

Appendix to the RII0-2 Gas Distribution Annual Report: 2023/24

Executive Summary

In July of each reporting year, each gas distribution network (GDN) business must submit information outlining the actual costs incurred up to 31 March of that year and forecast costs to the end of the price control period.

Our annual report, published alongside this document, offers an overview of how the GDN businesses are performing against the outcomes and metrics set by the RIIO (Revenue = Incentives + Innovation + Outputs) framework. It also analyses performance trends over the first three years of RIIO-2 and assesses the GDNs' current performance expectations for the five-year period.

This document provides additional detail on our assessment of the GDNs' performance based on the information submitted in the 2023/24 reporting year.

Structure of this report

- **Appendix One** provides further detail of GDNs' performance against the annual incentive targets and output delivery performance.
- **Appendix Two** presents our overview of each GDN's expenditure, comparing it to the adjusted allowance per cost category over the first three years of RIIO-2. It also includes projections for anticipated performance during the remaining years of the five-year price control period.
- **Appendix Three** provides further details on PCD projects, including the project description and output, delivery date, project allowance, current status, and company information.

All financial values in the report are in 2018-19 price base unless stated otherwise.

If you require additional performance data, please refer to the supplementary datafile which is published along with this report.

Information on our current assessment of the Return on Regulated Equity¹ was separately published in February 2025.²

¹ The financial return achieved by shareholders in a licensee during a price control period from its outturn performance.

² This report does not provide any information on the Network Asset Risk Methodology outputs which is provided through a separate regulatory submission. This report is also separate to the 14 February 2025 publication which provides a view of regulatory financial performance (RFP): <https://www.ofgem.gov.uk/publications/riio-2-regulatory-performance-data-2024>.

Appendix one: Output and incentive performances

In this appendix, we provide a deeper examination of outputs that are subject to incentives and provide an overview of GDN's activity and expenditure related to various social and environmental incentives, with a particular focus on the 2023/24 Regulatory Year. We also provide a brief overview of the cumulative revenue rewards and penalties accrued by each GDN over the first three Regulatory Years for each incentive area.

Output Performance

The Output Delivery Incentive (ODI) package for the GDNs has been designed to encourage licensees to deliver outputs and service quality that consumers and stakeholders want to see.

Our assessment for the above ODIs is measured against expectations set out in the licence and/or detailed in the Final Determinations (FD) document, including targets which have associated rewards/penalty or other expectations against which we hold GDNs to account.

Common incentive activities and outputs are also grouped into three broad delivery categories³:

- Meeting the needs of consumers and network users. This is related to meeting the needs of consumers and network users, including those in vulnerable situations.
- Maintaining a safe and resilient network. This is activity that helps GDNs to deliver a safe, resilient network that is both efficient and adaptable to change.
- Delivering an environmentally sustainable network. This is related to delivering an environmentally sustainable network that will apply to the GDNs in RIIO-GD2.

Table A1.1 provides an overview of applicable ODIs and an initial summary of GDN group performance against each area for the 2023/24 Regulatory Year.

Table A1.1: Output Delivery Incentives and other output mechanisms applicable to all GDNs

Outputs	Purpose	Delivery Category	Performance Summary
Customer Satisfaction Survey	A financial reward/ penalty output to incentivise GDNs to uphold high standards of customer service. The ODI applies to three areas; Connections, Planned and Unplanned work.	Meeting the needs of consumers and network users	All GDNs outperformed in each of the three years to date for the Connections and Planned interruption element of the ODI. With the exception of Cadent London and SGN Southern, all other regions exceeded target in each of the three areas across all years of RIIO-2 to date
Complaints Metric	A financial penalty only to incentivise GDNs to maintain good performance in their handling of complaints.	Meeting the needs of consumers and network users	All GDNs outperformed the minimum target in each of the three years to date for the Complaints Metric of the ODI, avoiding any penalty.
Emergency Response Licence Obligation	Requires GDNs to attend 97% of reported escapes within one hour	Meeting the needs of consumers and network users	All GDNs reported that all uncontrolled and controlled escapes were responded to within their allowed timescales for the 12 months

³ Details in this section are ordered according to these delivery categories.

	for uncontrolled escapes and two hours for controlled escapes ⁴		starting on 1 April 2023 ⁵ . NGN's performance has remained particularly high.
Unplanned Interruption Mean Duration ODI	A financial penalty only to protect consumers by ensuring that GDNs' performance on the duration of unplanned interruptions does not deteriorate.	Meeting the needs of consumers and network users	SGN Scotland, WWU and NGN outperformed their minimum target level. However, SGN Southern faced challenges in its region and exceeded the maximum penalty threshold.
Unplanned Interruption Mean Duration ODI (Cadent only)	A financial penalty only on the duration of unplanned interruptions across Cadent's networks.	Meeting the needs of consumers and network users	All Cadent's networks outperformed the minimum performance level for unplanned interruptions in Multiple Occupancy Building (MOB)s and non-MOBs in 2023/24.
Vulnerability and Carbon Monoxide Allowance (VCMA)	A use it or lose it (UIOLI) allowance to enable GDNs to spend on projects focused on vulnerability and carbon monoxide safety initiatives that go beyond business-as-usual activities.	Meeting the needs of consumers and network users	All GDNs are making use of this UIOLI allowance and are forecasted to use all of it by the end of RIIO-2.
Shrinkage Management	A financial reward/ penalty output to incentivise GDNs to reduce shrinkage of gas from their pipe networks.	Delivering an environmentally sustainable network	WWU and SGN have achieved consistent rewards throughout RIIO-2. NGN has stabilised their shrinkage levels and achieved a reward in 2023/24, their first in RIIO-2. Overall, Cadent has reduced shrinkage levels, but individual licensee minimum performance level varies.
Business Carbon Footprint (BCF)	A reputational incentive to incentivise GDNs to reduce their BCF comprising of scope 1 and 2 emissions excluding gas shrinkage, tonnes of carbon dioxide equivalent emissions (tCO ₂ e)	Delivering an environmentally sustainable network	During the RIIO-2 FD, we lacked sufficient data to establish target baselines for the GDNs in this output. Consequently, they were allowed to set their own targets and reporting methodologies for RIIO-2. Both WWU and NGN had seen increased Scope 1 and 2 emissions since a return to BAU following the Covid-19 pandemic but this year both GDNs saw a stabilisation and improvement in their performances. SGN and Cadent have also seen good overall performance in this incentive this year.

Annual output targets

As part of RIIO-2, we set a range of outputs that the GDNs have committed to deliver. It focuses on the common outputs (which apply to all GDNs). If GDNs met their annual output targets they could be eligible for incentive payments, whereas failure to meet their annual output targets could result in a financial penalty.

The following section offers an overview of output performance and indicates the corresponding reward or penalty, where applicable, for the applicable time period (i.e. either the 2023/24 Regulatory Year or the full RIIO-GD2 period).

⁴ Standard Special Conditions D10 2(h).

⁵ Further analysis has shown that there were individual months where some GDNs failed to meet this obligation despite their annual average performance being over 97%. This is discussed later in the report.

The presentation is organised according to the three delivery categories outlined in the previous section (consumers, resilience and sustainability).

Table A1.2 : GDN's current view on output performance

Green means 'Met': annual performance on target / ahead of target or above score.

Orange means 'Near': partially missing annual target / partially behind target or below score.

