1837.2	1568.1	-269.0	-15%
SGN	Sc	1342.4	1051.2	-291.2	-22%
	So	3203.2	2378.8	-824.4	-26%
WWU	WWU	2190.3	1501.7	-688.6	-31%
GD Sector	All	16593.1	12782.3	-3810.8	-23%

Assessment process

5.15 Our objective in cost assessment is to propose baseline totex at an efficient level for each GDN. We do this by undertaking a comprehensive and multi-faceted assessment of each licensee's Business Plan, including the BPDTs and Investment Decision Packs (IDPs).⁴⁴ This incorporates different elements, including:

- **Cost assessment:** determining whether the costs submitted by licensees are economically efficient, through detailed examination of cost and unit cost data using different economic modelling approaches.
- **Engineering assessment:** considering whether the needs case for proposed capital investments (eg projects and programmes of work) is justified. In the GD sector, this primarily means detailed review of Engineering Justification Papers (EJPs) submitted by the GDNs for capex and repex projects.
- **Technical assessment:** considering whether the needs case and costs for proposed investments in areas that are highly technical and require specialist knowledge (ie IT&T, data and digitalisation, cyber) are justified.

⁴⁴ IDPs contain Engineering Justification Papers (EJPs) and Cost Benefit Analysis (CBA) assessments.

- Policy assessment: our policy teams undertake comprehensive reviews of new or updated outputs proposed by the GDNs for RIIO-GD3. Decisions from these reviews can directly inform the allowances proposed through cost assessment (eg if a company has submitted an allowance attached directly to a new output proposal).

5.16 The outcome of each of these assessment processes factors into our overall view of efficient totex at DDs. The following sections provide an overview of the approaches across each of these elements. We have set out in this chapter how the outcomes of the different review processes affect the inputs into our modelling process. References to further details on these individual assessments are also provided, to help navigate through the DD documentation.

Cost assessment overview

Overview

5.17 In conducting our cost assessment review, as already mentioned above, we have considered information from a range of sources, including costs, volume and network data in the BPDTs, the Business Plans and supporting appendices, supplementary information provided through SQs, and the EJPs. For each cost activity, our review has informed the cost assessment approach we propose to apply in RIIO-GD3, pre-modelling normalisation adjustments we have made and, where costs are assessed directly through technical assessment, our proposed view of efficient costs.

Review of CBA payback periods

5.18 We undertook a review of the CBA payback periods for the GDNs which proposed non-mandatory repex programmes, as set out in sections 3.61 - 3.73 of Chapter 3.

5.19 Applying our proposed approach for non-mandatory repex resulted in us making pre-modelling adjustments to remove costs for proposed repex investments that did not meet our CBA payback threshold. This resulted in proposed adjustments of £90.7m in proposed repex costs for RIIO-GD3. We propose to disallow £28.7m for SGN for planned investments in its Southern and Scotland networks, £53.7m for NGN for proposed Tier 3 investments, and £8.4m for WWU for proposed Tier 2B and 3 investments. Further details of these proposed adjustments can be found in the relevant Company Annexes.

Engineering assessment overview

5.20 In this section we outline the methodology we adopted to analyse the licensee submissions from a technical perspective and to establish whether the licensees'

requests represented an economic and efficient arrangement for consumers. We also provide a high-level summary of the main areas where we propose to apply adjustments in RIIO-GD3, with more detailed information included in relevant sub-sections.

- 5.21 Detailed summaries of our engineering review of each EJP can be found in Appendix 1 of each Company Annex. Sections 9.8-9.21 of the Draft Determinations Overview document set out our approach to reviewing EJPs in RIIO-3.

Background and context

- 5.22 We have adopted three overarching principles when undertaking the technical review of the company Business Plan submissions relating to growth, hydrogen and asset condition.

Growth

- 5.23 RIIO-GD3 is a steady state price control. There is not expected to be any significant expansion in the gas distribution networks over the RIIO-3 period⁴⁵ so we proposed to deem any submissions that were anticipatory investment on the premise of future growth as unjustified. This does not apply to projects that are addressing existing constraint issues or reinforcement projects that relate to exiting new connection commitments.

Hydrogen

- 5.24 As per the Investment Decision Pack Guidance,⁴⁶ any submissions that supported the development of new hydrogen networks or the conversion of existing natural gas networks to hydrogen are considered to be outside the scope of RIIO-3 and would be deemed unjustified.

Asset condition

- 5.25 It is important that the health of existing gas networks is maintained while the energy transition takes places and the licensees continue to provide safe and reliable supplies to customers. We categorised the EJP submissions as either Asset Health or Major Projects. In assessing Asset Health submissions, we expected to see evidence of intervention requirements based on asset condition data. For Major Projects, our focus was on whether the project was required to maintain the integrity of network in the long term.

⁴⁵ See NESO's Future Energy Scenarios 2023.

⁴⁶ See the [RIIO-3 Business Plan Guidance](#), Technical Annex 1

Summary of engineering review findings

- 5.26 When carrying out the assessments we identified issues that were common across some or all of the GDNs. We have summarised these thematic findings below.

Availability of data or records

- 5.27 The provision of adequate data to support submissions for asset health spend was variable. In some cases, very good data was provided, either in the original submission or through the SQ process. In other cases, the data provided was inadequate or it was not provided at all. There were some instances where licensees failed to provide the data requested, including in response to a specific request made through the SQ process. Where this has resulted in inadequate evidence being provided to justify the needs case, we assessed the corresponding EJP as being unjustified and propose to make adjustments to workloads and allowances.

Asset health selection

- 5.28 One area of focus for our assessments was the relationship between asset condition data and the economic case for intervention on the asset. We observed that on several occasions there appeared to be a request to fund the replacement of an asset with a good asset health score. In some instances, it was stated that this was because the overall NARM score denoted that this was a critical asset. The NARM process is only one tool in the companies' asset management processes, and we do not consider high criticality scores alone to be sufficient reason for justification of proposed asset investments. Where we found evidence that funding was requested to replace demonstrably good assets, we have assessed the corresponding EJP as being unjustified and propose to make adjustments to workloads and allowances.

Engineering engagement with companies

- 5.29 We expect to undertake further engagement ahead of Final Determinations to work through the detail of our engineering assessments with the GDNs. We do not plan to request EJP resubmissions for activities already included within the GDNs' business plans. Where there are areas that the needs case in existing EJPs can be enhanced through the provision of further information and data, we will consider this additional evidence in coming to our Final Determinations.

Subject specialist technical reviews overview

- 5.30 We undertook reviews for proposed RIIO-GD3 investments in IT&T, cyber and data and digitalisation using subject area specialists, given the unique nature of

these activities. We have undertaken specialist review of these areas, given the materiality of the proposed investments and the complexity and importance of the subject areas.

Policy assessment overview

- 5.31 GDNs have submitted costs tied to proposals for new licence conditions (eg PCDs or UMs) for some proposed investments in RIIO-GD3. Our assessment of these proposals is set out in Chapters 3 and 4. To ensure consistency between our policy assessment and our cost models, we have made necessary adjustments to how costs are treated within the modelling suite (eg removed costs from baseline funding into UMs). Details of these proposed adjustments are explained in the relevant sections below.

Approach to Cost Assessment

Summary of consultation position

- 5.32 We are proposing to maintain the use of a single totex model for calculating efficient baseline totex in RIIO-GD3. Our proposed approach utilises a combination of regression analysis, non-regression benchmarking and technical assessment to model efficient totex allowances, and represents an evolution of the approach we used to determine efficient allowances in RIIO-GD2. The regression component of the model uses a composite scale variable (CSV) as the cost driver (see the Cost Driver section below for further details).

Rationale for our consultation position

- 5.33 We think our proposed totex model continues to effectively explain the relationship between costs and cost drivers for GDNs. Our proposed model is grounded in economic and engineering rationale and we think that it continues to demonstrate strong explanatory power and statistical robustness. The use of a CSV-based cost driver allows for the influence of exogenous factors that impact costs, including workload and network scale, to be captured within the model specification, and results in a statistically strong relationship between costs and the cost driver over time.
- 5.34 The specification of our proposed model (see the Totex regression model specification section below for further details) allows for trade-offs between different components of totex (eg capex, opex, repex) to be accounted for in the modelling, while mitigating potential impacts from differences in accounting and reporting practices between GDNs. By modelling totex using a top-down approach, our proposed model is agnostic to the different business models chosen by the GDNs, and focuses on driving efficiency across the whole cost

base, rather than for specific activities. This allows the management of GDNs to take a more holistic approach to operating their businesses, with greater freedom to deliver the full range of outputs consumers value however they deem best.

- 5.35 All of the GDNs expressed broad support for the continued use of the RIIO-GD2 CSV-based totex modelling approach in their Business Plan submissions. NGN and WWU supported the use of a single totex model in RIIO-GD3. SGN and Cadent proposed supplementing the RIIO-GD2 totex modelling approach with alternative model specifications, as set out in more detail below.

Alternative model specifications

Summary of GDN submissions

- 5.36 SGN's Business Plan proposed the use of a multiple model approach to estimating efficient totex. Cadent proposed to supplement our existing totex modelling approach with an alternative totex model that incorporates a density variable within the regression specification, rather than applying pre-modelling adjustments to account for some or all of the regional factors. Our assessment of these approaches is set out below. NGN noted that while additional models could form part of the evidence base for estimating efficient totex, any choice to use additional models would need to improve overall statistical performance. It also noted that using additional models risks adding complexity and unforeseen consequences.

Consultation position and rationale

- 5.37 We propose not to incorporate additional models into our calculation of efficient totex for RIIO-GD3. We have assessed a number of alternative model specifications as part of our cost assessment of the RIIO-GD3 Business Plans. These include models at different levels of aggregation, including 'top-down' totex models, 'middle-up' and 'bottom-up' models. We have also considered various 'pooled' models, which group different combinations of costs and cost drivers together to seek to explain parts of the overall cost base. Additionally, we also tested incorporating in-model density functions within the totex model.
- 5.38 Our modelling of these alternative model specifications did not convince us that there is a strong case for incorporating additional models into our assessment of efficient totex for RIIO-GD3. We observed that many of the alternative model

specifications we tested resulted in worse statistical 'fit',⁴⁷ failed one or more of the statistical robustness tests we applied or both.

- 5.39 Middle-up models consider the relationship between costs and drivers for the three headline categories that costs typically are reported at for GDNs: opex, capex and repex. All of the middle-up models we tested demonstrated lower explanatory power (ie lower adjusted R-squared) than our proposed totex model. This suggests that the middle-up models are failing to pick-up some of the interactions between different cost categories. For example, some GDNs deploy staff flexibly across activities that fall within different cost buckets (eg opex and capex). Additionally, each of the model specifications failed at least one, if not more, of the statistical robustness tests. We do not think that incorporating middle-up models into our calculation of efficient totex would improve overall statistical robustness, and risks overlooking the impact of capex/repex/opex trade-offs.
- 5.40 Bottom-up models consider the relationship between costs and cost drivers for specific activities undertaken by the GDNs (eg repair, emergency, repex). In principle, bottom-up models provide a more granular view of relative efficiency for individual activities, the results of which are then combined to build a 'bottom-up' view of overall totex efficiency. We used a suite of bottom-up models as part of our approach to setting efficient totex in RIIO-GD1, but decided not to use bottom-up models in RIIO-GD2 due to declining model quality.
- 5.41 Our testing of bottom-up models also showed lower explanatory power (ie lower adjusted R-squared) than our proposed totex model for RIIO-GD3, with some models showing weak 'fit' (ie relatively low adjusted R-squared values). Several of the models also failed at least one of the statistical robustness tests.
- 5.42 We do not think the bottom-up models are sufficiently robust to be incorporated into our proposed approach for modelling efficient totex at RIIO-GD3. This is consistent with the position Cadent set out in its Business Plan, where it noted that analysis performed up to the point of submission demonstrated 'poor statistical performance' of disaggregated models, which is why it had not used them in its own modelling for RIIO-GD3.
- 5.43 The specification of the CSV within our proposed model is closely informed by the bottom-up models previously used in RIIO-GD1, meaning that our proposed

⁴⁷ Lower adjusted R-squared values.

totex model already captures all of the drivers used in our bottom-up view of modelling. We do not think there is compelling evidence for the use of bottom-up models as part of the RIIO-GD3 approach to modelling efficient totex.

- 5.44 We tested a series of alternative 'top-down' totex models, which considered the relationship between totex and different scale drivers.⁴⁸ While these all returned statistically significant coefficients, none of the specifications offered greater explanatory power than our proposed totex model and all failed at least one, if not more, of the statistical robustness tests. We also tested a series of 'pooled' models, which combined different combinations of costs to explore whether totex can be explained by different combinations of scale and/or workload drivers.
- 5.45 We do not think there is compelling evidence that incorporating alternative top-down totex models or pooled models into our approach to calculating efficient totex would result in a more statistically robust outcome, or better explain relationships between costs and cost drivers, than our proposed totex model.
- 5.46 An alternative approach to specifying our CSV-based totex model is to incorporate a density variable within the regression. When specifying our proposed totex model, we make a series of pre-modelling 'regional factor' adjustments, to account for differences in GDNs' costs driven by the specific characteristics of the area in which they operate (see the Regional Factors section below for further details on our proposed approach to regional factors). Including a density variable can, in theory, remove the requirement to making pre-modelling regional factor adjustments.
- 5.47 The in-model density variable seeks to capture the relationship between density and costs within the model itself, removing the need for some or all of the pre-modelling regional factor adjustments. This involves adding a measure of density as an additional explanatory variable within the model. The estimated coefficient of this term can be interpreted as the elasticity of totex to density.
- 5.48 We tested the relationship between models incorporating both density and density plus density squared variables as terms within the regression. We ran this model both including and excluding Cadent's London GDN, to understand whether London has an overweight impact when considering the relationship between costs and density. We considered these specifications under two scenarios. The first where no pre-modelling regional factor adjustments were

⁴⁸ Modern equivalent asset value (MEAV), network length, throughput, customers.

made at all, and the second where only a regional factor adjustment for regional labour was made, but no adjustments were made for sparsity or urbanity. For each scenario, we also tested our 'base' totex model, not incorporating any density variable term.

- 5.49 For both scenarios tested, the base model (eg excluding any density variable) offered a relatively strong explanatory power (ie adjusted R-squared), although with slightly lower explanatory power than for the specifications which included density variables. The results of our testing showed that, while all the models appeared to offer relatively strong explanatory power, the specifications that incorporated density functions all failed at least one of the statistical robustness tests. In particular, the models with density variables consistently failed the normality test, meaning the residuals (errors) of those model specifications do not follow a normal distribution, which can make the hypothesis tests unreliable. This suggests models with the density variable may be mis-specified.
- 5.50 We consider the models we tested with the density variable to be too unreliable and at odds with Ofgem's general approach of ensuring modelling choices have strong engineering and economic logic. The density variable applies to all of totex, in contrast to our proposed totex model with pre-modelling regional factor adjustments targeted at specific cost categories where there is a demonstrable impact of regional environmental conditions on costs. We consider using the density variable risks overfitting the model, making the results unreliable.

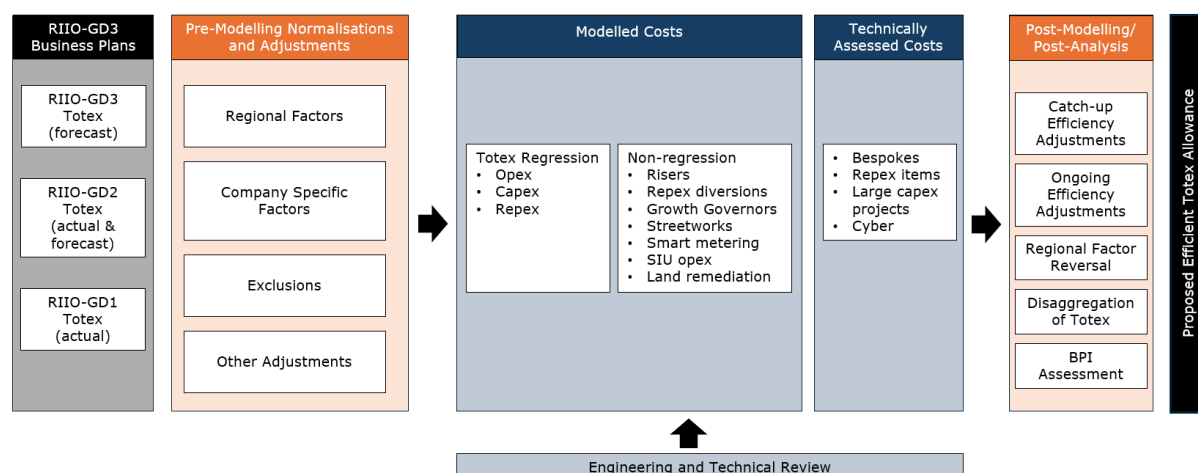
Questions

GDQ32. Do you agree with our proposed use of a 'top-down' regression model?

Proposed totex model for RIIO-GD3

- 5.51 Figure 7 below sets out a visual representation of our proposed cost assessment process for RIIO-GD3.