Red means 'Not met': failed to achieve annual target / substantially behind target or below score.

GDN	Network	Meeting the needs of consumers and network users: 2023/24 view	Maintaining a safe and resilient network: Five-year view ⁶	Delivering an environmentally sustainable network: 2023/24 view
Cadent	East of England			***
	London			
	North West			
	West Midlands			***
NGN	NGN			
SGN	Scotland			
	Southern	*	**	
WWU	WWU			

*SGN's Southern network exceeded the maximum penalty in the Unplanned interruptions ODI. This was due to an interruption affecting a MOB and additional complexity in restoring supplies in such buildings.

** SGN's Southern network are currently forecast to underdeliver across RIIO-GD2 against its Repex Tier 1 Mains PCD.

*** Cadent East of England and Cadent West Midlands were penalised for their performance against the shrinkage incentive for the first time this year due to higher than average system pressures in 23/24 when compared with 22/23.

The following section offers a comprehensive analysis of each key output, encompassing company performance across all three categories.

Meeting the needs of consumers and network users

This section sets out each of the outputs common to the GD sector related to meeting the needs of consumers and network users, including those in vulnerable situations.

Customer satisfaction survey (CSS)

The purpose of this incentive is to maintain good customer service and to reward GDNs that deliver exceptional performance in this space whilst any substandard provision will be penalised. The benefit of this incentive to wider consumers is that GDNs are encouraged to deliver exceptional service throughout the price control.

This incentive is financial in nature (an ODI-F) and has both a reward and penalty element.

The targets for the CSS have an inbuilt deadband (scores within this deadband receive neither a reward nor a penalty) as well as a cap and collar mechanism (where scores above the cap receive the maximum reward and scores below the collar receive the maximum penalty).

The incentive takes into account three elements each with their own target scores:

⁶ Due to the nature of the outputs that fall within this delivery category, our overview of performance considers the position across the full price control period.

- Connections: Target = 8.38/10. This relates to any request for, and the delivery of, any work to provide or modify a connection to the gas network.
- Planned work: Target = 8.51/10. Planned work is an interruption that occurs as a result of planned non-contractual work, other than those interruptions occurring as an inadvertent consequence of such work.
- Unplanned work: Target = 9.37/10. Unplanned work is a non-contractual interruption resulting from unplanned activities, or as an inadvertent consequence of planned work.

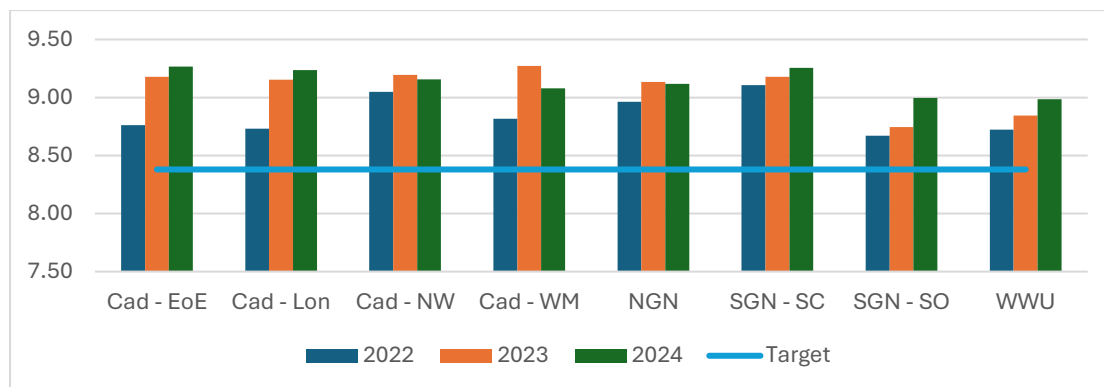
Each GDN must carry out surveys on each of the above elements on a weekly/monthly basis. The results are submitted to us through the annual regulatory submission. Each survey captures the opinions of a sample of customers who have interacted with the GDN's customer service in areas such as emergency response, connection services, and repair/planned work.

The performance of each GDN licensee is detailed below for each of the elements noted above.

Connections

This incentive element focuses on work to provide or modify connections to the gas network. It seeks to encourage GDNs to deliver an excellent customer experience throughout the connections journey and seeks to incentivise companies to improve the service delivered.

Figure A1.1: Customer Satisfaction – Connections performance against target (2023/24)



For the third Regulatory Year (denoted in green above) all GDNs outperformed the target of 8.38 regarding their customer satisfaction on connection matters.

Only one licensee received a score below 9/10 (although the score remains comfortably above target), demonstrating that GDNs are achieving high levels of customer satisfaction in the area of connections.

We are encouraged that licensees have enhanced their performance in customer satisfaction related to connections over the course of this price control period. Comparing this year's performance to the first year of the price control, we observe a significant improvement across all licensees. For those licensees who performed best in the second regulatory year there are some examples of minor regression in scores, though all remain well above the target set for this price control period.

The overall trend of increasing scores throughout the price control period demonstrates that both our incentive mechanisms and the strategies of the licensees have been successful to date in improving customer satisfaction. We expect licensees to maintain this performance level through to the end of the current price control period.

As a result of these performance scores, all regions have received a reward in each of the three Regulatory Years to date.

Table A1.3: CSAT Connection performance scores 2022-2024

	2021-22	2022-23	2023-24
Cadent - EoE	8.8	9.2	9.3
Cadent - London	8.7	9.2	9.2
Cadent - NW	9.0	9.2	9.2
Cadent - WM	8.8	9.3	9.1
NGN	9.0	9.1	9.1
SGN – Scotland	9.1	9.2	9.3
SGN – Southern	8.7	8.7	9.0
WWU	8.8	8.8	9.0

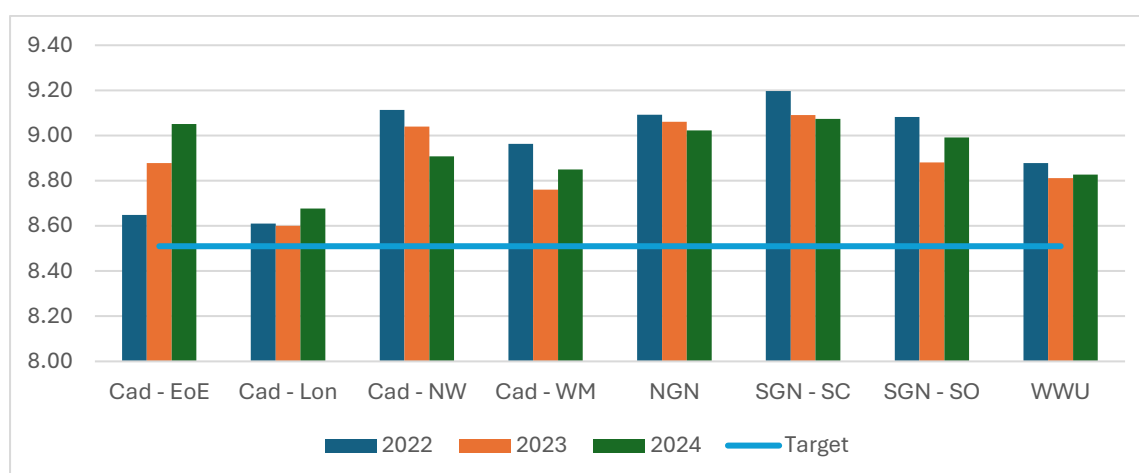
Table A1.4: CSAT Connection financial reward/penalty (£m) 2022-2024

£m	2021-22	2022-23	2023-24
Cadent - EoE	0.1	0.7	0.8
Cadent - London	0.1	0.5	0.6
Cadent - NW	0.4	0.5	0.5
Cadent - WM	0.1	0.4	0.3
NGN	0.3	0.5	0.4
SGN – Scotland	0.3	0.4	0.4
SGN – Southern	0.0	0.1	0.5
WWU	0.2	0.2	0.3

Planned work

This incentive element focuses on planned interruptions caused by scheduled activities to the gas network. It seeks to reward GDNs for exceptional performance and notable service improvements.

Figure A1.2: Customer Satisfaction – Planned work performance against target (2023/24)



For the third Regulatory Year all licensees are exceeding their target score regarding customer satisfaction on planned works.

Comparing 2023/24 to previous years of the price control period, we observe varied outcomes for different licensees, largely based on their initial satisfaction scores. Licensees with the highest satisfaction in the first regulatory year generally show a decrease in scores, though these remain well above the target. Conversely, licensees with the lowest initial satisfaction scores have shown improvement by 2023/24.

There are some licensees who have seen a year-on-year decrease throughout the price control regarding their customer satisfaction scores relating to planned works. Whilst the scores remain above the target, we will closely monitor to address the trajectory of diminishing satisfaction observed.

As a result of GDN's performance scores, all regions have received a reward or were within the deadband, meaning there was no penalty applied.

Table A1.6: CSAT Planned interruption performance scores 2022-2024

	2021-22	2022-23	2023-24
Cadent - EoE	8.6	8.9	9.1
Cadent - London	8.6	8.6	8.7
Cadent - NW	9.1	9.0	8.9
Cadent - WM	9.0	8.8	8.9
NGN	9.1	9.1	9.0
SGN – Scotland	9.2	9.1	9.1
SGN – Southern	9.1	8.9	9.0
WWU	8.9	8.8	8.8

Table A1.7: CSAT Planned interruption reward/penalty (£m) 2022-2024

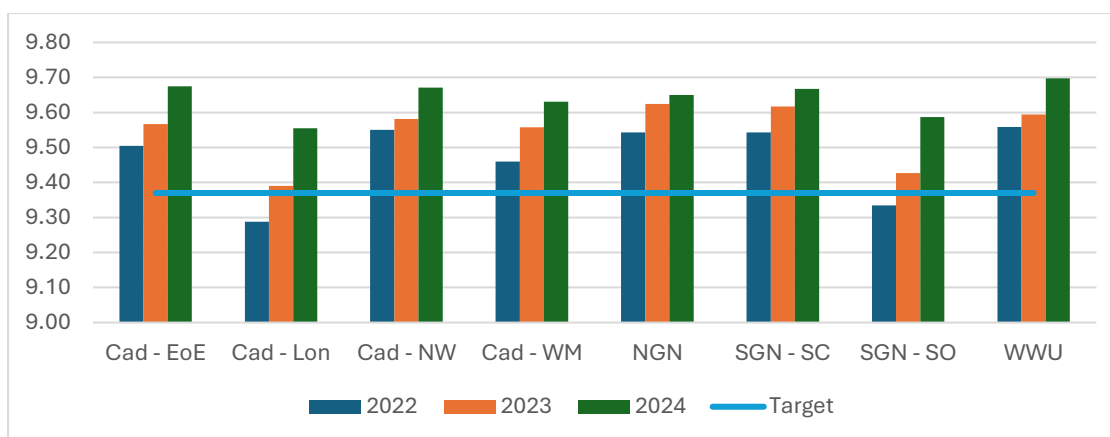
£m	2021-22	2022-23	2023-24
Cadent - EoE	0.0	0.4	0.7
Cadent - London	0.0	0.0	0.0
Cadent - NW	0.6	0.5	0.3
Cadent - WM	0.3	0.1	0.2

NGN	0.6	0.5	0.5
SGN – Scotland	0.5	0.4	0.4
SGN – Southern	0.9	0.4	0.7
WWU	0.3	0.2	0.2

Unplanned work

This incentive element focuses on work associated with unplanned interruptions resulting from unplanned activities on the gas network. It seeks to encourage good performance in responding to and resolving unplanned interruptions and provides penalty against a small range of work (recognising the difficulties caused by the unplanned nature of the work).

Figure A1.3: Customer Satisfaction – Unplanned interruption performance against target (2023/24)



The figure shows that in 2023/24 all GDNs exceeded their target performance regarding Unplanned Interruption. The majority of licenses are receiving scores above 9.6/10 in this area which demonstrates strong performance when sudden interruptions occur.

We are encouraged to observe year-on-year performance improvements by all licensees in the area of Unplanned Interruptions throughout the price control period. This consistent progress highlights the investment and focus companies have dedicated to this crucial area. We encourage licensees to continue building on these improvements for the remainder of RIIO-2.

As a result of the performance scores across all three years of the RIIO-2 price control to date, all regions have either received a reward or remained within the deadband, meaning no penalties were applied.

Table A1.8: CSAT Unplanned interruption performance scores 2022-2024

	2021-22	2022-23	2023-24
Cadent - EoE	9.5	9.6	9.7
Cadent - London	9.3	9.4	9.6
Cadent - NW	9.5	9.6	9.7
Cadent - WM	9.5	9.6	9.6
NGN	9.5	9.6	9.6
SGN – Scotland	9.5	9.6	9.7
SGN – Southern	9.3	9.4	9.6
WWU	9.6	9.6	9.7

Table A1.9: CSAT Unplanned interruption reward/penalty (£m) 2022-2024

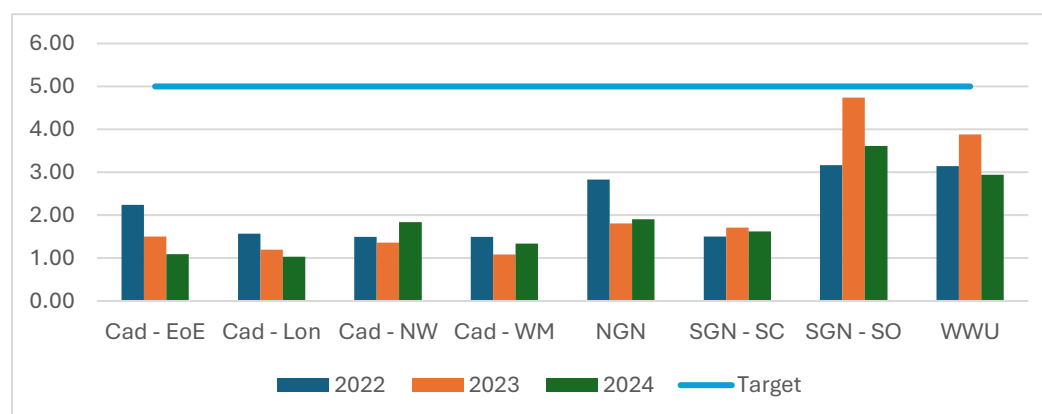
£m	2021-22	2022-23	2023-24
Cadent - EoE	0.5	0.8	0.9
Cadent - London	0.0	0.0	0.5
Cadent - NW	0.5	0.6	0.6
Cadent - WM	0.4	0.4	0.5
NGN	0.5	0.6	0.6
SGN – Scotland	0.4	0.5	0.5
SGN – Southern	0.0	0.0	1.0
WWU	0.6	0.6	0.6

Complaints Metric

The Complaints Metric is an important part of our Customer Satisfaction measures and focuses on how companies deal with complaints.