Figure 7: RIIO-GD3 cost assessment process map



5.52 The data used to inform our cost assessment approach is taken from the BPDTs submitted by each company for each GDN as part of their RIIO-GD3 submission. The BPDTs include information on costs, volumes, unit costs, network characteristics and other aspects of each GDN's operations. Submissions include both historical data, covering RIIO-GD1 and part of RIIO-GD2, and forecast data, covering part of RIIO-GD2 and RIIO-GD3. We set out further discussion on our proposed time period in the Totex benchmarking section below.

5.53 Prior to undertaking comparative benchmarking and efficiency assessments of the submitted costs, we make a series of pre-modelling adjustments. These are made to reflect the outcomes of our technical and engineering assessments of the needs cases of submitted workloads, as well as to allow for like-for-like comparison between GDNs. Pre-modelling adjustments cover workload adjustments, regional and company-specific factor adjustments, exclusions and other normalisations.

5.54 As already discussed, we propose to use regression analysis as our main tool for assessing the efficiency of submitted costs in RIIO-GD3. For some costs and activities, regression analysis is not considered suitable due to issues of data consistency or comparability between GDNs. In these cases, we use separate assessment approaches to determine efficient costs. Where costs have drivers that vary significantly between GDNs or are unique to a subset of GDNs, and are therefore not suitable for inclusion in the regression model, we use non-regression benchmarking approaches. For certain cost activities that are bespoke to individual GDNs or where the nature of the work within an activity is highly GDN-specific, we use technical assessment. This includes bespoke outputs, where we have assigned a specific policy mechanism to a bespoke

activity for one GDN or company (eg we've proposed a bespoke PCD for Cadent's London Medium Pressure project).

- 5.55 Once we have made an assessment of cost efficiency, either through regression or non-regression benchmarking approaches which are collectively referred to as modelled costs, we add back in normalisation cost adjustments. We then apply a catch-up efficiency challenge. This is to challenge less efficient GDNs to catch-up to an operational efficiency level consistent with the more strongly performing GDNs in the industry. Our proposed approach to setting the catch-up efficiency challenge at RIIO-3 is set out in the Catch-up efficiency challenge section below.
- 5.56 We then add the technically assessed costs to the efficient modelled costs and apply a post-modelling ongoing efficiency challenge to all of totex. This is intended to incentivise all companies to continue driving productivity improvements that we consider even the most efficient company can achieve. This would set the final level of proposed efficient totex for RIIO-GD3. See chapter 8 of the RIIO3 Overview Document for our proposed approach to setting the ongoing efficiency challenge in RIIO3.
- 5.57 Our final step is to disaggregate efficient totex into allowances for certain cost activities, which informs the allowances that go into individual licence conditions and the BPFM. Our approach to disaggregating totex allowances is set out towards the end of this chapter.
- 5.58 Stage B of the Business Plan Incentive (BPI) is directly informed by the outcomes of our cost assessment process across regression, non-regression and technical assessment. See Chapter 6 for further details.
- 5.59 Table 20 summarises the value of RIIO-GD3 submitted costs assessed through each assessment approach, prior to any pre-modelling adjustments being applied. We propose to assess 84% of costs through regression analysis, with 10% through non-regression benchmarking and 6% through technical assessment.

Table 20: Company submitted totex by cost assessment approach (£m, 2023/24 prices)

Network Company	GDN	Submitted totex	Modelled Regression Costs	Modelled Non-regression Costs	Technically assessed costs
Cadent	EoE	2,611	2,232	241	138
	Lon	2,194	1,664	338	192

Network Company	GDN	Submitted totex	Modelled Regression Costs	Modelled Non-regression Costs	Technically assessed costs
	NW	1,853	1,636	147	70
	WM	1,362	1,197	103	63
NGN	NGN	1,837	1,657	135	45
SGN	Sc	1,342	1,107	143	93
	So	3,203	2,560	458	186
WWU	WWU	2,190	1,899	124	167
Total		16,593	13952	1689	952
% of total submitted totex		100%	84%	10%	6%

5.60 Table 21 presents a summary of our proposed adjustments applied at each stage of the modelling process, tracking from GDN submitted costs to our view of proposed efficient costs for RIIO-GD3.

Table 21: Proposed modelling cost adjustments and efficient totex allowances for RIIO-GD3 (£m, 2023/24 prices)

GDN	Modelled cost - pre-modelling adjustments	Modelled costs - benchmarking efficiency	Technically assessed adjustments	Ongoing efficiency adjustments	Total adjustments
EoE	-247	-97	-49	-126	-518
Lon	-191	-180	-48	-98	-517
NW	-153	-189	-31	-83	-456
WM	-101	-40	-35	-71	-246
NGN	-127	-12	-21	-109	-269
Sc	-107	-64	-35	-86	-291
So	-280	-294	-80	-170	-824

GDN	Modelled cost - pre-modelling adjustments	Modelled costs - benchmarking efficiency	Technically assessed adjustments	Ongoing efficiency adjustments	Total adjustments
WWU	-69	-382	-109	-128	-689
% of total reductions	-8%	-8%	-2%	-5%	-23%

Pre-modelling normalisations and adjustments

Overview

- 5.61 A critical part of our cost assessment process involves identifying and applying pre-modelling adjustments. To ensure that our cost benchmarking is carried out on a comparable basis between GDNs, licensee submitted data may need to be adjusted to correct for inconsistencies and external effects. For example, adjustments may be made to exclude costs that are unsuitable for comparative assessment, or to remove costs associated with work that we are either separately assessing or have been rejected as part of our needs case assessment.
- 5.62 Our pre-modelling adjustments fall into the following categories:
- Regional factors: applied to allow comparative assessment between GDNs when operating in certain regions attracts higher or lower costs than elsewhere;
 - Company-specific factors: applied to allow comparative assessment between GDNs when the inherent characteristics of a particular network attract higher costs than others;
 - Exclusions: applied when costs are inappropriate for comparative benchmarking because they are only incurred by one or two GDNs, where costs are not explained by the cost drivers used in our cost models, or where there is a substantial change in the nature of costs between RIIO-GD2 and RIIO-GD3; and
 - Cost and workload adjustments following technical review: applied to remove or reduce costs and workloads when the needs case for the underlying workloads has not been sufficiently justified.
 - Other adjustments: applied when we need to normalise for differences in input assumptions between GDNs to allow for comparative benchmarking;

or where we need to reclassify costs from one activity to another to ensure comparability between GDNs.

- 5.63 This section explains our proposals and rationale for each of these categories, including our assessment of relevant company proposals contained within Business Plans.

Regional factors

Overview

- 5.64 Some GDN costs are driven by factors which are outside of their control and are unique to their operating area. We term these 'regional factors' and they can lead to higher or lower costs that are not related to relative efficiency. We make pre-modelling regional factors adjustments (eg removing the additional costs faced relative to other GDNs) to normalise for these uncontrollable costs, and then add them back to the GDNs' cost allowances post benchmarking. This allows for the econometric modelling to be undertaken on a comparable basis.
- 5.65 In RIIO-GD2 we made a number of pre-modelling adjustments to submitted cost data to account for regional factors. These covered labour costs, urbanity and sparsity effects.
- 5.66 For RIIO-GD3 we considered the GDNs' Business Plans, undertook our own analysis and concluded that some of the differences in costs between GDNs continue to be explained by factors beyond their control. We consider that the regional factors we recognised in RIIO-GD2 remain relevant for RIIO-GD3. Our position for these factors and our proposed methodology for measuring them is explained below.
- **Regional labour:** We make regional labour cost adjustments to account for the difference in efficient labour costs among GDNs due to geographical location. For GDNs operating in London and South-East England, we have accepted cost differentials and adjusted costs downwards prior to regression modelling.
 - **Urbanity:** We make pre-modelling cost adjustments to account for additional costs of operating in urban areas. One adjustment reflects a reduction in labour productivity associated with working in the London area. The other recognises additional reinstatement costs associated with working in highly dense urban areas.
 - **Sparsity:** We make pre-modelling adjustments to account for the additional costs faced by networks containing sparsely populated areas in carrying out

their Emergency and Repair activities. These adjustments compensate for reduced labour productivity owing to additional travel time.

5.67 Table 22, Table 23 and Table 24 summarise the annual average regional factor adjustments we have made to the submitted costs data for RIIO-GD1, RIIO-GD2 and RIIO-GD3.

Table 22: Summary of regional factor adjustments by GDN for RIIO-GD1 (£m, 2023/24 prices)

Adjustment factor	EoE	Lon	NW	WM	NGN	Sc	So	WWU	Industry
Labour	-2.7	-29.4	-	-	-	-	-24.3	-	-56.5
Urbanity (productivity)	-1.0	-12.8	-	-	-	-	-6.5	-	-20.3
Urbanity (reinstatement)	-0.1	-4.7	-	-	-	-	-3.4	-	-8.1
Sparsity	-2.4	0.0	-0.4	-0.9	-2.3	-2.1	-1.3	-2.7	-12.0
RIIO-GD1 Total	-6.2	-46.8	-0.4	-0.9	-2.3	-2.1	-35.5	-2.7	-96.9

Table 23: Summary of regional factor adjustments by GDN for RIIO-GD2 (£m, 2023/24 prices)

Adjustment factor	EoE	Lon	NW	WM	NGN	Sc	So	WWU	Industry
Labour	-2.3	-25.2	-	-	-	-	-18.6	-	-46.0
Urbanity (productivity)	-1.0	-12.1	-	-	-	-	-5.8	-	-18.9
Urbanity (reinstatement)	-0.1	-4.5	-	-	-	-	-3.2	-	-7.7
Sparsity	-1.8	0.0	-0.3	-0.7	-2.1	-1.8	-1.3	-1.5	-9.6
RIIO-GD2 Total	-5.2	-41.7	-0.3	-0.7	-2.1	-1.8	-28.9	-1.5	-82.3

Table 24: Summary of regional factor adjustments by GDN for RIIO-GD3 (£m, 2023/24 prices)

Adjustment factor	EoE	Lon	NW	WM	NGN	Sc	So	WWU	Industry
Labour	-2.4	-27.4	-	-	-	-	-22.0	-	-51.8
Urbanity (productivity)	-1.0	-12.8	-	-	-	-	-6.6	-	-20.4

Adjustment factor	EoE	Lon	NW	WM	NGN	Sc	So	WWU	Industry
Urbanity (reinstatement)	0.0	-4.6	-	-	-	-	-3.2	-	-7.8
Sparsity	-2.2	0.0	-0.4	-0.7	-2.9	-2.5	-1.2	-2.6	-12.4
RIIO-GD3 Total	-5.6	-44.7	-0.4	-0.7	-2.9	-2.5	-33.0	-2.6	-92.4

Regional labour

Background

- 5.68 In RIIO-GD2 we made regional labour cost adjustments to account for the difference in efficient labour costs between GDNs due to geographical location. These pre-modelling adjustments were calculated using Office for National Statistics (ONS) Annual Survey of Hours and Earnings (ASHE) wage data to construct different labour indices, using Standard Occupational Classification (SOC) codes.⁴⁹ The adjusted costs were added back post-modelling.
- 5.69 In developing our approach for RIIO-GD3, we considered to what extent labour costs continue to vary across regions, appropriate geographical boundaries for any adjustment and how we should capture potential differences in labour costs in our modelling process. Some GDNs commented on these issues in their Business Plans and proposed alternative approaches to specifying regional factors at RIIO-GD3.

Summary of consultation position

- 5.70 We consider that the wage differential between London and the South-East and the rest of Great Britain still appears to be wide enough to warrant a three-region adjustment (London, South-East, Elsewhere) in our benchmarking. We note that the wage differential is narrowing, and the case for the South-East is now more marginal. In line with RIIO-GD2, we have decided to use regional labour indices, using 2-digit SOC data for the past five years, to make pre-modelling cost adjustments to the same cost activities as for RIIO-GD2.
- 5.71 Compared with RIIO-GD2 the adjustment indexes⁵⁰ applied to GDNs would decrease for all three affected GDNs:

⁴⁹ SOC is a classification of occupational information for the UK published by the ONS: <https://www.ons.gov.uk/methodology/classificationsandstandards/standardoccupationalclassification/soc>

⁵⁰ We convert the regional labour indices to GDN-specific indices weighted by the region's share of the GDN's population. These indices are used to make pre-modelling adjustments to labour costs, with a higher index representing a proportionately larger adjustment. All other GDNs receive no labour cost adjustment.

- London - from 1.18 in RIIO-GD2 to 1.17 in RIIO-GD3;
- Southern - from 1.10 in RIIO-GD2 to 1.09 in RIIO-GD3; and
- East of England - from 1.012 in RIIO-GD2 to 1.011 in RIIO-GD3.

5.72 A number of the GDN proposals relate to interacting components of the regional wage adjustment, notably: the data source used (2-digit or 3-digit SOC), regional boundaries and the time period of historical data. We do not consider that any of the proposals have fully addressed these interacting elements in the round to create a fully coherent regional adjustment proposal. We consider that our proposed approach is coherent because our assessment of 2-digit SOC codes, with five years of historical data, supports a 3-region adjustment. It is also consistent with our RIIO-GD2 approach. However, we remain open to further evidence supporting an approach that more effectively draws together these elements in the round.

Rationale for consultation position

Number of regions

- 5.73 Cadent and SGN each proposed changes to the regional boundaries covered by the labour adjustment. Cadent's proposal was to extend the South-East boundary to cover some parts of the East of England, referred to as its East of London adjustment proposal. It claimed that some counties in this region, bordering London, experience similar wage pressures to the South-East region. SGN suggested that the adjustment should separately cover Scotland, claiming it experiences higher than average wages.
- 5.74 We have undertaken a detailed review of the data relating to Cadent's East of London adjustment proposal, to extend the regional adjustment to Bedfordshire, Hertfordshire and Essex. We consider there to be a weak justification for this proposal compared with other adjusted regions. In particular, we note that the proposal is based on general earnings in those counties as more granular, occupational-level data is not available at a local authority level. Cadent has not demonstrated a correlation between general earnings and GDN-specific labour costs.
- 5.75 Even based on general earnings, the East of London area broadly tracks at, rather than above, the national average. In addition, given the differential wage levels among local authority areas included in Cadent's proposal, the case for the proximity to London driving higher wages across the three counties is

weak.⁵¹ Furthermore, the recent convergence in wage rates further undermines the argument to extend the adjustment beyond London and the South-East.

- 5.76 In response to SGN's proposal to add a separate labour adjustment for Scotland, we note that the evidence presented by SGN is based on grouping Scotland with the South-East and comparing those two regions with Elsewhere (excluding London), rather than making a case for Scotland individually. Supporting evidence submitted by SGN appears to acknowledge the weak case for a Scotland adjustment, including showing the Scotland hourly rate only marginally above the national average. Furthermore, we note that the unstandardised wage indices (based on five years' historical data) presents a weaker case for a Scotland adjustment for RIIO-GD3 compared with the case we rejected for RIIO-GD2, and it is below the national average.
- 5.77 The evidence for a South-East adjustment has also weakened compared with RIIO-GD2. However, alongside London, it remains the only region where average wages have tracked above the national average for the last five years. The actual adjustment applied would be proportionate to that region's difference from the national average. This means that GDNs operating in the South-East (which has a standardised index of 1.05) would receive a lower adjustment than those with an equivalent population operating in London (which has an index of 1.21), while those only operating Elsewhere receive no adjustment (with an index of 1). We consider it is appropriate to limit our adjustment to the two regions where average wages have consistently tracked above the national average, while ensuring the adjustment is proportionate to their respective relative wage difference from the remainder of the country.
- 5.78 An alternative, symmetrical adjustment, based on regional wage indices, has not been proposed by any GDNs. This would involve costs being added to some GDNs pre-modelling, rather than only deducted. We consider our approach to be the most appropriate for RIIO-GD3.

Data source

- 5.79 WWU proposed a change to the source data used to calculate the indices, suggesting that we adopt 3-digit rather than 2-digit SOC codes to more accurately reflect the workforce and avoid over-rewarding with adjustments as per GD2. The 3-digit codes are more precise in occupations but, as a

⁵¹ The three counties include local authorities with average wage levels both markedly above and below the national average.

consequence, have smaller sample sizes and some missing data. WWU proposed a methodology to estimate any missing data.

- 5.80 We have calculated the proposed regional wage adjustment based on 2-digit SOC codes, consistent with our historical approach.⁵² We continue to consider that the 2-digit approach strikes the right balance between granularity of data and a robust sample size. We note WWU's proposed 3-digit approach contrasts with Cadent's proposal based on less granular data for its East of London adjustment proposal. We consider that any adoption of a 3-digit approach would need to address concerns with smaller sample sizes and be examined alongside a coherent proposal on regional boundaries and historical time periods using the same data.

Period of historical data used

- 5.81 WWU and NGN proposed that the adjustments should reflect the reducing regional wage differences post-Covid. In particular, WWU suggested that a one-year or three-year average of historical data should be used to for the labour adjustment for RIIO-GD3.
- 5.82 We are continuing to base our proposed RIIO-GD3 adjustments on the average of five years' worth of historical data. WWU and NGN proposed that shorter timeframes would better reflect the convergence in wage rates in recent years, particularly post-Covid. A shorter time period would reduce the indices compared with five years. The data (based on 2-digit SOC codes) does indicate a trend of reducing regional wage differences since 2020, though with an increase in 2024 from 2023.
- 5.83 We consider five years' data helps mitigate potential issues with shorter timeframes that can be susceptible to fluctuations that may not reflect changing labour cost fundamentals. We note that, for RIIO-GD2, Cadent proposed using a two-year time period, which would reduce the adjustments for its GDNs were it to be applied for RIIO-GD3. Cadent did not propose a change to the five-year time period for RIIO-GD3. Any deviation from a five-year time period would need to be part of coherent proposal also covering regional boundaries and the data source, as the use of different SOC codes and time periods may affect the evidence to support adjusting different regions and to what extent.