A complaint is defined as any expression of dissatisfaction made to an organisation regarding its products, services, or how it handled a previous complaint. We ask GDNs to record and report complaints related to their regulated products and services. These complaints, which may be covered by other redress mechanisms, must be forwarded to the appropriate party for resolution through the redress scheme.

The complaints metric is a financial incentive that is penalty only. To date, all GDNs have exceeded the target set and as such **no penalties** have been applied in RIIO-GD2.

Figure A1.4: Complaints Metric – performance against target (2023/24)

The incentive is constructed according to the following weightings:

- Complaints unresolved in one working day: 10%
- Complaints unresolved in 31 working days: 30%
- Repeat Complaints: 50%
- Energy Ombudsman decisions against the GDN as a percentage of total complaints: 10%

The target for the Complaints Metric is to record scores below 5. For the 2023/24 Regulatory Year all licensees are below the target score demonstrating a good level of performance when it comes to complaints handling.

Performance is varied across different licensees with SGN-Southern and WWU recording scores which are less positive than other licensees, through these scores are still substantially better than the target set.

When reviewing performance over the course of the price control we see high variability. While overall performance has improved, some licensees have shown relatively consistent performance across all three years of the price control.

SGN – Southern and WWU had below average performance in the second regulatory year of the price control (though still within the set targets), however this has improved substantially in the third regulatory year, and we are encouraged that measures have been taken to address the performance against the Complaints Metric.

We believe there is room for improvement for many licensees, in some instances better scores have been recorded in previous years and we encourage licensees in this situation to review their practices to ensure no degradation of performance continues. For the licensees that are performing worst in this metric we are pleased to see a substantial improvement for this Regulatory Year and encourage these licensees to continue on this trend to achieve parity of performance with others regarding the Complaints Metric.

Emergency Response Licence Obligation⁷

Emergency response time is a primary measure under the Maintaining a safe and resilient network output category. This obligation has been continued from RIIO-GD1.

A 97% response standard was set for the GDNs as part of their licence obligations (Standard Special Conditions D10 2(h)). This standard required GDNs to attend 97% of reported escapes within one hour for uncontrolled escapes and two hours for controlled escapes.

In the previous Regulatory Year (2022/23), SGN Scotland, SGN Southern, Cadent London, and Cadent North-West missed the target for controlled escapes, while Cadent London, North-West, and SGN Southern also missed the target for uncontrolled escapes. These are shown in Figures 5 and 6 below.

⁷ Emergency Response is a licensing obligation that mandates GDNs to adhere to specific standards. Failure to meet these standards constitutes a breach of the licence, which may result in Ofgem initiating enforcement action.

Additional information received from the affected GDNs revealed that several failed to respond to 97% of escapes within the allowed timescales during a particular time period (November and December 2022), despite meeting the annual average threshold.

As a result, we opened investigations on 29 August 2024 into Cadent and SGN’s compliance with their obligations under the gas transporter licence with regards to timely attendance at reported gas escapes. This work is ongoing, and the opening of these investigations does not imply that we have made any findings about non-compliance.

In the current Regulatory Year (2023/24), all GDNs reported responding to uncontrolled and controlled escapes within allowed timescales over 97% of the time on average. This was an improvement for SGN Scotland, SGN Southern, Cadent London, and Cadent North-West. This is shown in Figures 5 and 6 below.

In contrast, NGN and WWU’s performance has remained consistently high throughout the RIIO-2 period.

Figure A1.5: Controlled escapes responded to within two hours (2021 - 2024)

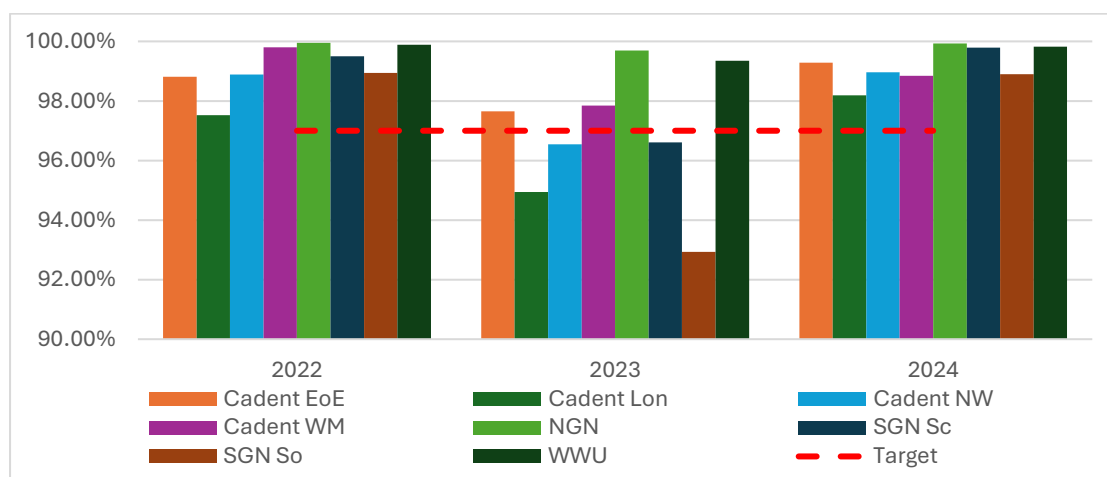
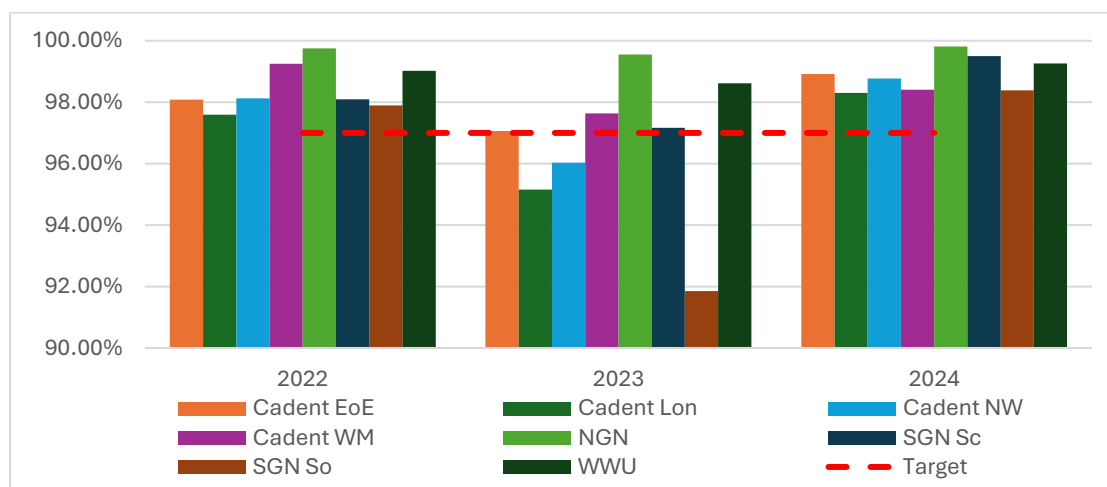


Figure A1.6: Uncontrolled escapes responded to within one hour (2021 – 2024)



Unplanned interruptions (Loss of Supply)

The purpose of the unplanned interruptions financial output delivery incentive is to ensure that GDNs manage the duration of these interruptions effectively and prevent performance deterioration. An unplanned interruption occurs when no prior notification is given to the customer.

The performance position in the current Regulatory Year (2023/24) for all GDNs, except Cadent, is summarised below:

- NGN's average duration was 4.03 hours for 10,603 interruptions, which compares favourably to the RIIO-1 average of 6.6 hours for 12,488 interruptions.
- SGN in Scotland outperformed its target with an average of 13.1 hours compared to a minimum performance level of 16.0 hours. However, SGN faced challenges in its Southern region, exceeding the maximum penalty threshold with an average of 34.4 hours compared to a threshold of 33.5 hours, resulting in a maximum penalty of £3.06m. SGN explain that this was due to an interruption affecting a MOB and additional complexity in restoring supplies in such buildings. Additionally, a significant increase in repair workload in 2023/24 led to emergency gas escape work taking priority, causing reconnections to take longer than usual.
- WWU also outperformed its target, achieving an average duration for unplanned interruptions of 8.37 hours across its network, avoiding any penalty.

Cadent's incentive design differs from the other GDNs by including two separate measures for unplanned interruptions, aimed at providing stakeholders with greater clarity on Cadent's performance:

- for MOBs, where a riser must be replaced or repaired before supply can be restored, and
- for all other buildings (non-MOBs).

Both measures are penalty-only incentives with a cap of 0.25% of Base Revenue for each ODI. This approach aims to provide a more accurate and detailed assessment of Cadent's performance, given the high number of MOBs in its network.

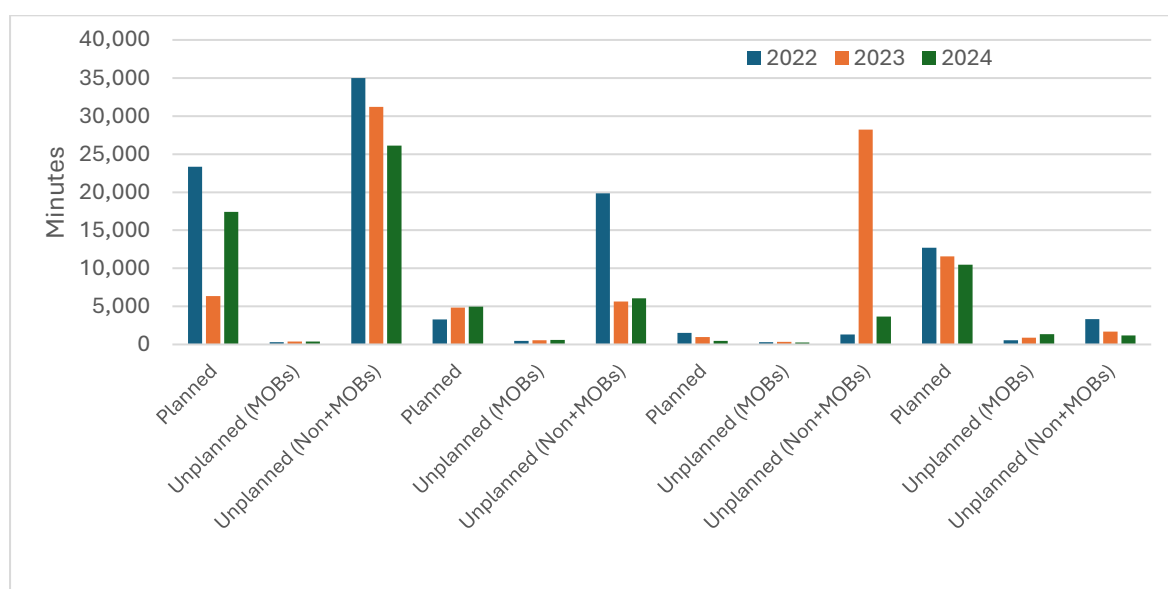
In the current Regulatory Year (2023/24), all of Cadent's networks outperformed the minimum performance level for unplanned interruptions in non-MOBs, with volumes and durations decreasing across all networks except for the North West, which saw a slight increase in average duration due to a rise in unplanned interruptions. London experienced the largest decrease in average duration, with a 10.2% reduction.

For unplanned interruptions in MOBs, all Cadent networks performed better than the minimum performance level. The average duration for MOBs unplanned interruptions decreased in London and the North-West compared to last year. Although the average durations increased in

the East of England and the West Midlands due to a few complex projects, performance remained significantly below the minimum performance level.

Overall, we have seen a decrease in the average time customers are off supply due to unplanned interruptions since the start of RIIO-GD2. However, there is still work to be done, especially in restoring supplies to MOBs.

Figure A1.7: average loss of supply duration



Vulnerability and Carbon monoxide Allowance (VCMA)

The VCMA provides UIOLI funding for GDNs to spend on projects focused on vulnerability and carbon monoxide (CO) safety initiatives that go beyond activities that are funded through other mechanisms or that are required through licence obligations.

The projects that GDN's run through the VCMA can largely be broken down into the following categories although there is often a lot of crossovers where projects target multiple avenues to help vulnerable gas consumers:

- Supporting priority customer groups - Projects that enable outreach into hard-to-reach communities of vulnerable gas consumers. This is then used to boost things such as Priority Service Register (PSR) uptake along with referrals to other VCMA project partners for further help.
- Carbon Monoxide (CO) awareness - Projects that focus on outreach around the dangers of CO, along with providing CO alarms.
- Fuel poverty and energy affordability - Projects that focus on helping vulnerable gas consumers in fuel poverty. This could include activities that include but aren't limited to maximising income, education on finances or providing fuel vouchers
- Services beyond the meter - Projects that focus on servicing, repairing and replacing essential gas appliances which goes beyond GDNs' BAU activity.

There is no requirement for a GDN's project portfolio to contain a specific percentage split between the different types of VCMA projects. However, the GDN must ensure that its portfolio

of VCMA projects covers a variety of activities and is not exclusively focused on either consumer vulnerability or CO safety initiatives.

At the time of RIIO-2 FD the size of the VCMA was £60m. We then made the decision in October 2023 for a one-off increase to the size of the VCMA to £171m, repurposing £111m of unspent allowances from the Fuel Poor Network Extension Scheme. Of that £171m, a minimum of 25% is ring-fenced for Collaborative VCMA Projects between GDNs. The remaining 75% is split between each network based on the forecast number of GB domestic gas customers served.

Over the first three Regulatory Years, Cadent has spent £23.1m of its VCMA allowance. In the third Regulatory Year it has delivered more than 100 separate initiatives and invested £13.9m.

SGN reports a total cumulative cost of £11.2 million in the RIIO-GD2 period to date. Of its licensees, £4.6million is attributable to activity in Scotland and £6.6m in its Southern network. Additionally, SGN are committed to spending a further £35.2 million in approved project activities and funding for programmes over the remaining two years of the price control period.

SGN has progressed 89 initiatives designed to support vulnerable households in using energy safely, efficiently, and affordably by utilising the VCMA, and supported 403,717 households supported throughout our VCMA programme to date.

NGN has spent £8.3m through RIIO-GD2 to date, with forecasted costs of a further £16.5m projected over the last two years of the price control. The GDN currently has 53 live VCMA projects.