Costs categories adjusted

⁵² Through the CAWG, we worked with the GDNs to align the current SOC 2020 classification with the previously used SOC 2010.

- 5.84 NGN stated that we should ensure that the wage index is capturing the differences in costs that must be undertaken locally, but did not make a specific proposal. SGN proposed extending the cost activities subject to the labour adjustment, including to SIUs, Business Support, Vehicles and IT&T.
- 5.85 We propose to continue applying the labour adjustment to the same cost activities as for RIIIO-GD2. We propose rejecting SGN's proposal to include SIUs as we are rejecting the Scotland labour adjustment. We propose rejecting SGN's proposal to extend the adjustment to other cost activities as it did not provide any justification. NGN did not provide any evidence for changing the cost activities receiving an adjustment.

Separate contractor adjustment

- 5.86 SGN proposed a separate adjustment for contractor labour to apply to its Southern network. It suggested a 10% uplift for Southern contractor labour based on relative wage rates between its Southern and Scotland networks for Repex. It proposed applying this to the contractor share of Repex, Direct Opex and Capex workloads.
- 5.87 We propose rejecting SGN's proposal for a separate 10% uplift for Southern contractor labour. Fundamentally, a separate contractor adjustment has the potential to reward GDNs for an inefficient labour model; applying one adjustment to all labour on a notional basis avoids this. In addition, we consider that SGN's methodology of basing the difference on comparing its Southern and Scotland networks for Repex, but seeking to apply this to Repex, Direct Opex and Capex is not robust, particularly given that its proposal would result in Southern receiving a larger labour adjustment than London. Furthermore, we note that, SGN's own data implies that, on a notional basis, use of contractors would be over-rewarded by the existing adjustment, further undermining its case for a separate uplift.
- 5.88 While we acknowledge that ASHE data does not capture self-employed labour, SGN has not demonstrated that it is using self-employed contractors without available alternatives. We also note that we are proposing to continue to use the South-East adjustment that would apply to its Southern GDN, despite a weakening basis for this.

National Insurance adjustment

- 5.89 Cadent proposed an addition to the existing labour adjustment. It suggested that employers in higher wage areas have to make relatively higher National Insurance contributions than those in lower wage areas, but that this difference

is not captured by the existing regional labour adjustment, which is based on wages data. Its submission was based on quantifying this impact prior to the changes announced in the Autumn Budget 2024, which set out changes to both the National Insurance threshold and contribution rate.

- 5.90 To make a full assessment of Cadent's proposal on National Insurance contributions would require a separate data collection exercise, to reflect the impacts following the Autumn Budget 2024 changes. We plan to work with the GDNs through the CAWG to further explore this issue ahead of Final Determinations. But we would welcome views on the principle of the proposal.

Urbanity

Background

- 5.91 In RIIO-GD2 we made two types of cost adjustments to account for urbanity factors, covering labour productivity and reinstatement costs. We applied a pre-modelling adjustment to emergency, reinforcement, connections and repex costs to reflect lower labour productivity associated with working in the London area, based on an assumed 1.15 London urbanity productivity factor.⁵³
- 5.92 We also recognised that there are additional reinstatement costs associated with working in highly dense urban areas. We treated these costs as labour costs and adjusted them for particular Opex activities based on the indices used to make regional labour adjustments.
- 5.93 For RIIO-GD2, in response to one of Cadent's company-specific factor proposals, we extended the urbanity reinstatement adjustment to cover repex reinstatement and the productivity adjustment to cover repex plant hire.
- 5.94 In developing our proposed approach for RIIO-GD3, we have considered the scale of the urbanity indices and the cost areas that they apply to. The GDNs commented on a number of issues relating to urbanity, particularly focusing on the value of cost adjustments required to account for the urbanity impacts on their networks.

Summary of consultation position

- 5.95 Overall, we consider that productivity and reinstatement factors, as recognised in RIIO-GD1 and RIIO-GD2, are still relevant drivers of additional costs for GDNs operating in urban areas. We also consider that a pre-modelling adjustment is

⁵³ This London index is applied to the GDNs operating in the London area, weighted by their share of the London population. The resulting GDN-specific indices are then used to adjust relevant cost categories, based on multiplying costs by the index and deducting the difference, pre-modelling.

the most appropriate method of accounting for urbanity. It is conceptually simple and the productivity differential assumption is supported by multiple sources of analyses. This approach also avoids potential interpretation and data reliability issues compared with adding an explanatory variable term (eg density factor) into our model.

- 5.96 Our proposed approach to calculating urbanity productivity indices is the same as that adopted in RIIO-GD2. We calculate the urbanity productivity indices as the average between an assumed 1.15 urbanity factor for London and 1 for the rest of GB, weighted by each area's proportion of the GDN's work. The only networks to receive an urbanity productivity adjustment are London, Southern and, to a small extent, East of England. We set the 1.15 productivity value based on evidence from two GDNs at RIIO-GD1. We reviewed this assumption at RIIO-GD2 and considered it to still be appropriate.
- 5.97 As with the urbanity productivity adjustment, the only networks to receive an urbanity reinstatement adjustment are London, Southern and East of England. As per RIIO-GD2 we are proposing to apply our urbanity reinstatement adjustment to include repex reinstatement, in addition to reinstatement costs for emergency, repair, maintenance and other direct activities. We treat these as labour costs and apply our regional labour indices to these costs to determine the cost adjustments.
- 5.98 We have based our proposed repex reinstatement and plant hire adjustments for London and Southern on the average of RIIO-GD2 values, as they are not captured in the BPDTs. We will work with the GDNs through the CAWG to explore whether updated figures for these adjustments are available, ahead of Final Determinations.
- 5.99 We do note that the data behind the existing productivity and reinstatement adjustments could be made more robust with updated data. We would be open to work with the GDNs through the CAWG to further explore this issue ahead of Final Determinations.

Rationale for consultation position

- 5.100 Cadent submitted a singular urbanity adjustment to reflect the impact of the 'Nature of Streets' in London, which it considered to align with the approach adopted at RIIO-ED2 for UKPN's London DNO. This is focused on the 'impact of operating underground in London on GDNs' productivity and would involve applying a 1.18 adjustment factor to costs for repair, connections, reinforcement and repex.

- 5.101 Alongside this, Cadent also proposed a complementary Network Specific Factor claim to account for the impacts of population and property density not accounted for by the 'Nature of Streets', which we address under the Company Specific Factor section, below.
- 5.102 We propose to reject Cadent's Nature of Streets claim, which would represent a significant increase in the size of the cost adjustment applied compared with the existing approach. Unlike for RIIO-ED2, where we accepted UKPN's London network's Nature of Streets claim, there is an existing, well-established methodology for urbanity adjustments for the Gas Distribution sector. Cadent's proposal is partly based on a consultancy report that was available and used to support its regional factors claim for RIIO-GD2.
- 5.103 In addition, we note that one impact of Cadent's proposal is to take out an existing element of the productivity adjustment (covering emergency times) and package it up with previously rejected company-specific factors in order to reach the materiality threshold for its Network Specific Factor claim (see Company-specific factors, below).
- 5.104 SGN proposed amendments to both the productivity and reinstatement adjustments. For the productivity adjustment, it proposed setting a floor on the adjustment for Southern of 1.08, compared with 1.04 in RIIO-GD2. It also stated that we should consider the case for a higher adjustment based on travel statistics and underground utility network congestion. In its BPDT it suggested extending the adjustment to Repairs and Maintenance costs but did not provide any evidence to support this.
- 5.105 For urban reinstatement, SGN stated that we should consider updating the adjustment index in light of data provided as part of a consultancy report from 2019 and the latest Ofwat approach for working in London.
- 5.106 We propose to reject SGN's proposal to set a floor on the productivity adjustment for Southern of 1.08 (instead of 1.04 in RIIO-GD2) because it has made a weak case, particularly given the scale of the proposed increase. It uses internal travel data to compare its Southern and Scotland networks and does not make the case that such issues are unique to London. Its use of external travel data is based on journey miles per mile of road network which does not directly translate to increased travel time.
- 5.107 While SGN proposed increasing the productivity adjustment still further (above the proposed floor) based on travel statistics and other data, it does not set out any justification for doing so or suggest what the appropriate index should be.

As with Cadent, we note that SGN refers to a consultancy report that was available and used to inform its regional factors claim for RIIO-GD2. We also propose to reject SGN's proposal to extend the adjustment to Repair and Maintenance as it provides no justification for this proposal.

- 5.108 NGN stated that we should re-assess which cost activities are subject to the urban productivity adjustment. It considered there is a risk of double counting the impact of urbanity given what it considered to be the strong correlation between the urban productivity adjustment and the adjustment for regional labour.
- 5.109 NGN did not explain the potential for double counting the impact of urbanity given the correlation between the urban productivity adjustment and the adjustment for regional labour. As for RIIO-GD2, we calculate the labour adjustment after applying the urbanity productivity factor to the notional labour costs. This approach reflects the fact that GDNs operating in London are faced with higher wages but also require a larger amount of labour due to lower productivity.

Sparsity

Background

- 5.110 In RIIO-GD2 we made cost adjustments for sparsity factors, accepting that there are differences in costs associated with working in relatively sparse areas for the Emergency and Repair cost activities. This involved applying a 13% adjustment to WWU's costs (as in RIIO-GD1) and scaling the sparsity indices for other GDNs accordingly.⁵⁴
- 5.111 In developing our proposed approach for RIIO-GD3, we have considered the scale of the sparsity index and the cost areas that it applies to. In their RIIO-GD3 Business Plans, the GDNs commented on a number of issues relating to sparsity, including:
- which cost activities should be adjusted;
 - to what extent sparsity impacts on costs should be accounted for; and
 - how sparsity should be measured.

⁵⁴ The approach is based on the GDNs' population shares of sparse local authority areas with gas network coverage, scaled to the maximum 13% adjustment for WWU as the sparsest GDN. London receives no sparsity adjustment.

Summary of consultation position

- 5.112 We consider that there is sufficient evidence to maintain the RIIO-GD1 and RIIO-GD2 approach by continuing to apply sparsity adjustments to Emergency and Repair costs, as these particular activities incur lost productivity due to longer travel times. In the absence of an updated alternative, we propose to continue to use the existing 13% adjustment benchmark for WWU for local authorities with a below average population density.⁵⁵ We do not propose to extend the adjustment to other cost activities or make any additional adjustments for fatigue.
- 5.113 Several of the GDN proposals relate to interacting components of the sparsity adjustment, notably: the cost activities adjusted, the evidence for the scale of the adjustment and the threshold for a local authority area to be considered sparse. We do not consider that any of the proposals have fully addressed these interacting elements in the round to create a fully coherent regional adjustment proposal. We consider that our proposed approach, consistent with that for RIIO-GD1 and RIIO-GD2, is coherent, but we would be open to work with the GDNs through the CAWG to further explore this issue ahead of Final Determinations.

Rationale for consultation position

- 5.114 WWU and SGN proposed changes to the cost activities subject to a sparsity adjustment. Both GDNs proposed extending the adjustment to cover Maintenance, while WWU also proposed that it cover Repex and Business Support. WWU presented "U-shaped" charts to demonstrate what it considered to be a sparsity impact on increasing costs for Repex and Maintenance.
- 5.115 SGN proposed using an Adjusted Geographic Concentration index to help explain regional differences in costs. It considered this measure could better identify GDNs with a mixture of dense and sparse areas. Relatedly, we note that WWU's assessment to support extending the sparsity adjustment was based on an upper quartile rather than a mean average measure of sparsity, ie limiting the adjustment to the 25% of local authorities with the lowest population densities.
- 5.116 WWU's proposals to extend the adjustment to Repex and Maintenance are based on relationships against the upper quartile sparsest areas. However, it has not proposed a revised adjustment index based on this different threshold for

⁵⁵ The 13% sparsity benchmark for WWU was based on a comparison with London based on GDPCR1 data. In RIIO-GD2, we received a wide range of GDN estimates of sparsity impacts on different activities, but considered 13% to remain appropriate.

sparsity. We would like to understand why the upper quartile was chosen instead of any other measure. We note a different threshold to the existing average measure of sparsity may be appropriate given that the urbanity adjustment applies to a smaller proportion of local authority areas than the existing sparsity adjustment. SGN's proposed use of the Adjusted Geographic Concentration index may also be instructive in this regard.

- 5.117 We also note that WWU's "U-shaped curves" for the proposed new areas of sparsity adjustment (Repex and Maintenance), appear to be driven more by the more densely populated areas than sparsely populated ones. In contrast, the existing adjusted areas (Emergency and Repair) have a more notable increase in costs as sparsity increases. In its own submission, Cadent stated it found no evidence of sparsity effects on Repex. WWU's submission does appear to show a trend towards increasing Tier 1 repex workloads in sparser areas over time, but it is not linear.
- 5.118 We propose rejecting WWU's proposal to extend the sparsity adjustment to Business Support. WWU's proposal for additional facilities costs (depots and stores) was based on a comparison with the West Midlands network. This was based on a simple comparison of absolute numbers of sites with West Midlands without controlling for other factors (eg, network length or number of customers). Cadent's assessment found no case for a sparsity adjustment for property costs.
- 5.119 Cadent provided evidence for the scale of the adjustment based on its own licence areas, focussing on the RIIO-GD2 sparsity-adjusted activities of Emergency and Repair. It proposed updated adjustments just for its non-London licence areas, but not an index that could be used across all relevant GDNs.
- 5.120 Cadent's proposal for updated adjustment values for its non-London GDNs was based on establishing a relationship between productivity and population density separately for Emergency and Repairs. The relationship shown for Repair appears relatively weak (R-squared of 0.47). The two cases are based on comparing its London network with its non-London GDNs to make a case for a sparsity adjustment. We note that it makes the same comparison to argue for an urbanity adjustment in the other direction for London. We are open to considering an update to the sparsity benchmark, but think this should be combined with an examination of the sparsity threshold and cost activities adjusted as part of a coherent proposal.

- 5.121 NGN's submission covered similar areas to the above, making a general comment that we should re-assess the appropriate threshold to apply the sparsity adjustment, and which cost activities are subject to an adjustment for sparsity.
- 5.122 SGN made a separate proposal for an additional adjustment for Scotland for Emergency, Repair and Maintenance owing to the maximum 12-hour shift patterns for employees (commonly termed 'fatigue').⁵⁶ While compliance with the HSE's legislation on fatigue applies to all GDNs, SGN argues that the additional costs incurred due to compliance are proportionally greater in its Scotland network due to it being more sparse. It based this on a comparison between its Scotland and Southern networks, stating that this should be additional to the existing sparsity adjustment.
- 5.123 We propose rejecting SGN's proposal of an additional adjustment for Scotland owing to HSE fatigue legislation. This would significantly increase the sparsity adjustment to Scotland based on the existing approach. We have proposed a pre-modelling fatigue normalisation adjustment and consider that any additional adjustment would risk double counting.

Company-specific factors

- 5.124 The GDNs submitted a number of other company-specific factors, which they suggested we take account of prior to modelling. We have not accepted any of these because they do not meet our criteria for a valid company-specific factor.
- 5.125 In our SSMD we stated our proposal to use the same criteria as for RIIO-GD2 for assessing company-specific factor claims, requiring that each individual claim should:
- have a materiality threshold of 0.5% of a GDN's gross unnormalised totex;
 - be unique in nature to a single or small number of GDNs;
 - be outside the control of the GDN;
 - be excluded from the cost drivers used in the econometric modelling; and
 - be excluded from other adjustments such as regional factors.

Cadent - Network Specific Factor

- 5.126 As noted in the urbanity section above, Cadent proposed a Network Specific Factor claim to account for the impacts of population and property density not

⁵⁶ We discuss fatigue further under Other normalisations and adjustments, below.

accounted for by its 'Nature of Streets' proposal. This would apply an adjustment to only its London network to reflect what it claims are:

- higher operational property costs and property development-driven maintenance work;
- higher emergency costs due to longer job times, necessary alternative shift patterns and greater use of locksmiths;
- higher costs to maintain unique underground assets; and
- costs to comply with unique transport schemes, designed to reduce congestion and emissions.

5.127 We note that the individual components of this claim were nearly all submitted as part of its RIIO-GD2 company-specific factors claims, all of which we rejected at the time. In our RIIO-GD2 Final Determinations we stated:

"We recognise the fact that these claims relate to operating in the London area, however we do not agree that they can all be considered together as one single factor as they relate to different aspects of operations and affect different cost activities. For example, the challenges of operating in London include higher wages and lower productivity which are being recognised and adjusted for separately and we do not see merit in considering these jointly as one single factor. While we accept that some of these claims have merit in principle, we do not believe that they are material enough to warrant an adjustment."