WWU has 56 projects in place across its network and in collaboration with the other GDNs. It has spent £5.3m of the revised £20.4m allowance with a total in excess of £17m committed to projects and £3.4m still to be allocated. Its projects helped over 140,000 homes with savings of over £17.6m made up of unclaimed benefits, tackling energy debt and tariffs, and accessing energy efficiency measures.

Maintaining a Safe and Resilient Network

A key aim of the RIIO-2 Framework is for GDNs to deliver a safe and resilient network that is efficient and responsive to change. This section will discuss company performance against common outputs related to achieving this aim.

Repex – Tier 1 mains and service replacement

The Repex programme is a long-term project of work which includes the replacement of old and deteriorating metal mains and services with plastic pipes.

GDNs deliver the majority of Repex through the Iron Mains Risk Reduction Programme (IMRRP) which is a long-term programme regulated by the Health and Safety Executive (HSE). Within the IMRRP, mains are categorised into different tiers, depending on diameter and/or risk measure.

In the RIIO-GD2 FD we implemented two PCDs⁸ for Tier 1 mains⁹ and Tier 1 services¹⁰. The performance in terms of costs and volumes for each is discussed below.

⁸ These specify the deliverable(s) for the funding allocated, and the mechanism(s) to refund consumers if an output is not delivered

⁹ An iron pipe having a diameter of 8 inches and below qualifying for decommissioning under the HSE's Enforcement Policy for the Replacement of Iron Gas Mains.

¹⁰ Service interventions associated with Tier 1 mains

Tier 1 Mains

The purpose of this PCD is to fund Tier 1 mains decommissioning and replacement activities. The benefit of the PCD is that it provides clarity over baseline target workloads to be delivered over RIIO-GD2. The allowance adjustment mechanism, built into the PCD, will ensure that costs to consumers reflect what is delivered (based on the Outturn Workload Mix), whilst maintaining flexibility for GDNs to deliver work efficiently.

Volume overview

Table 10 below outlines the volume delivery reported in the first three years and the current forecast for the remaining RIIO-2 period. This data is then compared to the target volume profile in Table 11 for the entire RIIO-2 price control period, with the variance captured in Table 12.

Table A1.10: Tier 1 Mains Actual and Forecast Volumes (2022- 2026) (Km)

	2022	2023	2024	2025	2026	Total
EoE	527	586	601	559	547	2,820
Lon	298	289	288	333	331	1,539
NW	424	412	382	388	379	1,985
WM	285	308	301	288	288	1,471
NGN	437	430	470	442	407	2,187
Sco	211	219	201	202	202	1,036
Sou	587	510	470	600	615	2,782
WWU	282	313	337	318	318	1,568

Table A1.11: Tier 1 Mains Volume targets (2022- 2026) (Km)

	2022	2023	2024	2025	2026	Total
EOE	555	555	555	555	555	2,774
LON	306	306	306	306	306	1,531
NW	384	384	384	384	384	1,918
WM	294	294	294	294	294	1,469
NGN	429	429	429	429	429	2,144
Sc	204	204	204	204	204	1,021
So	600	600	600	600	600	3,001
WWU	314	314	314	314	314	1,568

Table A1.12: Tier 1 Volume target variance (% , 2022- 2026)¹¹

	2022	2023	2024	2025	2026	Total
EOE	-4.8%	5.7%	8.3%	0.8%	-1.4%	1.7%
LON	-2.5%	-5.6%	-6.1%	8.8%	8.1%	0.5%
NW	10.7%	7.5%	-0.5%	1.1%	-1.1%	3.5%
WM	-2.7%	5.0%	2.6%	-2.0%	-2.0%	0.2%
NGN	2.1%	0.4%	9.5%	3.1%	-5.1%	2.0%
Sc	3.6%	7.5%	-1.3%	-1.2%	-1.2%	1.5%
So	-2.3%	-15.0%	-21.7%	0.0%	2.5%	-7.3%
WWU	-10.0%	-0.3%	7.5%	1.4%	1.5%	0.0%

¹¹ An Allowance Adjustment Mechanism adjusts allowances at close-out to reflect the Outturn Workload and Outturn Workload Mix based on ex ante unit costs. Any upward adjustment is restricted to 3% of the Baseline Cost Allowance value, with any overspend beyond this going through the Totex Incentive Mechanism (TIM). There is no lower limit on adjustments to the Baseline Cost Allowance, but GDNs must explain any variance in value greater than 2% below the Baseline Cost Allowance. This mechanism has resulted in a number of regions deciding to deliver lower volumes than their target, in the latter years of RIIO-2, to avoid breaching that cap.

The performance position across the full RIIO-GD2 period (i.e. reflecting the current volume delivery expectations) for all GDNs is summarised below.

Cadent

London is currently below the main replacement target but forecasts an increase in workload over the final two years of the price control period. Specifically, Cadent anticipates exceeding its linear target by 8.8% in regulatory year 4 and 8.1% in regulatory year 5. Ofgem acknowledges the challenges associated with this increased workload and will continue to engage with Cadent to monitor progress.

The remaining three Cadent regions have performed well to date as all are all currently surpassing their linear targets. Throughout the entire RIIO-2 period, Cadent forecasts that all three regions will exceed their price control targets. We are encouraged by the level of delivery achieved thus far across these regions and have confidence that each will achieve their price control target.

NGN

NGN has performed well to date, exceeding its linear target in each of the three years. NGN currently forecasts that it will exceed its price control target by 2%. Given the level of delivery to date, we are confident that NGN will continue on its current trajectory and achieve the target volumes across the full period.

SGN

There is a differing story across the two SGN regions. In Scotland, delivery has been positive, with the region exceeding its three-year target and forecasting to over-deliver by 1.5% across RIIO-2. Progress to date gives us confidence that this level of delivery can be achieved.

In contrast, the Southern region is currently well below its target, with an under-delivery of 21.7% in year 3. SGN explains that issues with attracting contractors to its areas has intensified, and the complexity of work has further delayed completion. This has resulted in increased unit costs due to contractor scarcity and additional cost pressures to attract new contractors. SGN forecasts that, due to these issues, it will under-deliver by 7.3% across RIIO-2. We note that achieving even this level of delivery will be a challenge, as it would require Southern to meet its linear target in year 4 and exceed it in year 5.

We recognise that there is likely to be a shortfall in tier 1 mains delivery across the price control. However, we are encouraged by some of the actions taken by SGN to address this shortfall. In discussions, SGNs has provided details on its recovery plan which, it forecasts, will allow it to increase its annual delivery target across the final two years. We will continue to engage with SGN on this issue and will provide further updates as we progress.

WWU

While WWU reports delivery to be below annual targets in the first two years, the GDN has managed to increase volumes in year three, bringing it just below the three-year target. WWU forecasts to continue delivering slightly above its annual target over the final years. Given that these volumes are less than those achieved in year 3, we are confident this level of delivery can be realised.

Cost overview

The tables below set out the actual costs incurred to date and current GDN expectations on future costs to be incurred across the full RIO-GD2 price control period.

Table 13 outlines the annual cost reported to date in the first three Regulatory Years and the current forecast for the remaining price control period. This data is then compared to the allowance profile in Table 14 for the entire RIO-GD2 price control period, with the variance captured in Table 15.