5.128 Cadent unsuccessfully appealed our RIIO-GD2 decision, claiming our cost assessment had failed to account adequately for the substantially higher costs involved in serving the very densely populated London area. The CMA concluded that "GEMA's choice and use of materiality threshold was within its margin of appreciation as an expert regulator" and "GEMA's application of the materiality criterion to Cadent's claims was not wrong."⁵⁷

5.129 When we consider the components of Cadent's proposed Network Specific Factor individually, all but one is below the 0.5% of gross unnormalised totex materiality threshold. The exception is the claim for longer emergency times, but that is already captured by our existing urban productivity adjustment. We therefore propose to maintain our RIIO-GD2 position and reject this claim on the basis that the individual components are below the materiality threshold or are captured by existing regional adjustments.

⁵⁷ CMA Final Determination Volume 3: Individual Grounds:
https://assets.publishing.service.gov.uk/media/617fd092d3bf7f5604d83de4/ELMA_Final_Determination_Vol.3.pdf

SGN - Isle of Wight

- 5.130 SGN also resubmitted a company-specific factor claim from RIIO-GD2, for the activities it needs to carry out on the Isle of Wight that it claims are unique to SGN. It claims that the Isle of Wight has unique challenges arising from physical barriers to accessing the island which comes with several challenges that are not seen in other parts of mainland network operation. The claim is for an adjustment of £9.9m over RIIO-GD3.
- 5.131 As with RIIO-GD2 we propose rejecting this proposal on the basis that it is below the materiality threshold. We also note that the case is principally driven by labour costs, based on a comparison of employees per square km on the Isle of Wight with the remainder of the Southern network excluding London. SGN did not explain why this was an appropriate comparator, nor did it provide a full assessment of the claim against the company-specific factor criteria. Irrespective of this, we propose to reject this proposal on the basis that it is below the materiality threshold.

SGN - Soil Types

- 5.132 SGN proposed a Soil Type company-specific factor, claiming it could require a regional adjustment for other regional networks. This is based on early research suggesting that different soil types may cause variations in the deterioration rates of pipes. SGN did not provide an estimate of the potential impact (in £m) on its network(s), and acknowledges that there is more work required. We do not consider SGN has presented sufficient evidence for us to assess the claim and therefore we have rejected it as a company-specific factor.

SGN - ULEZ

- 5.133 In its BPDT, SGN included a claim for ULEZ schemes 'outside the control of the networks' for Southern and Scotland. We propose to reject this on the basis of low materiality and the fact that accepting it could disincentivise the decarbonisation of SGN's fleet. We also note that SGN provided no further narrative to support this claim.

Summary of regional factor and company-specific factor adjustments

- 5.134 Table 25 below summarises the value of our proposed pre-modelling adjustments for regional and company-specific factors in RIIO-GD3.

Table 25: Regional factor adjustments by GDN as a percentage of submitted modelled totex

	EoE	Lon	NW	WM	NGN	Sc	So	WWU
Factor adjustments as a percentage of modelled totex	1.1%	11.2%	0.1%	0.3%	0.8%	1.0%	5.5%	0.6%

Exclusions

5.135 It is our view that costs should be included in our modelling whenever possible in order not to weaken the benefits of benchmarking. Costs should only be excluded from the totex regression when there is a strong rationale for doing so and when the methodological issues cannot be addressed through other benchmarking choices. Where we exclude costs from the regression, we will assess them using either non-regression benchmarking or technical assessment approaches.

Cost exclusions for non-regression benchmarking

5.136 Within their Business Plans, the GDNs made various proposals for costs they suggested we should exclude from the totex regression. We have reviewed these proposals and decided to maintain our RIIO-GD2 approach to excluding the following cost activities from the regression and to assess them through non-regression benchmarking approaches:

- repex diversions;
- streetworks;
- multiple occupancy buildings;
- growth governors;
- smart metering;
- land remediation; and
- Statutory Independent Undertakings (SIU).

5.137 The underlying rationale for excluding costs for these activities has not changed since RIIO-GD2. In RIIO-GD2, we also excluded gas holder demolition costs from the regression model. This programme has now ended. We have excluded these costs for RIIO-GD1 and RIIO-GD2, with no allowances provided for RIIO-GD3 due to the end of the programme. See the Non-regression benchmarking section below for further details of our proposed assessment approach.

5.138 Cadent and WWU both proposed that we change our RIIO-GD2 approach and include growth governors within the regression modelling for RIIO-GD3. As set

out in our engineering review summary, we have proposed to move all reinforcement costs (including growth governors) in RIIO-GD3 to a re-opener uncertainty mechanism. Given our proposed treatment of reinforcement costs in RIIO-GD3, we think that incorporating growth governors into the regression would result in inconsistent treatment between historical and forecast costs. Therefore, we propose to continue to exclude historical growth governor costs for RIIO-GD1 and RIIO-GD2 from the regression, in line with our RIIO-GD2 approach.

- 5.139 WWU proposed that those costs associated with smart metering costs should be included within the regression for RIIO-GD3. Cadent supported maintaining our RIIO-GD2 approach of excluding these costs from the regression. Our assessment of smart metering costs suggests that the number of smart meters installed continue to be driven by external factors outside the control of GDNs meaning the workloads undertaken due to escapes remain inconsistent between GDNs. We are proposing to maintain excluding these costs from the regression and separately assessing.

Cost exclusions for technically assessed projects and bespoke outputs

- 5.140 For costs which are bespoke in nature or relate to specific projects or outputs, we consider technical assessment to be the most appropriate approach to determining efficient costs. Where activities fall into this category, we exclude the costs from the regression. Activities that have a specific policy mechanism attached to them are referred to as bespoke outputs.
- 5.141 We are proposing to exclude costs for several projects and activities for technical and bespoke assessment in RIIO-GD3. Exclusions apply to all networks or companies, unless otherwise indicated in brackets. See the Technical Assessment section below and Chapter 5 in the relevant Company Annexes for further details on our technical assessment proposals at Draft Determinations. The excluded costs cover the following projects and activities:
- cyber opex and capex costs;
 - advanced leakage detection (ALD) costs;
 - Digital Platform for Leakage Analytics (DPLA) costs (Cadent networks only);
 - large rechargeable LTS diversions;
 - iron stubs;
 - electric vehicles;
 - PSUP capex;

- London Medium Pressure (Cadent, London network);
- Grays Medium Pressure (Cadent, London network);
- Intermediate and medium pressure services (SGN Southern and Scotland); and
- Other bespoke or technically assessed costs from RIIO-GD1 and RIIO-GD2 to ensure a consistent view for comparative benchmarking.

5.142 The GDNs proposed the exclusion of a number of other cost categories in their business plans, which we are proposing to reject and have continued to assess these costs within the regression. Details of these specific claims and our rationale for rejection are included in chapter 5 of the Company Annexes.

Cost and workload adjustments following technical reviews

- 5.143 An important part of our assessment process is to undertake detailed technical reviews to build assurance and confidence in the needs case for proposed investments in certain cost areas. This includes the engineering review of the engineering justification papers for capex and repex-related spend on network assets, and technical review by subject experts for cyber, IT&T and data and digitalisation investments.
- 5.144 Recommendations from the outcomes of these reviews directly inform the pre-modelling adjustments we make to costs, workloads and cost drivers for related activities.

Engineering and cost review adjustments

- 5.145 We make pre-modelling adjustments to workloads to align the cost assessment process with the engineering review. For cost activities that are modelled through the regression, where there is a corresponding workload driver within the totex CSV (eg repex), we make proportional pre-modelling adjustments to both the costs and cost driver. Where the cost activity is represented by a scale variable within the regression, we make pre-modelling adjustments to the costs. For costs modelled through non-regression benchmarking, we make relevant adjustments to the costs and workloads prior to applying any benchmarking analysis. For technically assessed activities, we make adjustments directly to the costs as part of applying our view of allowed efficient costs.

Summary of adjustments to capex activities

- 5.146 We are proposing to remove £730.4m of capex costs through our technically assessed, bespoke outputs and engineering technical review adjustments from submitted costs across all GDNs.
- 5.147 For Cadent, we propose to adjust capex downward by £397.8m. We have removed costs in full for filters and pressure reduction on offtakes, governors and physical security while supporting justification lacks clarity. This includes volume increases not being explained and justified, and the scope or costs of projects not being clear. We have partially removed costs for pipeline monitoring, preheat on offtakes & PRS and pipeline isolation valves, making a £52.6m adjustment. Due to uncertainty in costs and volumes, we propose to remove £80.2m of baseline funding for Cadent's proposed mains reinforcements below 7 bar programme, and move these costs to the New Large Load Connections Re-opener. More detail around this and further reductions can be found in the company annex.
- 5.148 For SGN, we propose to adjust capex expenditure under the following categories: LTS Pipelines, Storage & Entry, Governors, Other Capex and Reinforcement. We have removed in full proposed costs for these categories, totalling £53.5m, as we consider the proposed investments lack sufficient justification at this stage. We have made further downward adjustments to costs, totalling £34.9m, for pressure management maintenance, governors and preheating replacement, where we consider specific elements of these programmes to lack sufficient justification. Due to uncertainty in costs and volumes, we propose to remove £27.7m of baseline funding for its general reinforcements programme, and move to the New Large Load Connections Re-opener and £12.47m for its asset intervention strategy to the Diversions and Loss of Development Claims Re-opener.
- 5.149 For NGN, we propose to adjust capex downward by £50.2m, removing costs related to its submitted investments in offtakes and pressure reduction sites. We consider the justification for these investments to have not been made, more information on the specific assessment of each investment proposal can found in the NGN company annex. Additionally we propose to remove £27.0m relating to its reinforcements programme to the New Large Load Connections Re-opener, more information on this re-opener can be found in section 4.
- 5.150 We propose to remove £87.2m of capex costs for WWU, based on insufficient justification at this stage. We have made partial adjustments to the submitted costs for LTS offtakes, PRIs, storage and governors, where we consider lower

cost options to be more appropriate or where the needs case for some volumes is not considered to have been justified. We propose to remove in full submitted costs for proactive interventions in distribution steel pipelines, where we consider the justification for the proposed volumes to be unclear at this stage, and for LTS investments, where it is unclear how the proposed workload relates to the outcome of inspections.

Summary of adjustments to repex activities

- 5.151 We have proposed £884.9m of repex reductions, including CBA adjustments, from the submitted GDN costs. This includes £459.2m of reductions for Cadent, £91.8m for NGN, £313.5m for SGN and £20.4m for WWU.
- 5.152 For Cadent, we propose to adjust repex expenditure within the following cost categories: MOBs, Mains Tier 1, Mains Tier 2A, Mains Diversions, and Repex Services, with the majority of the adjustments being applied to Mains Tiers 2A (£255.26m) and MOBs costs (£110m). More detail around this and further proposed reductions can be found in the company annex.
- 5.153 For SGN, we propose to adjust repex expenditure within the following cost categories: MOBs and Repex Services, Mains Diversions and Mains Tier Other. The most notable downward adjustment is to the MOBs cost category (£240.90m) due to a lack of data asset repository, limited details for CDS and maintenance. More detail around this and further proposed reductions can be found in the company annex.
- 5.154 For NGN, we propose to adjust repex expenditure under the following categories: MOBs, Mains Tier 1, Mains Tier 2B and Mains Tier 3, with the majority of the adjustment being applied to Mains Tier 1, Mains Tier 2B and Mains Tier 3 (£89.2m). More detail around this and further proposed reductions can be found in the company annex.
- 5.155 For WWU, we propose to adjust repex expenditure under the following categories: MOBs, Mains Tier 2B and Mains Tier 3 for WWU with most of the adjustment being applied to MOBs expenditure (£12.0m). More detail around this and further proposed reductions can be found in the company annex.
- 5.156 As discussed in Chapter 3, we propose to apply a CBA-payback cutoff to non-mandatory repex work. This has resulted in removing £28.6m for mains in the other category for SGN, £53.7m relating to Tier 3 mains for NGN and £8.4m for Tier 2b and Tier 3 mains for WWU. More detail around this and further proposed reductions can be found in the company annex.

Cyber, IT&T and data & digitalisation technical review

Summary of GDN submissions

- 5.157 Cadent proposed that costs relating to cyber resilience should be technically assessed due the differing nature of the investments across GDNs and unsuitability of a static scale driver used within totex regression models.
- 5.158 WWU proposed for cyber, IT&T and data & digitisation that the costs assessment approach must reflect the step change caused by an increase in costs between GD2 and GD3 and there is no current suitable cost driver in the model.

Summary of consultation position

- 5.159 We propose to apply pre-modelling adjustments to costs to reflect the outcomes of the technical reviews for cyber, IT&T and data and digitalisation. For IT&T and data and digitalisation, which we are proposing to assess through the totex regression, we made pre-modelling adjustments to costs. We are proposing to model cyber costs through technical assessment and have applied the adjustments resulting from our technical review directly to our view of allowed efficient costs.

Cyber resilience technical review

- 5.160 To evaluate the network companies' Cyber Resilience Business Plans (CRBPs), we conducted a bottom-up assessment focusing on the merits of the needs case, deliverability, and costs of each project proposed by the companies. Due to national security concerns, we cannot provide further details regarding our assessment of the projects.
- 5.161 Further details on our cyber assessment can be found in chapter 11 of the overview document. A detailed breakdown of our consultation position has been shared in confidential annexes that have been shared directly with the network companies for private consultation.

IT&T technical review

- 5.162 Our assessment of GDNs IT&T investments has built on the approach from RIIO-GD2, advised by the consultants AtkinsRéalis and Grant Thornton. Non-operational IT, Operational Technology and IT Business Support costs were in the scope of the assessment but not Data & Digitalisation or Cyber costs, which were assessed separately. It also did not include lower materiality BAU IT costs with associated IDPs.
- 5.163 The review considered companies' IT & Telecoms strategies, accompanying commentary to their business plan data template (BPDT) submissions, engineering/investment justification papers (EJPs/IJPs) and cost-benefit

analyses (CBA). The review also considered companies' responses to clarification questions.

- 5.164 For GDNs, the expert review covered complete assessments of 68 projects, corresponding to around 99% of requested funding for projects with associated IDPs from Cadent, 95% from SGN and 80% from WWU. While the review covered 100% of NGNs funding proposals, in some cases the requested funding value was unclear. We propose to apply the average percentage of allowed expenditure for the projects reviewed for a given GDN to the remaining IT projects proposed by that GDN. We consider the high number of projects included in the assessment mean that this is a representative percentage for each company.
- 5.165 The expert review of each proposed investment focused on three dimensions:
- the validity of the needs case;
 - the strength and robustness of the needs case, broken down into 'value for money' and 'optioneering'; and
 - the appropriateness of cost levels associated with the proposed work plans, broken down into 'scope definition', 'delivery certainty' and 'cost assurity'.
- 5.166 Each dimension component was scored using an ordinal Red-Amber-Green (RAG) rating. These scores were then combined into a composite rating and mapped onto percentage funding allowance thresholds:
- any project that achieved at least an Amber needs case rating received at least 25% of requested funding;
 - a project required a minimum of three Green ratings to be awarded the full funding requested;
 - a project with five Amber ratings was awarded 75% of the requested funding; and
 - a project required a minimum of three Amber ratings to receive 50% funding.
- 5.167 Due to sensitivity around the details of each company's proposed IT&T investments, we have not published the Grant Thornton and AtkinsRéalis report. However, we will share the report, containing detailed information on the specific criteria used, how funding percentages would align with the RAG scoring and on the overall assessment framework, directly with the licensees.
- 5.168 Overall GDNs submitted investment proposals totalling £658.4m. Some proposals were found to be outside the scope of this technical assessment so

£316.9m of proposed investment was removed. For projects which were in scope, we propose to reduce submitted costs by £104.2m based on our assessment of individual projects, where we considered some costs or workloads not to have been justified.

- GDQ33. Do you agree with our assessment approach for IT&T?
- GDQ34. Do you think we should make any amendments to the assessment framework or the thresholds employed?
- GDQ35. Should any cost categories be included or excluded from the assessment?

Data and Digitalisation technical review

- 5.169 Digitalisation means improving the way we use data and digital technologies to generate value for consumers, in our business plan guidance and chapter 12 in the Overview document we identify the criteria and process that we have used to assess the funding of proposed data and digitalisation investments.
- 5.170 Within their business plans GDNs requested a total of £87.6m for data and digitalisation investments after miscategorised costs were accounted for and reclassified. We propose to fund £73.9m after removing those investment proposals that did not provide sufficient justification or information. Our consultation position, rationale on proposed funding for each company is provided in the individual company level documents.

Other pre-modelling cost adjustments

- 5.171 In its plan, Cadent proposed a £24.7m investment to support activities associated with the net zero transition. We propose to reject these costs as the proposal assigns certain strategic planning accountability to the GDN instead of NESO, which contradicts RESP policy. Further information can be found in chapter 5 of the Cadent company annex.
- 5.172 SGN made two separate NZARD funding proposals, which we propose to include in baseline due to the level of cost and needs case certainty for these projects in its business plan. We propose to move these requested costs of £18.5m for these projects into submitted baseline totex. Further information can be found in Chapter 4 of SGNs company annex.

Other normalisation adjustments

- 5.173 We have made some other adjustments to data submitted in the RIIO-GD3 BPDTs to ensure a reasonable comparison between GDNs in our econometric modelling. These include proposed exclusions of specified historical costs and

exclusion of forecast costs relating to different levels of legislative compliance between GDNs.

Adjustments to historical costs

- 5.174 We propose to maintain adjustments for historical costs from the RIIO-GD1 and RIIO-GD2 period relating to.
- large capex projects,
 - gasholder demolition,
 - physical security,
 - Cyber resilience,
 - Loss of land development claims
- 5.175 This is in line with our approach to assess the forecast costs separately in RIIO-GD3 and would ensure a consistent view of totex over the 18-year time period for our econometric modelling.
- 5.176 Similarly, we removed historical costs associated with our non-regression cost activities. This includes costs relating to repex diversions, MOBs, streetworks, smart metering, land remediation, growth governors and SIU opex.

Compliance with HSE legislation on fatigue

- 5.177 We propose to make adjustments to both historical and forecasts costs for all GDNs to reflect different levels of compliance with the HSE's directives around maximum 12-hour shift patterns for employees (commonly termed 'fatigue'). At the beginning of RIIO-GD2, the HSE updated its directives around the maximum length of shift patterns for workers, moving from a 16-hour to 12-hour limit, and set out its expectations around compliance and enforcement.
- 5.178 The GDNs are responsible for ensuring timely response and action on a 24/7 basis following reports of gas leaks on their networks. This means each GDN must have a certain number of first call operatives (FCOs) working at any one time, to ensure they can respond to reports of leaks across the full geographic coverage of their network. As these FCOs are not always engaged in emergency response work during their shifts, they can also undertake non-emergency work (eg routine maintenance tasks).
- 5.179 The GDNs have argued that the move to a shorter maximum shift pattern results in increased overheads and lower productivity in the delivery of non-routine work. We have established with the GDNs, through SQs, which cost

activities they expect to be impacted by complying with the HSE fatigue legislation and when they expect to be fully compliant.

- 5.180 We are proposing to make normalisation adjustments to account for the different levels of expected compliance with HSE fatigue legislation across the industry and the impact this has on the relative efficiency of different GDNs. We propose to make adjustments to individual licensees' costs based on the relative scale of additional costs they expect to face in each, relative to Cadent, which has the latest expected date to reach full compliance, in 2028. This results in WWU receiving the largest adjustment across the longest period, having achieved full compliance within RIIO-GD2. See the Company Annexes for an overview of the total annual adjustment proposed to be made for fatigue for each GDN.

Loss of meterwork adjustment

Background

- 5.181 The GDNs have historically undertaken contract meterwork via competitive procurement. Following the expiration of these contracts, the costs associated with First Call Operatives (FCOs) were reallocated from metering, a non-price controlled activity, to emergency services, which are price controlled. This shift led to an increase in the costs attributed to emergency activities, and occurred at different rates for different GDNs, depending on when contracts expired.

Summary of consultation position

- 5.182 We are proposing to maintain the historical loss of meterwork adjustment only for RIIO-GD1, but not extend it into RIIO-GD2. In RIIO-GD2, we made an adjustment to costs to account for the contract meterwork that GDNs had historically competed for (ie in RIIO-GD1) via competitive procurement. We are not proposing to extend this adjustment to cover the historical RIIO-GD2 period.

Rationale for consultation position

- 5.183 Cadent proposed extending this adjustment into RIIO-GD2, given the continuing existence of some meterwork activities during this period. We do not think the level of meterwork being undertaken in RIIO-GD2 results in a materially different level of productivity and cost between GDNs. Additionally, GDNs have had a number of years to adapt to new working models resulting from smart metering contract work ending or running down. Therefore, we propose to only maintain the historical adjustments for loss of meterwork in RIIO-GD1.

Questions

GDQ36. Do you agree with our proposed approach to pre-modelling normalisations and adjustments?

Totex Benchmarking

Overview

5.184 Totex benchmarking is the most important tool in our cost assessment toolkit, allowing us to compare relative cost efficiency between GDNs across various activities and through time. In sections 5.33-5.35 above, we set out our rationale for proposing to continue using a single regression model to determine totex in RIIIO-GD3. In this section we set out our proposed specification for this model, and our modelling performance and results.

Totex regression model specification

We propose the following model specifications and parameters for our regression model at RIIIO-GD3:

Number of models: single totex model.

Level of aggregation: Top-down.

Estimation technique: Ordinary Least Squares (OLS) estimator with clustered robust standards errors.

Model specification: Cobb-Douglas function with a composite scale variables (CSV) as the main driver.

CSV cost driver components: MEAV; Maintenance MEAV; Total External Condition Reports; Emergency CSV; Repex Synthetic Cost Driver; Capex Synthetic Cost Driver (mains reinforcement and connections).

Time trend: t1 (2013-14 to 2030-31) and t2 (forecast period 2024-25 to 2030-31) time trends to account for unobserved time effects.

Time period of data used: RIIIO-GD1, RIIIO-GD2 and RIIIO-GD3 (2013-14 to 2030-31).

Level of aggregation

5.185 We set out in our RIIIO-GD3 SSMD that initial testing suggested the model specification from RIIIO-GD2 was a strong starting point for RIIIO-GD3. Having now updated and tested this model with the RIIIO-GD3 BPDT data, we continue to think that the model specification performs strongly and is robust.

5.186 Our proposal to continue using a single top-down totex model in RIIO-GD3 reflects a consistent approach across gas distribution price controls and aligns with our view that RIIO-GD3 looks broadly similar to RIIO-GD2 in the context of the workloads, activities and responsibilities the GDNs are required to undertake. We also think this provides regulatory consistency, which is important for capital intensive regulated sectors, such as gas distribution, where investors typically make longer term investment decisions. Having a stable regulatory approach to determining the core funding for GDNs is also important in the context of the broader uncertainties that face the sector over the medium to long term.

Estimation technique

5.187 We propose to continue using Ordinary Least Squares (OLS) with robust standard clustered errors as the estimation technique for our model. Our RIIO-2 Step-by-Step Guide to Cost Assessment annex⁵⁸ sets out more detail on our rationale for the use of OLS with robust standard clustered errors, and our view is that these arguments continue to hold for RIIO-GD3.

Model specification

5.188 Our approach for RIIO-GD3 proposes to continue using the Cobb-Douglas function, consistent with our approach in RIIO-GD1 and RIIO-GD2. This functional form is widely employed in cost assessment literature. It allows for economies of scale to be captured and estimated coefficients can be easily interpreted as cost elasticities.

5.189 We are proposing to maintain our RIIO-GD2 approach of using a composite scale variable (CSV) as the main driver in the model specification. The CSV is a weighted average of scale and workload drivers, reflecting the disaggregated cost activities included in our totex definition. Further details on the CSV components and our proposed approach to determining weights are set out in the following section.

5.190 We have also continued to include two time trends within the model specification, to account for change in totex due to historical and future shifts in the efficiency frontier, as well as other exogenous factors that could impact the relationship between costs and the cost driver over time.

⁵⁸ See 'Final Determinations: Technical Annex part one' at: [RIIO-2 Final Determinations for Transmission and Gas Distribution network companies and the Electricity System Operator | Ofgem](#)

Time trends

- 5.191 The inclusion of a time trend variable within a regression model allows the model to capture changes in real expenditure through time, due to increasing efficiency or other exogenous factors not captured within the model.
- 5.192 In RIIO-GD2 we included two time trend variables, t1 covering historic and forecast data, and t2 covering only forecast data. We have maintained this approach for RIIO-GD3 Draft Determinations.
- 5.193 We believe there is a strong rationale for having the t1 time trend variable based upon historic and forecast data, which can reflect efficiency and exogenous changes over the whole time period used. However, we are considering whether the t2 time variable should be maintained within the model specification. We consider there is a risk that the t2 variable allows the model to reflect differences between the historic (ie actual) data and forecast data, whether or not these increases are appropriately justified. For instance, while the t2 variable would allow the model to capture an increased rate of efficiency improvement within the forecast, it may also allow the model to reflect inefficiencies within the forecast data, which would clearly not be appropriate.
- 5.194 We intend to further consider approaches to using the t2 time trend variable, including the potential to remove this variable from the model specification, before finalising our decision at Final Determinations. We welcome input on the proposed use of the t2 time trend variable within the model specification through consultation responses.

Time periods

- 5.195 We have used data covering RIIO-GD1, RIIO-GD2 and RIIO-GD3 in our proposed econometric totex model. Specifically, this covers:
- RIIO-GD1 historical data for 2013/14-2020/21;
 - RIIO-GD2 historical data for 2021/22-2023/24;
 - RIIO-GD2 forecast data for 2024/25-2025/26; and
 - RIIO-GD3 forecast data for 2026/27-2030/31.
- 5.196 Our proposed model incorporates 11 years of historical 'actual' data, as reported by the GDNs in their annual regulatory reporting pack (RRPs), and seven years of forecast data across the final years of RIIO-GD2 and all of RIIO-GD3. We also ran our proposed model specification on historical only (RIIO-GD1 and historical years of RIIO-GD2), full RIIO-GD1 and RIIO-GD2, and RIIO-GD2 and RIIO-GD3. The outcomes of the model runs using these time periods demonstrated

comparable performance to the full time series model, with very minor differences in the adjusted R-squared and the coefficients.

- 5.197 In general, benchmark models are considered more statistically robust the greater the number of observations included within the model. Additionally, for models to be reliable explainers of the real-world relationship between costs and drivers, they should be firmly grounded in actual observed data, noting the inherent uncertainty contained in forecasts.
- 5.198 For these reasons, we think using the full RIIO-GD1 to RIIO-GD3 dataset is appropriate for our modelling in RIIO-GD3, and results in a model that is weighted 61% towards reported historical data, 39% towards forecast. In our view, this strikes a reasonable balance between explaining observed relationships, while allowing for some influence of forecast data, in terms of incorporating it into the estimation of the relationship between the cost and cost driver.

Cost drivers

CSV overview

- 5.199 For RIIO-GD3, we propose to continue to use the same individual components to construct the totex CSV as we used in our RIIO-GD2 modelling. These individual components are:
- Modern Equivalent Asset Value (MEAV, a proxy for network scale);
 - maintenance MEAV;
 - total external condition reports;
 - emergency CSV;
 - synthetic cost driver for repex; and
 - synthetic cost driver for capex - combining mains reinforcement and connections.
- 5.200 We are also proposing to maintain our RIIO-GD2 approach to determining the weights of each component within the totex CSV for RIIO-GD3. This is based on the relative proportions of average industry submitted costs⁵⁹ for each cost category associated with each of the cost drivers. See the CSV weighting section below for further discussion on our approach and rationale to determining CSV weights.

⁵⁹ Gross costs after exclusions, reclassifications and regional adjustments for the years 2014-2031. Separately assessed costs and technically assessed cost are not included.

- 5.201 We continue to maintain the view that the totex CSV incorporates a range of input variables which we consider cover all the main exogenous drivers of totex costs. Specifically, we have included all of the cost drivers we previously used within disaggregated models in RIIO-GD1. We believe using a totex model allows the regression to solve for trade-offs between expenditure on different activities.

MEAV and Maintenance MEAV

Background

- 5.202 MEAV is defined as the current replacement value of an individual asset. We sum these individual values together to give a single MEAV value for each network, which acts as a proxy for scale of operation. Maintenance MEAV is a subset of MEAV, comprising only those assets which are maintained under our definition of 'Maintenance' opex costs within the BPDs. Within the totex model, MEAV is used as a scale variable, reflecting the relative size and complexity of each network.

Consultation position and rationale

- 5.203 Modern Equivalent Asset Value (MEAV) continues to be our preferred scale driver in RIIO-GD3, as we consider it to best reflect the complexity within each network. We think network scale and complexity has a strong relationship with a lot of the GDNs' underlying cost base, not otherwise explained by workload or other scale drivers. WWU supported this position in its Business Plan, noting that it did not consider any of the potential alternative scale variables (eg network length, customers number or throughput) to be an improvement on MEAV.
- 5.204 We propose to maintain the same set of assets within MEAV and Maintenance MEAV in RIIO-GD3 as we used in RIIO-GD2.⁶⁰

Total External Condition Reports

Background

- 5.205 External condition reports are used as the cost driver for Repairs and Emergency. An external condition report is made when a member of the public notifies the central reporting line of a suspected gas escape. The GDNs are expected to respond to these reports to establish the source of any potential gas leaks and fix any damaged or deteriorated assets they identify, initiating a repair job.

⁶⁰ Details of the assets included in MEAV are in p103 and p114 of [RIIO-2 Final Determinations – GD Sector Annex \(REVISED\)](#).

- 5.206 Repair costs include the costs of attending a site, locating, excavating, repairing a leaking main and reinstating all excavations. In RIIO-GD1 and RIIO-GD2, we have used the number of external condition reports as the cost driver for repair activities. The number of external condition reports is expected to fall in the future, as the GDNs continue to deliver the IMRRP repex programme (due to be completed by 2032), which reduces the number of leaks on the network.

Consultation position and rationale

- 5.207 We propose to maintain our existing approach of using total external condition reports to explain repair costs within the CSV in RIIO-GD3. We think this measure meets the criteria for being a robust cost driver, namely that it is common across all GDNs, outside of management control and consistently reported.
- 5.208 SGN proposed in its Business Plan that the number of repairs should be used as the driver for repair costs. It suggested that repairs represent a more operationally intuitive measure of the costs GDNs face, given that a single external condition report can result in more than one repair, and that there is an inconsistent relationship between the number of reports and repairs between GDNs. SGN also proposed that repair workloads should be considerate of tier mix in assessment of costs.

We disagree with the proposal to use the number of repairs within the CSV, as we consider it does not meet the criteria of a robust cost driver. The primary external driver for repairs is the number of external condition reports received by each GDN. This cost driver has clear causal relationship with the activity and is driven by factors outside of the control of GDNs. Replacing or introducing repairs as a secondary driver could risk introducing the wrong incentives to GDNs, which have more control over the number, scope and timing of repair work.

Emergency CSV

Background

- 5.209 Emergency costs are the direct costs of providing an emergency service to respond to all reported gas escapes and make any escapes safe. The emergency CSV is a combination of customer numbers (80%) and the number of external condition reports (20%). The customer numbers element reflects the fixed cost component of GDNs costs, as customer numbers tend to be relatively stable over time. External condition reports account for the variable component of costs relating to operating the GDNs' emergency service functions.

Summary of consultation position and rationale

- 5.210 We propose to maintain our existing approach to calculating the emergency CSV in RIIO-GD3. We think the combination of these drivers continues to provide a strong explanation of GDNs' emergency costs in RIIO-GD3.
- 5.211 Both SGN and WWU supported the ongoing use of this driver in their Business Plans, and no companies proposed an alternative. After its initial business plan submission WWU updated its customer number forecast to align with future planning scenarios used by other GDNs. We have used this updated forecast in our modelling at Draft Determinations.

Repex synthetic cost driver

Background

- 5.212 We use the term to refer to costs associated with the asset replacement programme for mains and services⁶¹. Repex costs relate to the ongoing programme of replacing old metallic mains and services with new PE ones. In RIIO-GD2, we modelled mains and services costs within our totex model, using a synthetic cost driver within the CSV. We did not include costs for MOBs, diversions or bespoke outputs.
- 5.213 The synthetic cost driver is the sum of the products of synthetic unit costs and volume for each disaggregated activity (eg each mains diameter band or type of service intervention) included within the repex component of the totex CSV.

Summary of consultation position and rationale

- 5.214 We propose to maintain our existing methodology for calculating repex synthetic costs in RIIO-GD3. The synthetic cost driver is the sum of the products of synthetic unit cost and volume for each disaggregated activity that is included within the repex part of the totex CSV. We have included the same activities within the synthetic cost driver as at RIIO-GD2.⁶²
- 5.215 As the synthetic cost driver is a workload driver, we have made workload adjustments consistent with the recommendations from our engineering review to the repex workloads for each GDN. Further details on the workload

⁶¹ Repex also includes costs associated with replacing, refurbishing and decommissioning risers and services on multiple occupancy buildings, but we propose to assess these costs outside of the regression in RIIO-GD3.

⁶² Tier 1 iron mains, Tier 2A iron mains, Tier 2B iron mains, Tier 3 iron mains, steel mains <=2", steel mains >2", iron mains >30m from a building, other policy and condition mains, services associated with all of the aforementioned mains replacement activities, services not associated with mains replacement.

adjustments resulting from engineering review are provided in the Appendix of the relevant Company Annexes.