Table A1.13: Tier 1 Mains Actual and Forecast costs (£m, 2022- 2026)

	2022	2023	2024	2025	2026	Total
EoE	80.2	96.4	94.6	80.2	80.7	432.1
Lon	63.8	67.5	75.1	61.8	61.5	329.7
NW	69.0	62.5	60.1	53.0	52.9	297.5
WM	43.8	42.9	44.4	44.2	45.4	220.7
NGN	52.9	53.1	56.5	52.6	52.0	267.0
Sco	29.3	30.1	28.7	31.1	30.1	149.4
Sou	76.3	70.6	81.2	106.3	109.6	444.0
WWU	31.5	45.5	51.9	58.4	55.8	243.1

Table A1.14: Tier 1 Mains Allowance (£m, 2022- 2026)

	2022	2023	2024	2025	2026	Total
EoE	74.9	72.8	70.8	70.1	69.9	358.5
Lon	52.0	49.7	47.4	47.2	47.0	243.4
NW	62.7	60.3	57.9	57.5	57.4	295.8
WM	49.7	47.8	45.8	45.5	45.4	234.3
NGN	53.0	52.0	50.6	50.2	50.0	255.8
Sco	34.3	34.1	33.0	32.8	33.3	167.4
Sou	84.2	83.7	81.3	80.9	81.4	411.5
WWU	42.9	42.0	41.2	39.2	40.9	206.2

Table A1.15: Tier 1 costs vs allowance variance (£m, 2021- 2026)

	2022	2023	2024	2025	2026	Total
EoE	5.3	23.6	23.8	10.0	10.9	73.6
Lon	11.8	17.8	27.6	14.6	14.4	86.2
NW	6.4	2.2	2.2	-4.5	-4.6	1.7
WM	-6.0	-4.8	-1.5	-1.3	0.0	-13.6
NGN	-0.2	1.0	5.9	2.4	1.9	11.1
Sco	-5.0	-3.9	-4.3	-1.7	-3.2	-18.1
Sou	-7.8	-13.1	-0.2	25.4	28.2	32.5
WWU	-11.4	3.5	10.8	19.2	14.9	36.8

Several regions are forecasting to significantly overspend against their allowances, ranging from 1% in the North West region to 35% in London. These overspends are attributed to various factors. Discussions are ongoing with each GDN to understand the materiality of each performance drivers.

In London, the dense population, complex underground utilities, unique housing stock, and heavy traffic complicate the use of cost-effective methods, resulting in increased delivery times and costs. Cadent also highlights inflationary pressures leading to higher labour and material costs, particularly in the London and Eastern networks. Additionally, Cadent is of the view that while some factors were considered when the allowances were originally set, not all regional challenges were fully accounted for, which is partially responsible for the anticipated overspend

WWU has highlighted the impact of inflation on labour and material costs, along with significant increases in traffic management expenses, exacerbated by high competition from other industries for contractor labour, as the main drivers for its expected 18% overspend. However, WWU has implemented several cost mitigation measures, such as transitioning to an in-house managed mains replacement program, which provides greater control over costs. While these measures are expected to reduce the level of overspend, the scale of the current projected overspends remains a primary concern. We will continue to closely monitor the progress and effectiveness of WWU's cost-saving initiatives.

Two GDNs are currently forecasting an underspend, Cadent WM and SGN Scotland. Cadent explain that across all networks a similar business model is implemented whereby mains replacement works are contracted out to "Local Delivery Partners". This means a large part of the cost of works is driven by competition to tender events. As such, the outperformance is due to local market factors at the time of procurement events. Analysis of network capacity, pressure optimisation and integration n WM has enabled greater use of one and two-size down insertion techniques. This has contributed to cost savings in mains replacement during RIIO-2.

SGN Scotland explain that the labour market (both direct and contractor) has been much more stable across the price control to date in comparison to the Southern region, and as such it has been able to perform more efficiently compared to allowance.

Tier 1 Services

The purpose of this PCD is to fund service interventions associated with Tier 1 mains decommissioning activities. The benefit of the PCD is that it provides clarity over baseline target workloads to be delivered over RIIO-GD2.

The mechanism, built into the PCD, ensures that costs reflect what is delivered (based on Outturn Workload Mix), whilst maintaining flexibility for GDNs to deliver work efficiently.

Table A1.16: Tier 1 services – interventions and delivery (2022- 2024)

	2022	2023	2024	Baseline target workload	Delivered (%)
EoE	39,169	53,785	51,201	241,929	60%
Lon	30,525	31,251	31,108	185,296	50%
NW	40,584	38,211	31,788	195,011	57%
WM	25,849	28,264	25,752	157,646	51%
NGN	30,220	28,688	31,929	147,469	62%
Sco	16,120	16,526	16,203	80,430	61%
Sou	46,630	39,501	42,572	269,929	48%
WWU	22,089	21,692	27,047	118,604	60%

Volume overview

The purpose of this PCD is to fund service interventions associated with Tier 1 mains decommissioning activities. The PCD provides clarity on baseline target workloads to be delivered over RIIO-GD2. The built-in allowance adjustment mechanism ensures that consumer costs reflect actual delivery (based on the Outturn Workload Mix), while maintaining flexibility for GDNs to deliver work efficiently.

At the final determination, we also agreed on volume targets for Tier 1 services. The number of Tier 1 service interventions is closely correlated with the number of mains laid. Consequently, SGN Southern has the lowest delivery of all regions to date. Additionally, we note that three of Cadent's regions are below their linear target as of the end of year three, triggering an automatic clawback through the mechanism.

Cadent explains that the performance across these network areas is due to the baseline workload being based on historic averages, while actual service density has been much lower across all networks. Furthermore, Cadent notes that the London and West Midlands networks have seen service interventions around 16% below the assumed baseline workload.

We will continue to monitor this situation and provide updates as necessary.

Cost overview

Table A1.17: Tier 1 services – variation from allowance (£m, 2022- 2026)

	2022	2023	2024	2025	2026	Total
EoE	-31%	-18%	-19%	-18%	-18%	-21%
Lon	-22%	-22%	-10%	17%	17%	-4%
NW	-14%	-18%	-22%	-10%	-11%	-15%
WM	8%	10%	12%	-12%	-13%	1%
NGN	0%	-5%	13%	20%	19%	9%
Sco	-8%	-15%	-12%	-1%	-1%	-8%
Sou	7%	-13%	-1%	15%	25%	7%
WWU	53%	98%	155%	71%	79%	89%

The table above set out the actual and forecast costs variation from allowance for Tier 1 Services PCD for the RIIO-2 period as a whole. To date, WM, NGN and WWU have exceeded cost target whilst the remaining GDNs are all well below allowance. Across the RIIO-2 period as a whole, this picture remains similar, with only SGN Southern moving from under to overspend.

Cadent

Varied performance is reported across its regions.

In the East of England, it has achieved its three-year linear target while underspending by 23%. In London, Cadent are 10% below the three-year linear target but 18% below its cost allowance for the same period. The North West region is 3% below its linear service replacement target and 18% below its cost allowance. Conversely, the West Midlands is 9% below its volume target for this stage in the price control but has exceeded its cost allowance by 10%.

Cadent attributes these discrepancies to a much lower service density compared to the assumed density within its plan across all networks. This lower workload delivery has resulted in underspending in the East of England, London, and North West regions, while the West Midlands experienced a slight overspend due to higher unit rates for service interventions.