- 5.216 All of the GDNs raised points around increasing complexity of repex work in RIIO-GD3, relative to RIIO-GD1 and RIIO-GD2, which they linked to increasing repex cost forecasts. They suggested that previous guidance around how mandatory repex programmes were designed and which mains were prioritised has resulted in a greater number of complex projects being left to the end of the programme. Each GDN set out various examples of complexity factors which they suggest lead to longer job times, reducing productivity and increasing costs. SGN and WWU both proposed that the repex synthetic cost approach should be updated to take into account complexity factors.
- 5.217 We have further explored the issue of complexity factors in repex through the CAWG and the SQ process. We note that while all companies set out examples of complexity factors they were facing, there was only a limited degree of overlap between these examples across companies. Additionally, many of the factors cited are not captured in a sufficient level of granularity within the BPDTs to allow a comprehensive and consistent comparison to be undertaken between GDNs. This makes identifying and specifying a particular driver of complexity very challenging, in the context of our benchmark modelling, which considers the cost drivers impacting a notionally efficient GDN.
- 5.218 The increased volume of ductile iron and the proportion of repex undertaken through the open cut technique were two factors that were cited by several of the companies, and which we capture some information on within the BPDTs.
- 5.219 We are not currently proposing at Draft Determinations to separate out the areas of complexity identified by the GDNs within the repex component of the CSV cost driver. This reflects the fact that in many cases we have insufficient historic and forecast information on the increased volumes and costs, and the complexity has not been considered consistently across all GDNs submissions. We are also cautious of introducing increased complexity into the repex synthetic cost driver or the CSV unless there is sufficient evidence that the issues are material, a modelling methodology can be defined which adequately reflects the cost driver, and that the issue can be consistently reported across all GDNs. However, we remain open to considering repex complexity further before Final Determinations, where GDNs can provide sufficient evidence and an appropriate methodological approach. The information we would require to further consider these issues includes:

- Well evidenced information regarding the scale of proposed increased costs associated with the complexity, estimated on a consistent basis across GDNs.
- Well evidenced information on volume of complex workloads, on a comparable basis across GDNs.
- Evidence that there is an increase in the volume of complex work compared to the forecast repex programs submitted in RIIO-GD1 and RIIO-GD2. The GDNs need to be able to show that the volumes of complex work implicitly included within the costs included within the existing repex synthetic cost driver are insufficient to cover the volumes and costs of the forecast program. In addition, repex is a programme of work that spans multiple price controls, so GDNs also need to evidence that the forecast volumes of complex work have not already been funded under previous price control settlements.
- Evidence that the total costs of each area of complexity is material enough to justify an adjustment to our proposed modelling methodology for RIIO-GD3.
- Proposals from the GDNs for robust methodologies for incorporating repex complexity within our proposed modelling methodology for RIIO-GD3. Proposed approaches should consider whether issues are common across GDNs, and therefore should be captured within the regression model through the repex synthetic cost driver and applied fairly across all GDNs, or whether issues are considered to be unique to a specific network, demonstrating how a proposed adjustment meets the relevant criteria for a company specific adjustment.

Tier 1 mains workload forecasts

- 5.220 We have concerns about the justification for some of the Tier 1 mains workloads forecasts submitted by the GDNs in their Business Plans, and want to seek further clarification on the rationale for these ahead of Final Determinations. There are two areas where we have identified issues that could have material impacts on the outcome of the benchmark modelling and where we would like to further clarify the rationale for the submitted workload forecasts. The workload mix forecasts for Tier 1 mains commissioned for some GDNs show notable inconsistencies between historical and forecast years with respect to the diameter band mix. There are also a number of cases where the ratio between the forecast volume of mains commissioned (eg laid) and of mains decommissioned (eg abandoned) is inconsistent with historical trends and engineering logic.
- 5.221 The commissioned diameter band workload mix feeds directly into the repex synthetic cost driver calculation. We have observed that for some GDNs, there is

a marked shift from smaller diameter bands to larger diameter bands between historical (ie 'actuals') and forecast years, the rationale for which has not been set out in their business plans. It is also notable that there is not a corresponding shift in the forecast diameter band mix for mains decommissioned. A diameter band mix featuring a higher share of larger diameter mains would result in a higher value repex synthetic cost driver, all else being equal.

- 5.222 The IMRRP sets out that all Tier 1 iron mains must be decommissioned by 2032. Therefore, the overall workload of Tier 1 mains the GDNs need to undertake over RIIO-GD3 is largely determined by the size of their remaining Tier 1 iron mains population that needs to be decommissioned, and the number of years left in the programme. Generally, when GDNs decommission a Tier 1 main, they do so by inserting or laying a new plastic main in its place. The length of the decommissioned main is the same as the length of the commissioned (laid) main.
- 5.223 In some instances, the GDNs will identify opportunities to decommission an existing main, but commission shorter lengths of new mains.⁶³ At the aggregate level, this means that across all of the Tier 1 work delivered, the aggregate length of mains laid is typically slightly less than the aggregate length of mains abandoned. This metric is known as the lay-to-abandonment ratio, and would typically be slightly below 1. We note that in the BPDTs, several of the GDNs are forecasting a lay-to-abandon ratio for Tier 1 mains of exactly 1 for RIIO-GD3. This could suggest that the forecasts submitted for mains commissioned are higher than needed, relative to the expected length of mains to be decommissioned in RIIO-GD3.
- 5.224 At Draft Determinations, we have used the Tier 1 workload forecasts as submitted by the GDNs, and have not applied any adjustments. We want to further engage with the GDNs ahead of Final Determinations to understand the rationale and justification for the Tier 1 forecasts submitted in their BPDTs, both in terms of commissioned diameter band mix and lay-to-abandon ratio. If we think there is insufficient evidence or justification to support these forecast ahead of Final Determinations, we will consider making adjustments to forecast Tier 1 commissioned workloads based on:

⁶³ For example, this can occur due to network reconfiguration or where two mains being decommissioned run in parallel down either side of a street, but can be replaced with a single new main running down one side.

- historical averages or trends of lay-to-abandon ratios for Tier 1 mains;
- historical relationships between Tier 1 mains commissioned and decommissioned diameter band mixes; and
- historical average Tier 1 mains commissioned diameter band mixes
- other methodological approaches that are robust and follow engineering logic.

Capex synthetic cost driver

Background

- 5.225 Capex relates to costs associated with new network investment. Connections and reinforcement are two sub-categories of capex investment. Connections cost relate to the cost of connecting new domestic and non-domestic customers to the gas network. Reinforcement costs are costs associated with increasing the capacity of sections of the network, either to support growth in local demand, enable operational changes in the network or to enable greater use of live insertion techniques for repx. In RIIO-GD2, we modelled connections and reinforcement costs within our totex model, using a synthetic cost driver within the CSV.
- 5.226 The synthetic cost driver is the sum of the products of synthetic unit costs and volume for each disaggregated activity (eg each mains diameter band) included within the capex component of the totex CSV. For the regression analysis, we propose to retain our RIIO-GD1 and RIIO-GD2 approach of smoothing costs and workloads using a 7-year rolling average to minimise the risk of the lumpy nature of these activities biasing the econometric results.

Consultation position and rationale

- 5.227 For RIIO-GD3, we are proposing to maintain the same approach to capex cost drivers within the totex CSV. We think a workload driver remains the best approach to explaining connections and reinforcement costs, and it is supported by stakeholders. Two GDNs mentioned their support for continuing to use the RIIO-GD2 approach for connections and reinforcement cost drivers. We have updated the synthetic unit costs used to calculate the drivers. Our calculation of the synthetic unit cost is based on the same level of aggregation as in RIIO-GD2.
- 5.228 The synthetic cost driver for reinforcement distinguishes between mains below and above 180mm. We made no distinction between general and specific reinforcement in calculating the synthetic unit costs, because the two types of reinforcement have similar unit costs.

- 5.229 The needs case for reinforcement workloads is subject to engineering assessment. We are proposing to move ex ante funding for reinforcement workloads, with the exception of reinforcement for insertion to support repex work, into uncertainty mechanisms in RIIO-GD3. We adjusted reinforcement workloads proposed by Cadent, NGN and SGN to align with this approach. Further details can be found in the company annexes.
- 5.230 We have accepted all the proposed workloads for connections. Forecasted volumes and associated costs for new connections have trended downward since RIIO-GD1, and GDN submissions are projecting a marked reduction in activity levels from the start of RIIO-GD3.

CSV weighting

- 5.231 We propose to continue to weight the components within the CSV based on industry average submitted cost⁶⁴ shares for the activities associated with each driver for RIIO-GD3. This is a continuation of the approach we used in RIIO-GD1 and RIIO-GD2.
- 5.232 Cadent proposed an alternative approach to weighting the totex CSV components in its RIIO-GD3 Business Plan. This involves determining GDN-specific weights on an annual basis, as well as incorporating individual cost elasticities for each component, to more granularly reflect the relationship between changes to specific cost drivers and totex. Cadent's own analysis suggested this approach could result in improved explanatory power (ie higher adjusted R-squared) of the totex model.
- 5.233 We have tested Cadent's proposal and variants of it in our proposed RIIO-GD3 totex model. Overall, we have found that Cadent's proposed approach does not improve the explanatory power of our model, instead resulting in a lower adjusted R-squared than our preferred approach. Cadent's approach does not appear to offer an improvement, from an overall model quality perspective, on our existing approach.
- 5.234 We also think there are methodological challenges with Cadent's proposed approach. Cadent's methodology incorporates individual elasticities for each CSV component, which it derives from the bottom-up models. As Cadent itself notes in its Business Plan and we set out in the Alternative model specifications section above, the performance of the bottom-up models is relatively weak, and

⁶⁴ Gross costs after exclusions, reclassifications and regional adjustments for the years 2014-2031. Separately assessed costs and technically assessed cost are not included.

several models fail statistical robustness tests. We do not think placing reliance on the coefficients derived from these models to estimate cost driver weights results in a more robust weighting methodology overall.

- 5.235 Cadent's proposed approach also introduces CSV weights representing the expenditure composition for each individual GDN for each year. In effect, it is proposing to apply 144⁶⁵ unique sets of weights within the totex model. This means that the value of the weighted CSV is dependent not just on the cost drivers but also the relative expenditure composition. Given that the components of the CSV should represent external drivers which are outside management control, but the way costs are incurred and allocated is within management control, the approach risks allowing more company control over the value of the CSV input driver. We don't think this is appropriate, and risks potential unintended consequences. Additionally, we don't think it is wholly aligned with our concept of using a regression model for econometric benchmarking.
- 5.236 The regression model seeks to identify a relationship between the cost drivers (exogenous, outside management control) and totex spend (within management control). This identifies the relationship between the level of cost for a notional efficient company and the exogenous cost drivers. This relationship can then be used to identify the relative efficiency of each GDN and to set efficient allowances. The Cadent approach allows for a degree of endogeneity (eg management choices over cost allocations) within this relationship, which potentially undermines the concept of identifying the totex of a notional efficient company, relative to the exogenous cost drivers.
- 5.237 We believe that the Cadent proposal for setting CSV weights is subject to weaknesses in statistical performance, a lack of statistical robustness in setting elasticities and a conceptual weakness of allowing endogeneity within the CSV cost driver. We therefore do not propose to consider the Cadent proposal further, and intend to continue with our proposed approach to setting CSV weights.
- 5.238 Table 26 sets out the weights applied in our proposed CSV driver.

⁶⁵ There are 144 observations within our proposed totex model, covering eight GDNs across 18 years (2013/14-2030/31)

Table 26: Weights of components within the totex CSV (%)

Component	Weight
Repex synthetic cost driver	39%
MEAV	38%
Maintenance MEAV	7%
Total external condition reports	6%
Emergency CSV	5%
Connections	4%
Reinforcements	1%

Econometric model results

5.239 Our totex model takes the following form:

$$\log(\text{totex}_{it}) = \beta_0 + \beta_1 \log(\text{totex CSV}_{it}) + \beta_2 t_1 + \beta_3 t_2 + \epsilon_{it}$$

5.240 Where β_0 is a constant term, β_1 is the coefficient associated with the cost driver (totex CSV) and ϵ_{it} is the error term representing the component of costs not explained by the cost driver (ie noise, measurement errors and inefficiency) for GDN i at time t . The linear time trends are accounted for by the t_1 and t_2 terms.

5.241 Table 27 below presents our regression model estimation results. The estimated coefficient for the totex CSV is 0.90, which implies a 1% change in the value of the cost driver results in a 0.90% change in totex. The t_1 time trend is very slightly positive, suggesting costs have trended marginally upwards over time (all else being equal). The forecast time trend is also positive, which indicates an expectation that totex is expected to increase over the forecast period relative to levels seen in RIIO-GD1 and RIIO-GD2 (all else being equal). This is consistent with the cost increases included in the GDNs submitted totex for RIIO-GD3.

5.242 The overall model fit remains strong, with an adjusted R-squared of 0.91. While this represents a slight decrease from our RIIO-GD2 model, it remains strong in general, and suggests the model is effective in specifying the relationship between costs and cost drivers over time. The model also passed the statistical robustness tests that we applied⁶⁶.

⁶⁶ We considered model performance against the following statistical tests: RESET test, normality test, heteroskedasticity, pooling test.

Table 27: Regression model estimation results

Ln-totex	Coefficients ⁶⁷
Ln_totex_csv	0.897** (0.042)
t1	0.003** (0.003)
t2	0.020** (0.007)
Constant	-0.909 (0.306)
Adjusted R ²	0.906
Observations	144

* statistical significance at the 10% level

** statistical significance at the 5% level

*** statistical significance at the 1% level

Questions

- GDQ37. Do you agree with our proposed approach to totex benchmarking?
- GDQ38. Do you agree with the proposed level of aggregation, estimation technique and time period for our econometric modelling?
- GDQ39. Do you agree with our proposed cost drivers and approach to weighting drivers in the totex CSV?
- GDQ40. What are your views on our proposed workload adjustments to cost drivers?

Non-regression analysis

Overview

- 5.243 We propose to exclude a number of cost activities from our econometric modelling due to the variation of these costs across different networks and because costs are not well represented by our proposed cost drivers within the totex CSV.

⁶⁷ Standard errors are shown below the coefficients in parentheses

- 5.244 We are proposing to maintain our RIIO-GD2 approach and assess the following activities through non-regression approaches: MOBs, Streetworks, Repex diversions, Smart metering, Land remediation, SIU opex and Growth governors.
- 5.245 For each area, we have undertaken both qualitative and quantitative reviews of the Business Plan submissions and developed an approach to assessing efficient costs for RIIO-GD3. We have also incorporated proposed adjustments to workloads and associated costs based on the outcome of our engineering review. These are set out in further detail for each category below.

Multiple Occupancy Buildings (MOBs)

- 5.246 MOBs covers costs associated with maintaining, refurbishing, replacing or decommissioning gas network assets that provide gas to buildings with multiple occupants (eg blocks of flats). While the majority of these are domestic customers, commercial customers are also included (eg where multiple shops within a shopping centre are connected to the gas network). Our assessment of MOBs costs covers repex (replacement or refurbishment of assets), capex (connections of new MOBs) and opex (maintenance of existing assets). All three categories are assessed through the non-regression route.

Engineering review

- 5.247 Our engineering review identified a number of areas where we think further clarification is required to provide confidence around the needs case for the proposed investments in RIIO-GD3. In particular, we have noted inconsistencies between different companies in the interpretation of recently updated HSE guidance relating to the use of polyethylene (PE) riser mains in high rise buildings⁶⁸. We understand guidance in relation to GDN replacement of PE riser mains, does not mandate a full replacement programme across all PE assets, but rather should be based on asset condition. Therefore, we propose to remove £3.6m from Cadent's, £2.6m from NGN's and £9.8m from SGNs proposed MOBs costs in RIIO-GD3, relating to the replacement of PE mains in high-rise buildings.
- 5.248 We also propose to remove costs relating to complex distribution systems (CDS) for WWU and SGN amounting to £5.1m and £3.9m respectively. We think these costs are too uncertain to fund through baseline allowances, given uncertainty over need, scope and intervention requirements flagged through engineering

⁶⁸ Buildings over 18 metres in height

review. Additional information on our proposals for CDSs can be found in the UM we propose to reject section and the relevant company annexes.

- 5.249 We propose to remove costs for Cadent's proposed proactive riser replacement, amounting to £105.0m. We propose to only allow reactive works to replace risers that have failed in service, and which cannot be repaired. Our engineering review identified concerns over the justification for Cadent's proposed workloads in RIIO-GD3. See the Cadent Annex for further details.
- 5.250 We propose to allow costs for SGN's proposed valve replacement costs for MOBs, but propose to remove costs totalling £227.1m for other MOBs related activities, including steel riser replacement/refurbishment. Our engineering review identified concerns over the justification for SGN's proposed MOBs workloads in RIIO-GD3. See the SGN Annex for further details.
- 5.251 We propose to partially reject proposals from WWU on its proposal to replace risers on high and medium rise buildings removing associated costs totalling £6.9m. Our engineering review identified concerns over the justification for high rise building (HRB) workloads and medium rise buildings (MRBs), and recommended volume reductions. See the WWU Annex for further details.

Cost assessment review

- 5.252 We assessed RIIO-GD3 costs, volumes and unit rates against historical RIIO-GD1 and RIIO-GD2 data to understand trends over time and differences in costs between GDNs.
- 5.253 Following the application of our engineering assessment and cost review, we propose reductions to submitted MOBs costs of £105.1m for Cadent, £2.6m for NGN, £238.9m for SGN and £11.8m for WWU.
- 5.254 We will continue to work with Cadent, NGN and SGN ahead of Final Determinations to understand efficient levels of funding for replacement of PE risers in RIIO-GD3.

Repex diversions

- 5.255 Diversions are mains replacement or relay work resulting from a GDN being required to re-route sections of the network. Diversions are usually driven by third parties, and the costs are mostly rechargeable to the third party. However, in some instances, the GDNs must bear all or part of the costs.
- 5.256 Two GDNs said they were in favour of continuing with our RIIO-GD2 approach of separately assessing diversions, given the workloads are uncertain.

Engineering review

- 5.257 Our engineering review noted a lack of clarity over the expected scope and volume of repex diversions work in RIIO-GD3. In general, there was a lack of optioneering to support the proposed workload forecasts, with little consideration given to alternative approaches. We propose to remove baseline funding of £23.9m for NGN and £238.4m for Cadent due to uncertainty on scope and timing of the proposed diversions workloads in RIIO-3.

Cost assessment review

- 5.258 We assessed RIIO-GD3 submitted costs, volumes and unit costs against historical RIIO-GD1 and RIIO-GD2 run rates for rechargeable and non-rechargeable diversions. We have proposed adjustments to costs for SGN, where we consider justification for significant increases in average annual costs has not been provided. We propose downward adjustments totalling £8.7m for SGN.

Streetworks

- 5.259 Streetworks relates to activities that enable and support works in the public domain, such as permits and inspections relating to working in the highway. The GDNs proposed a total gross baseline investment of £785.8m in RIIO-GD3.

Cost assessment review

- 5.260 Since networks face varying exposures to chargeable permit and lane rental schemes, we have based our assessment on each network's own average streetworks costs taken between RIIO-GD2 and RIIO-GD3. This 10-year period (2022-26 and 2027-31) includes both actual and forecast data since we consider it to be reflective of current conditions, whilst also reducing the impact of short-term cost volatility. In calculating the average, we have included the cost for permits, lane rentals, suspensions and switch-outs, inspections, administration and productivity.
- 5.261 Due to timing uncertainty over new permit schemes, our assessment of base streetworks costs assumes no new permit schemes in RIIO-GD3. Instead, we propose to retain a specified streetworks cost re-opener to accommodate material additional costs driven by new schemes introduced during RIIO-GD3.
- 5.262 We propose disallowing all costs relating to penalties and charges, as we think these costs are within GDNs' control and are levied by highway authorities due to failure by a GDN or its contractors to comply with agreed permit conditions. These conditions are in place to ensure sites are managed safely and effectively

and there must be a strong incentive on GDNs to comply with these requirements.

- 5.263 We have proposed a total reduction of £109.1m from the submitted costs. This includes a £33.0m reduction for Cadent, £12.2m reduction for NGN, £48.2m reduction for SGN and a £15.8m reduction for WWU. See the relevant company annexes for further details.

Growth governors

- 5.264 The growth governors category relates to the installation of new district and service governors associated with network reinforcement. GDNs proposed a total gross baseline investment of £16.9m in RIIO-GD3 for growth governors.

Engineering review

- 5.265 Two GDNs said growth governors costs can be modelled through the regression rather than separately assessed. However, this option was not considered at this stage as all growth governors workload has been disallowed.

Smart metering

- 5.266 The GDNs are not responsible for installing smart meters but may incur costs for addressing issues and faults upstream of the meter either during or after a smart meter installation. In RIIO-GD2 we estimated based on GDN submissions that interventions were necessary in 2.5% of cases where a smart meter had been installed. These costs are largely associated with opex (Work Management and Emergency), with some capex and repex. There was no EJP submissions associated with this activity.

Cost assessment review

- 5.267 The GDNs have forecast smart metering costs for the RIIO-GD3 period of £12.7m, down from a forecast total of £16.1m for RIIO-GD2. Forecasts of smart metering costs vary across the GDNs for RIIO-GD3, with NGN and WWU not forecasting any expenditure. Cadent has forecast total costs of £5.7m and SGN a total of £7.0m.
- 5.268 We propose to maintain our RIIO-GD2 approach to assessing smart metering costs, continuing to apply a 2.5% intervention rate for each GDN. Applying this assumption results in proposed modelled smart metering costs of £9.1m for RIIO-GD3 (£6.2m for Cadent, £2.9m for SGN). We set out further detail in the company annexes.

Land remediation

- 5.269 Land remediation costs are part of opex and relate to statutory remediation of gasholder and non-gasholder sites, routine site monitoring and maintenance. There were no EJPs submissions associated with this activity.

Cost assessment review

- 5.270 The GDNs have forecast £38.5m of land remediation costs over RIIO-GD3, compared to expected costs of £28.9m in RIIO-GD2. All GDNs have forecast costs in RIIO-GD3, with SGN accounting for the largest share of costs, proposing a total of £23.0m across its two networks. Cadent proposed costs of £5.5m in RIIO-GD3, NGN of £3.2m and WWU of £6.9m.
- 5.271 The majority of SGN's forecast relates to a proposed groundwater legislation change in Scotland requiring the reassessment of 50 previously investigated sites. In justifying these costs, SGN submitted an external report from environmental consultancy Worley, which estimated the cost of land remediation for SGN's sites.
- 5.272 Overall, we consider that forecast land remediation costs are generally in line with historical costs, and large work programmes such as SGN's reassessment of 50 sites are supported by external evidence. Therefore, we propose accepting the GDNs' forecast of £38.5m as our modelled view of land remediation costs in RIIO-GD3.

Statutory Independent Undertakings (SIUs)

- 5.273 SGN owns and operates five independent gas networks in remote parts of Scotland, which are referred to as SIUs. It has forecast £45m of opex in RIIO-GD3, compared with estimated costs of £39.9m for RIIO-GD2.

Engineering review

- 5.274 We propose accepting SGN's forecast cost for SIU opex in RIIO-GD3.

Non-regression analysis summary

- 5.275 Table 29 summarises the outcome of our proposed assessment for non-regression analysis for each GDN in RIIO-GD3.

Table 28: Summary of non-regression analysis by GDN (£m, 2023/24 prices, total for all non-regression costs)

GDN	Total submitted	Total adjustments	Total Ofgem efficient view
EoE	240.7	-112.7	127.9
Lon	338.2	-142.6	195.6

GDN	Total submitted	Total adjustments	Total Ofgem efficient view
NW	147.4	-76.4	71.0
WM	102.9	-44.4	58.6
NGN	135.1	-36.1	99.0
Sc	142.9	-54.9	88.1
So	457.7	-249.9	207.8
WWU	124.0	-24.2	99.8
GD Sector	1,689.0	-741.2	947.8

Questions

GDQ41. Do you agree with our approach to non-regression benchmarking analysis?

Catch-up efficiency challenge

- 5.276 The benchmarking efficiency adjustment ('catch-up efficiency challenge') is applied as a post-modelling adjustment to modelled costs (ie the outputs of both the regression and non-regression benchmarking modelling, but not technical or bespoke assessment).
- 5.277 In RIIO-GD2 we applied a benchmarking efficiency adjustment ('catch-up efficiency') to challenge less efficient GDNs to reach the productivity levels of the more efficient companies. We set the catch-up efficiency challenge at the 85th percentile, allowing a three year glide path from the 75th percentile from the start of the price control. All GDNs with efficiencies below the benchmark will be given a totex allowance based on the efficient benchmark. GDNs whose efficiencies are above the benchmark will be allocated their forecast costs (subject to pre/post and non-regression adjustments).
- 5.278 We propose to maintain the same catch-up efficiency challenge for RIIO-GD2: 85th percentile, on a three year glide path from the 75th percentile over the first three years of RIIO-GD3. We think the statistical performance of our proposed totex model continues to be strong, giving us higher confidence that differences in modelled outcomes are mostly explained by differences in efficiency.
- 5.279 We have continued to improve the detail and consistency of reporting through the RIIO-GD3 BPDTs, further enhancing our confidence in the quality of the input data for our modelling. The type of activities being undertaken by the GDNs in RIIO-GD3 are broadly comparable to those in RIIO-GD2, supporting the

case for maintaining a strong efficiency challenge. All of these factors support setting an ambitious but achievable benchmarking efficiency challenge in RIIIO-GD3.

- 5.280 Currently, three of the eight GDNs are expecting to spend less than their allowances in RIIIO-GD2. This indicates setting the catch-up efficiency at the 85th percentile represents a stretching but achievable level of efficiency.
- 5.281 In RIIIO-GD2 we identified the frontier for each year of the price control based upon analysis of the relative efficiency of each GDN's forecast totex across the forecast period. It is common when applying benchmarking techniques to use historic data both to identify the regression model and also to identify the efficiency frontier. We note that Ofwat has used 'actual' data from the previous 5 years when setting the efficiency frontier for the water companies.
- 5.282 Since we are proposing to use both historic outturn and forecast data within our proposed model specification, we consider it may be appropriate to also use historic data to set the efficiency frontier. We intend to further consider approaches to setting the efficiency frontier, including setting the efficiency challenge using historical data, before finalising our decision at Final Determinations. We welcome input through consultation responses on different approaches to setting the efficiency frontier, including using historical outturn data.

Questions

- GDQ42. What are your views on our proposed approach to applying the catch-up efficiency challenge?
- GDQ43. Do you consider that the efficiency frontier should be set based on historical performance?

Technically assessed costs

- 5.283 We use the term technical assessment to refer to the assessment of costs associated with projects or areas of work which are bespoke in nature and therefore are not suitable for benchmarking.
- 5.284 Bespoke outputs are technically assessed costs relating to a specific licensee or certain GDNs that have a specific licence condition attached (eg PCD). See Chapter 3 for further details on our proposed bespoke outputs for RIIIO-GD3. In this section, we have separated out bespoke outputs from technically assessed costs for clarity. In practice, the assessment approaches used to determine efficient costs are similar across the two categories.

5.285 This section sets out details of our reviews of the various areas we have assessed through technical and bespoke assessment. Our rationale for why we have chosen to technically assess these areas at Draft Determinations is set out in the Exclusions section above.

Technically assessed projects and cost activities

5.286 Table 29 below summarises our proposed approach to funding technically assessed activities in RIIO-GD3. In this section, we provide a general summary of the cost activities we propose to technically assess in RIIO-GD3. We provide further details on technically assessed costs in the Company Annexes, including our rationale for areas proposed by the licensees that we propose not to technically assess, either historically or for RIIO-GD3.

Table 29: Assessment of technically assessed costs (£m, 2023/24 prices)

Network	Submitted allowance	Proposed allowance (excluding ongoing efficiency)	Difference (%)
EoE	137.8	89.0	-35%
Lon	78.3	30.0	-62%
NW	69.9	38.7	-45%
WM	62.8	28.2	-55%
NGN	44.9	24.1	-46%
Sc	87.4	55.9	-36%
So	184.4	105.3	-43%
WWU	167.5	58.5	-65%
All	832.8	429.7	-48%

Cyber

5.287 We have assessed both cyber opex and capex costs through technical assessment for RIIO-GD3. These costs relate to investment and ongoing operating costs for licensees to ensure they are cyber secure and resilient during RIIO-GD3.

5.288 We undertook specialist review of cyber costs led by technical experts. Further information about this review is set out in Chapter 12 of the Core Document. This review directly informed our proposed cost reductions.

Advanced Leakage Detection (ALD)

- 5.289 Advanced leakage detection relates to costs associated with adopting and operating new approaches to proactively detect leaks on the GDNs' networks. This is a new area of baseline costs for RIIO-GD3, with ALD funding in RIIO-GD2 provided through UMs.
- 5.290 Following our technical review of the companies' submissions for ALD, we propose to allow £51.9m within baseline allowances, in line with GDNs proposals. To ensure GDNs are well-positioned to integrate this technology and implement the associated process changes in RIIO-GD3, we have allowed baseline funding of £27.5m for Cadent. £4.9m for NGN, £12.4m for SGN and £7.1m for WWU.

Digital Platform for Leakage Analytics (DPLA)

- 5.291 DPLA includes costs associated with developing, adopting, implementing and using a new data-driven model for identifying leaks on the GDNs' networks. This is a new area of baseline costs for RIIO-GD3, with DPLA funding in RIIO-GD2 provided through the Strategic Innovation Fund (SIF).
- 5.292 We propose to allow Cadent a baseline allowance of £5.1m for DPLA in RIIO-GD3, in line with what it requested, Cadent has led the DPLA SIF project so it has greater certainty on costs and timelines for implementing the DPLA in RIIO-GD3 than the other GDNs. For NGN, SGN and WWU, we are proposing to fund DPLA through a re-opener (see chapter 4 for further details). Therefore, we have allowed no baseline funding for DPLA in RIIO-GD3.

Large rechargeable LTS diversions

- 5.293 LTS diversions occur when sections of the LTS network need to be rerouted. This work is often driven by requests from third parties, and under certain circumstances the costs associated with completing the work can be recharged to those parties.
- 5.294 We propose to maintain the removal of gross costs for large rechargeable LTS diversions gross costs from the regression for RIIO-GD3.
- 5.295 In its Business Plan, Cadent proposed that gross costs for all rechargeable LTS diversions should be removed from the totex regression, regardless of size. We have proposed to keep costs for smaller LTS diversions (ie less than £5m) within the regression model. This is consistent with our RIIO-GD2 approach, which was upheld on appeal at the CMA. The CMA agreed with our approach of including smaller rechargeable LTS diversions within the regression model and using MEAV as the cost driver. We think this approach remains appropriate for RIIO-3.

Iron stubs

- 5.296 Iron stubs are short sections of Tier 1 iron mains connecting to larger diameter parent mains, that were left in-situ during previous phases of the mains replacement programme (prior to the IMRRP). As qualifying Tier 1 mains, they are required to be decommissioned by 2032, under the IMRRP. We accept the needs case for this work to be undertaken during RIIO-GD3, in line with timely completion of the IMRRP.
- 5.297 RIIO-GD2 was the first price control period in which the GDNs began to address their stubs workload. We provided some ex ante baseline funding to SGN and NGN. We provided SGN and Cadent with additional funding to address iron stubs in RIIO-GD2 through a re-opener. WWU has not requested any funding for iron stubs in RIIO-GD2.
- 5.298 All GDNs submitted proposed costs and workloads for iron stubs in RIIO-GD3. Our review of these forecasts raised significant concerns about the consistency and comparability of the proposed unit costs for undertaking remedial work on iron stubs. In particular, there was significant variation in proposed unit costs for decommissioning iron stubs, with SGN's proposed costs in Southern more than twice that of any of Cadent's networks.
- 5.299 Additionally, there were significant inconsistencies in the reporting of different workload types between GDNs. For example, Cadent forecast zero workloads for 'stubs not found',⁶⁹ instances where the GDN identifies the location of a stub, but upon digging down to the pipe, a stub is not found and further intervention (ie decommissioning) is not needed. In contrast, NGN estimates up to 88% of its overall workload would be in this category. There is also notable variation in the techniques each GDN expects to use to decommission stubs, with implications for expected costs.
- 5.300 Given the significant uncertainty and inconsistency in the submitted costs provided by the GDNs, we propose to not include any forecasts for iron stubs costs at Draft Determinations. We have asked GDNs to provide more information on iron stubs as part of their consultation response (see the Tier 1 Iron Stubs PCD section in Chapter 3). We also plan to work with the GDNs through the CAWG to better understand the basis of the iron stubs costs forecasts in their business plans and to develop a final view on the efficient costs of undertaking iron stubs work in RIIO-GD3. Subject to us reviewing the

⁶⁹ This occurs when the GDNs dig at the location of an expected iron stub, but do not find one. This can occur due to incomplete historical records.

additional information requested, our preference is to set two efficient unit costs for undertaking stubs work, one for decommissioning an iron stub and another for instances of 'stub not found'. We will consider setting different unit rates for each GDN, if appropriate.

PSUP capex

- 5.301 GDNs own assets and sites that are designated as Critical National Infrastructure (CNI). The Secretary of State has initiated the Physical Security Upgrade Programme (PSUP), a DESNZ mandated national programme to enhance physical security at CNI sites. The level of security at each site and the type of solution required is determined through the PSUP.
- 5.302 The discrete nature of these investments limits our ability to model costs and benchmark through direct comparison. GDNs supported the continued evaluation of physical security capex costs through technical assessment.
- 5.303 We propose to remove all of Cadent's submitted baseline costs for physical security capex through our engineering review until further information has been provided on asset health and the need for intervention. We are proposing to fund WWU and SGN in line with the costs requested. NGN has not requested any funding for physical security in RIIO-GD3.

Major projects

- 5.304 As part of business plan submissions, companies submitted Engineering Justification Papers (EJPs) in support of their larger capex projects and schemes. We received 15 major project EJPs across all GDNs.
- 5.305 We undertook a technical assessment of costs on 6 discrete capital investment proposals within the LTS, Storage and Entry, and repex categories, with a total proposed gross cost of £107.9m across all GDNs. This stage of our assessment resulted in a proposed total downward cost adjustment of £19.5m.
- 5.306 We based our technical assessment of costs on expert review, typically looking at each project cost input bottom-up. We applied a proportionate level of scrutiny, based on the materiality of the proposed investment costs.
- 5.307 In its business plan, Cadent submitted two proposals that we have technically assessed, the Tinsley Viaduct Diversion and West Winch pipeline. We propose to accept the submitted costs of £28.4m for the Tinsley Viaduct Diversion. Our engineering assessment determined the needs case for the West Winch pipeline not to be justified, and therefore we have removed the proposed £11.3m of funding requested. Further information can be found in the Cadent Annex.

- 5.308 SGN submitted four proposals that we have technically assessed, Full site and system rebuilds, Glenmavis rebuild and rationalisation, Welling PRS full site rebuild and Cams Hall. Based on our technical engineering assessment we have accepted £60.0m of costs through a proposed bespoke PCD for 15 Full Site and System Rebuilds projects across SGNs network. We have disallowed £8.2m of costs where needs case were not justified. Further detail can be found in section 2 of the SGN company annex.
- 5.309 We have not technically assessed any discrete capex investments through technical assessment for WWU or NGN.

Bespoke outputs

- 5.310 Bespoke outputs are individual projects or schemes put forward by the GDNs in their Business Plan with a proposed output attached (eg PCD). They are generally unique to a specific GDN or company. From a cost assessment perspective, we assess them in the same way as technically assessed projects, but there is also an additional policy review of the proposed output, with the final funding decision reflecting the outcome of both of these reviews.
- 5.311 Our proposals on the GDNs' forecast bespoke outputs are summarised in Table 30 below. Detail on our proposals for all bespoke outputs is provided in the Company Annexes. Overall, we propose to exclude £119.6m of forecast incremental expenditure associated with bespoke outputs from our modelling for technical assessment. We have accepted £115.6m of expenditure associated with bespoke outputs.

Table 30: Assessment of bespoke outputs (£m, 2023/24 prices)

Network	Submitted allowance (£m, 2023/24)	Proposed allowance (excluding ongoing efficiency) (£m, 2023/24)	Difference (%)
EoE	0.0	0.0	0%
Lon	113.3	113.3	0%
NW	0.0	0.0	0%
WM	0.0	0.0	0%
NGN	0.0	0.0	0%
Sc	5.2	1.8	-64%
So	1.2	0.4	-65%

Network	Submitted allowance (£m, 2023/24)	Proposed allowance (excluding ongoing efficiency) (£m, 2023/24)	Difference (%)
WWU	0.0	0.0	0%
All	119.6	115.6	-3%

Repex projects

- 5.312 Cadent submitted costs for delivering two bespoke repex projects in RIIO-GD3, namely London Medium Pressure and Grays Medium Pressure. These both involve replacing large diameter, medium pressure mains located in densely populated areas of London. London Medium Pressure is an ongoing project that was started in RIIO-GD1 and is expected to conclude after RIIO-GD3.
- 5.313 We are proposing to fund these projects in line with the costs requested by Cadent. We propose to place a PCD on each project (see Cadent company annex for further details) to protect customers from under delivery in RIIO-GD3.

Intermediate pressure and medium pressure steel services

- 5.314 In its plan, SGN proposed to continue a service replacement programme to address pipes that fall outside of the Health and Safety Executive Iron Mains Risk Reduction Programme where services have no natural driver for replacement.
- 5.315 We propose to allow £2.2m to undertake a replacement of Intermediate Pressure (IP) services and the survey costs for Medium Pressure (MP) services. We are proposing to disallow costs of £4.1m as a more robust needs case including the associated costing is required for Medium Pressure (MP) steel services and end of network services.

Questions

GDQ44. Do you agree with our assessment of technically assessed costs and bespoke outputs?

Ongoing efficiency challenge

- 5.316 We apply an ongoing efficiency challenge to all of totex (ie modelled costs plus technical assessment and bespoke assessment costs). This gives our final view of efficient totex.
- 5.317 For RIIO-GD3, we are proposing to apply OE at 1.0% per annum. See chapter 8 in the Overview document for further details on our proposed approach and

rationale for OE in RIIO3. The GDNs, along with NGT, collectively commissioned a report on OE from consultancy Economic Insight to inform their proposed RIIO-GD3 positions on OE. All of the GDNs submitted a proposed OE challenge of 0.5% per annum for RIIO-GD3, aligning with the recommendations of this report.

5.318 Table 31 below compares our proposed efficient totex for RIIO-GD3 with the GDNs' submitted costs, inclusive of their proposed OE target.

Table 31: Comparison of GDN submitted costs and Ofgem efficient costs including OE (£m, 2023/24 prices)

GDN	Submitted totex, including OE at 0.5% p.a.	Ofgem efficient totex, including OE at 1.0% p.a.	Difference, %
EoE	2,546	2,092	-17.8%
Lon	2,139	1,677	-21.6%
NW	1,808	1,397	-22.7%
WM	1,329	1,116	-16.0%
NGN	1,791	1,568	-12.5%
Sc	1,310	1,051	-19.7%
So	3,125	2,379	-23.9%
WWU	2,190	1,502	-29.7%
Total	16,185	12,782	-21.0%

Disaggregation of allowances

5.319 The totex model calculates a totex allowance from a range of drivers. It is necessary to disaggregate specific allowances for certain activities within the price control, primarily where there is a specific mechanism associated with an activity (ie PCD or volume driver). To determine these allowances, we have disaggregated totex allowances for each network.

5.320 We have maintained our existing approach to disaggregating totex allowances for RIIO-GD3. This uses a combination of top-down and bottom-up approaches to derive allowances for PCDs and volume drivers. We propose to continue using weights calculated from submitted net costs adjusted for exclusions and reclassifications to disaggregate allowances.

Questions

GDQ45. What are your thoughts on our approach to disaggregating cost allowances?

Totex Incentive Mechanism (TIM)

- 5.321 The TIM is designed to ensure that GDNs and consumers appropriately share the risk of overspending and share any cost efficiencies that can be realised. It also acts as an incentive on GDNs to deliver cost efficient projects, by exposing them to the impacts of cost overruns.

Background

- 5.322 Cost sharing mechanisms in infrastructure contracting and price controls for regulated monopolies are commonplace. These are used to ensure that the parties (in this case consumers and the GDNs) both benefit from in-period efficiencies, ie share any underspend against allowances, and also share the risk of any overspending. In our RIIIO price controls this mechanism is referred to as the Totex Incentive Mechanism (TIM).
- 5.323 We have typically used the TIM primarily to drive cost efficiency and thus lower consumer bills – based on an assumption that the majority of costs are within a network company's control and that at time of setting allowances there was reasonable confidence that these were reflective of the efficient cost of carrying out activities. In RIIIO-GD2 TIM rates were: 50% for Cadent, SGN and WWU, and 49%⁷⁰ for NGN.
- 5.324 In our SSMD we set out that for RIIIO-GD3 "we expect to adopt a qualitative and quantitative assessment of relevant factors, rather than mechanically derive the TIM" and "we advise companies that using a sharing factor in the range of 20-50% is plausible."
- 5.325 In their Business Plans submissions all GDNs assumed a TIM sharing factor of 50%, for the purpose of running financial modelling scenarios. The GDNs did not provide further information or proposals on TIM.

Consultation position and rationale

- 5.326 We propose to set the TIM at 50% for all GDNs in RIIIO-GD3. We think this results in an appropriate balance of risks between GDNs and customers and retains a strong incentive for GDNs to deliver cost efficient projects.
- 5.327 In general, the majority of the activities the GDNs expect to undertake in the RIIIO-GD3 are well understood, repeatable and predictable. This means companies should have a strong understanding of their cost base and be well

⁷⁰ NGN receives 49% of any underspend resulting from outperformance, with the consumer receiving 51%.

placed to manage delivery and procurement risks. We think a 50% sharing factor provides a suitably strong incentive to encourage companies to seek cost efficiencies and limit cost overruns against this backdrop.

- 5.328 We propose to apply the same sharing factor to each company for RIIO-GD3. While there are some minor differences between the scope and mix of work and outputs the GDNs expect to deliver in RIIO-GD3, we do not think these result in significant differences in risk profile between companies, or that they are sufficiently material to warrant the application of different TIM rates.

Questions

GDQ46. Do you agree with our proposed TIM sharing factor?

Business Plan Incentive

Business Plan Incentive - Stage B

- 5.329 This section sets out the approach and outcome of the assessment for gas distribution companies for Stage B of the Business Plan Incentive (BPI). Further details on company performance against Stage B of the BPI are set out in the company annexes. For information on what the BPI is and how it is assessed, see the Overview Document.

Network level results

- 5.330 Table 32 summarises the result of the BPI Stage B assessment for the GDNs, showing the final output in basis points of RoRE.

Table 32: Network level results for the gas distribution sector for Stage B of the BPI (bps of RoRE)

Network	Stage B – Comparative	Stage B- Bespoke	Total
EoE	-7.13	0.72	-6.42
Lon	-8.67	1.30	-7.36
NW	-4.29	0.34	-3.95
WM	3.98	0.44	4.43
Sc	-5.23	0.15	-5.08
So	-9.34	0.07	-9.26
NGN	37.33	0.28	37.61
WWU	-6.22	-0.33	-6.55

Assessment methodology

- 5.331 Stage B assesses whether the costs submitted as part of the business plan are adequately justified and efficient. We use two separate assessment methodologies, one for costs which are assessed comparatively, and one for more bespoke costs. The overall result for Stage B corresponds to the weighted average of the outcomes from the comparative and bespoke assessment methodologies, as we set out in our SSMD.⁷¹
- 5.332 There are two categories of comparatively assessed costs:
- totex is assessed by econometric modelling, and
 - separate comparative assessment using non-regression benchmarking approaches. For RIIO-GD3, we propose this approach for assessing multiple occupancy buildings (MOBs), streetworks, diversions, land remediation, and smart metering.
- 5.333 We consider all costs assessed through technical assessment (including bespoke outputs) to be 'bespoke costs' in the context of the BPI methodology.

Comparatively assessed costs

- 5.334 Efficiency scores for totex are estimated based on the outputs of our econometric modelling. For separately assessed costs, a GDN's efficiency score is determined by the ratio between its normalised submitted costs and the modelled costs, across all years of RIIO-3 price control period. We have applied this assessment at the aggregate level, combining the costs for each of the activities assessed through this approach and then calculating the efficiency score.
- 5.335 For the two categories of comparatively assessed costs, GDNs' BPI Stage B score is determined by their own efficiency scores, relative to the efficiency benchmark of the GD sector. The efficiency benchmark is set at the 85th percentile of the range of GDNs' efficiency scores. This is in line with the level of efficiency catch-up target for RIIO-3.
- 5.336 BPI scores are derived separately for totex assessed by econometric models and separately assessed costs. The weighted average BPI reward or penalty for comparative costs are presented in Table 32 where the weights are calculated based on normalised submitted costs of the two categories.

⁷¹ RIIO-3 Sector Specific Methodology Decision - Overview Document
https://www.ofgem.gov.uk/sites/default/files/2024-07/RIIO_3_SSMD_Overview.pdf

Bespoke costs

- 5.337 The reward or penalty for bespoke costs is based on an in-the-round assessment of the quality of the justification submitted for each bespoke cost activity. Where a proposal or commitment has not been accepted, the costs associated with it will not be assessed in Stage B. This is to avoid overlap with Stage C.
- 5.338 The efficiency of submitted costs has been assessed on its own merit as part of our cost assessment approach. Therefore, the Stage B assessment does not apply a mechanistic quantitative assessment to bespoke costs.
- 5.339 Our assessment considered three criteria: quality of cost evidence, justification of unit cost efficiency and justification of volume efficiency. In some instances, where costs were not specifically tied to workload volumes, the latter two criteria were considered not applicable. The scores for each applicable criterion were equally weighted in the assessment.
- 5.340 BPI rates are derived separately for each bespoke cost area. Scoring of individual bespoke costs for each network is set out within company documents. The reported BPI reward or penalty for bespoke costs in Table 32 are the average BPI reward or penalty weighted by each GDN's normalised submitted costs.

6. Your response, data and confidentiality

All proposals published as part of these documents are draft proposals, subject to consultation. We will publish our decisions on the RIIIO-3 price controls in our Final Determinations later this year. We will implement our Final Determinations by modifications to the companies' licence conditions, after further consultation on licence drafting.

Consultation stages

- 6.1 Table 33 below sets out the key stages for this consultation and how we will progress from Draft Determinations to Final Determinations

Table 33: Consultation Stages

Stage	Date
Consultation Open	01/07/2025
Consultation closes (awaiting decision). Deadline for responses	26/08/2025
Final Determinations (including publication of consultation responses)	Winter 2025

How to respond

- 6.2 We want to hear from anyone interested in this consultation. Please send your response to RIIO3@ofgem.gov.uk.
- 6.3 We've asked for your feedback in each of the questions throughout. Please respond to each one as fully as you can.
- 6.4 We will publish non-confidential responses on our website at www.ofgem.gov.uk/consultations.

Your response, your data and confidentiality

- 6.5 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.
- 6.6 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.

- 6.7 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 2.
- 6.8 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.

General feedback

- 6.9 We believe that consultation is at the heart of good policy development. We welcome any comments about how we've run this consultation. We'd also like to get your answers to these questions:
1. Do you have any comments about the overall process of this consultation?
 2. Do you have any comments about its tone and content?
 3. Was it easy to read and understand? Or could it have been better written?
 4. Were its conclusions balanced?
 5. Did it make reasoned recommendations for improvement?
 6. Any further comments?

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

How to track the progress of the consultation

You can track the progress of a consultation from upcoming to decision status using the 'notify me' function on a consultation page when published on our website. Choose the notify me button and enter your email address into the pop-up window and submit.

[ofgem.gov.uk/consultations](https://www.ofgem.gov.uk/consultations)

Notify me +

Would you like to be kept up to date with *Consultation*
name will appear here? subscribe to notifications:

Email*

Submit >

Once subscribed to the notifications for a particular consultation, you will receive an email to notify you when it has changed status. Our consultation stages are:

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

Appendix 1 – BAU Vulnerability and CO Safety activities to be funded through baseline allowances

Summary of BAU activities

A1.1 We have decided to fund the BAU vulnerability and CO safety activities outlined in Table 34 through baseline allowances. We have included a high-level summary to outline why we consider these activities to be both BAU and suitable for funding through baseline allowances.

A1.2 We provided guidance on these activities to the GDNs in the autumn of 2024 and they submitted costs in their business plans based on this list.

Table 34: RIIO-GD3 BAU vulnerability and CO safety activities to be funded through baseline allowances

Activity Area	Specific Activity	Comment
Campaigns and education	Campaigns on PSR	GDNs have a LO to register eligible customers for the PSR. Therefore, we will consider proposals for campaigns on the PSR in baseline allowances as a core BAU activity.
Campaigns and education	Education on PSR	GDNs have a LO to register eligible customers for the PSR. Therefore, we will consider proposals for education initiatives on the PSR in baseline allowances as a core BAU activity.
CO	Additional checks following CO reports and/or alarms	This is an immediate gas safety issue. As such, we will consider proposals for additional checks following CO reports and/or alarms in baseline allowances as a core BAU activity.
CO	Annual CO awareness campaigns	We recognise the importance of increasing CO awareness through campaigns, and the overlap between these campaigns and other core areas of the GDNs' activities and responsibilities. Therefore, we will consider proposals for annual CO awareness campaigns in baseline allowances as a core BAU activity.

Activity Area	Specific Activity	Comment
CO	CO education (schools and wider community)	We recognise the importance of increasing CO awareness through education, and the overlap between these education initiatives and other core areas of the GDNs' activities and responsibilities. Therefore, we will consider proposals for CO education (schools and wider community) in baseline allowances as a core BAU activity.
CO	Provision of CO/specialist alarms	The provision of CO/specialist alarms to eligible households is now considered BAU and is a means by which the GDNs can directly improve consumer safety while undertaking their core activities and functions. Therefore, we will consider proposals for the provision of CO/specialist alarms in baseline allowances as a core BAU activity. We will work with the GDNs and stakeholders to review eligibility requirements and consider updating the VCMA Governance Document accordingly.
Connections	Funded alterations for access to the Emergency Control Valve (ECV) and/or meters	The GDNs have a LO related to funded alterations for access to ECV and/or meters and this is already considered BAU. This includes situations where the householder cannot access the ECV and/or meter due to physical restrictions or other vulnerability needs. We will continue to consider proposals for these activities in baseline allowances as a core BAU activity.
Measurement and eligibility	Eligibility checks	GDNs undertake eligibility checks for a range of BAU and VCMA projects. We consider it may be more efficient to resource these checks internally rather than through external organisations. Therefore, we will consider proposals for eligibility checks in baseline allowances as a core BAU activity.
Measurement and eligibility	Maintenance and	The SROI tool is required for the GDNs to deliver evaluation elements of the price control. Therefore,

Activity Area	Specific Activity	Comment
	development of Social Return On Investment (SROI) tools for BAU and VCMA evaluation	we will consider proposals for its maintenance and development in baseline allowances as a core BAU activity. We will work with the GDNs to set expectations on what maintenance and development is required in RIIO-GD3.
Memberships and accreditation	Memberships (including British Standards Institution/ International Organization for Standardization accreditation of inclusive services) and events	We recognise there can be benefits from the GDNs' staff having relevant accreditations. Therefore, we will consider proposals for memberships and events in baseline allowances as a core BAU activity.
Personalised welfare	Including alternative heating, cooking, hot water, food and accommodation	These activities are related to legislative obligations under GSOP 3 and (for most GDNs) are already funded through as BAU through baseline allowances. Therefore, we will consider proposals for personalised welfare in baseline allowances as a core BAU activity.
Safeguarding services	Including locking cooker valves, easy assist ECVs, translations apps for engineers	Locking cooker valves, easy assist ECVs and translation apps for engineers have been part of the GDNs' BAU for many years. Therefore, we will consider proposals for only these three specific activities in baseline allowances as a core BAU activity. Other safeguarding services could, if eligible, be funded through the VCMA.
Training	Internal training of customer	GDNs should already be providing specific internal training to customer facing employees, including on

Activity Area	Specific Activity	Comment
	facing employees	issues related to specific issues of vulnerability, as part of their obligations to meet the needs of their customers. We will consider proposals for the internal training of customer facing employees in baseline allowances as a core BAU activity.
Vulnerable customer support	Dedicated teams to support customers during works and triage of engineers referrals for support	These activities are directly related to the GDNs' core roles and responsibilities, and the GDNs employ dedicated staff to work on this area. Therefore, we consider this to be BAU and suitable for funding through baseline allowances.

Appendix 2 – 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. i.e. 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 project is closed.

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](#)".