NGN

NGN are currently 2% above its linear target and 3% above cost allowance for the same period. These costs are in line with what was set out at final determination.

SGN

In Scotland, performance is 1% above the three-year target while being 12% below the cost allowance for the same period. Conversely, the Southern region is 12% below the three-year target and 2% below the cost allowance. This shortfall is attributed to the delivery challenges previously highlighted and the associated increased costs of attempting to catch up.

WWU

WWU is currently on target for the three years to date; however, the GDN is significantly over its cost allowance by 98%, amounting to £45.6 million. WWU attributes this substantial overspend to significant economic pressures.

Ofgem will continue to monitor performance against this PCD and will provide updates going forward.

Capital Projects

The purpose of the PCD is to hold companies to account for the delivery of specifically funded capital investments. This is to ensure funding for large projects aligns with the outputs delivered for customers.

Appendix three provides further details on each project, including the project description and output, delivery date, project allowance, current status, and company information.

Cyber IT and OT PCD

Spending to improve and upgrade communication and operational systems to make them more resilient. Due to the sensitive nature of these activities, GDNs' performance is not discussed further.

Delivering an environmentally sustainable network

The gas networks and related business activities can be harmful to the environment and stakeholders expect the companies to take appropriate steps to mitigate their environmental

impacts. In this section we set out GDNs performance on the outputs related to delivering an environmentally sustainable network that will apply to the GDNs in RIIO-GD2.

Shrinkage and Environmental Emissions

Shrinkage refers to gas which is lost from the transportation network and is the dominant element of the GDNs' business carbon footprint.

Shrinkage is comprised of leakage from pipelines (95% of the gas loss), theft (3% of the gas loss), and companies' own use (2% of gas loss).

GDNs use a common shrinkage leakage model to assess the leakage from each of their networks. Reducing shrinkage lowers methane emissions and avoids the cost of purchasing replacement gas. This financial incentive offers rewards and penalties up to a cap of +/- 0.25% of base revenue. It is measured against baseline leakage levels, set based on average pressure and gas conditioning levels from 2017-18 to 2019-20. An asymmetric deadband applies solely to the pressure calculation.

The information received shows that in the current Regulatory Year (2023/24) the majority of GDNs are performing well in this area.

Performance Overview

- **WWU:** Consistently achieving rewards throughout RIIO-2, WWU has reduced shrinkage levels by 10.1% compared to the baseline.
- **SGN:** Also achieving consistent rewards during RIIO-2. In Scotland, despite meeting Repex target abandonment lengths in 2023/24, Average System Pressures (ASP) and Gas Conditioning performance slightly improved from the previous year. This resulted in a 3.2 GWh reduction in leakage and a 3.1 GWh reduction in shrinkage. In the Southern region, although Repex lengths were below target, improved ASPs from 2022/23 significantly benefited annual leakage reduction. Lower LDZ gas throughput volumes further positively impacted shrinkage reduction, leading to a 17 GWh reduction in leakage and a 19.2 GWh reduction in shrinkage.
- **NGN:** Initially penalised in the first year of RIIO-2, NGN has stabilised shrinkage levels and achieved a reward this year. This improvement is due to targeted efforts in increasing MEG saturation levels and reducing average system pressures, positioning NGN to meet targets for the remainder of RIIO-2.
- **Cadent:** While overall shrinkage levels have decreased, performance among individual licensees has been mixed. Cadent London, previously penalised, achieved a reward this year. However, Cadent West Midlands and Cadent East of England received penalties for the first time in 2023/24. Cadent forecasts meeting the baseline target level by the end of RIIO-2.

Overall shrinkage volumes across the sector decreased from 2240 GWh in 2023 to 2156 GWh in 2024. Shrinkage costs significantly reduced from £131.7m last year to £60.6m in 2024, due to changing energy prices, as well as lower shrinkage volumes.

Table A1.18: Total Shrinkage Volumes in GWh, 2021/22 – 2023/24

Company	GDN	2021/22	2022/23	2023/24
Cadent	EoE	381	370	356
	Lon	195	184	176
	NW	268	256	249
	WM	245	235	230
NGN	NGN	314	283	268
SGN	Sc	168	161	158
	So	457	442	423
WWU	WWU	320	308	298

Business Carbon Footprint (BCF)

A reduction target exists for each GDN for the end of RIIO-2. This is reputational in nature and aims to ensure that GDNs take responsibility for their environmental impacts, excluding shrinkage, arising from their networks and are more transparent in what they are doing to mitigate these.

At the time of our RIIO-2 FDs we did not have robust enough data to set target baselines for the GDNs in this output. They were therefore able to choose their own targets and methodologies in reporting. This is an area we are still developing our understanding of the different methodologies to measure comparable performance across the GDNs but below is detailed their performance against their own targeted levels.

Cadent

Cadent experienced a minor 0.2% increase in its BCF (excluding shrinkage) from 2022/23. Despite this, it achieved a 9.4% reduction in Scope 1 and 2 emissions, which include emissions from its own gas use, commercial fleet, and company car mileage. The increase in its overall BCF was due to a 9.1% rise in Scope 3 emissions, attributed to the inclusion of waste reporting in its Scope 3 calculations. Cadent is addressing fleet challenges by adopting a different licensing model to overcome supply chain and electric vehicle (EV) availability issues.

SGN

SGN has made significant progress towards its BCF target, meeting its 2023/24 goals by reducing Scope 1 and 2 emissions by 8%. This reduction lowers its annual emissions (excluding shrinkage) to 18,215 tCO₂e, positioning it well to achieve its target of 17,395 tCO₂e by the end of GD2. SGN has faced challenges in transitioning its commercial fleet to electric vehicles due to supply chain and availability issues but continues to work towards its long-term goals.

NGN

NGN's Scope 1 and 2 emissions have increased since the Covid-19 pandemic, but they have stabilised in 2023/24. NGN's energy consumption is now 21% below pre-Covid levels from 2019/20, although it remains 27% above its revised annual target for 2023/24. NGN has focused on reducing non-operational mileage, achieving a 7.5% reduction in Scope 1 business mileage emissions. The GDN continues to purchase 100% certified renewable electricity for its

premises and plan to install rooftop solar energy generation at its offices and depots in 2024/25.

WWU

WWU is on track to meet its long-term ambition of reducing Scope 1 and 2 emissions by up to 37.5% by 2026. The GDN has seen a stabilisation in its total Scope 1 and 2 emissions since the Covid-19 pandemic and has achieved a reduction in its BCF emissions this year. Similar to NGN, WWU has encountered challenges in transitioning its commercial fleet to electric vehicles due to supply chain and availability issues. Despite these challenges, WWU remains committed to its long-term emission reduction goals.

Incentive rewards and penalties

Table A1.19 summarises the cumulative revenue rewards and penalties accrued by each GDN over the first three reporting years for each incentive area.

Key points include:

- all GDNs have successfully met or exceeded their targets against the Customer Satisfaction Survey ODI-F mechanism and have been rewarded accordingly.
- The Customer Satisfaction Survey ODI-F mechanism is a source of reward for all the GDNs throughout the RIIO-2 period to date.
- SGN has shown weak performance and faced a penalty against its Unplanned Interruptions ODI-F mechanism.

Table A1.19: ODI mechanisms – indicative cumulative revenue rewards & penalties (2021-2024)

ODI	Cadent	NGN	SGN	WWU	TOTAL
Customer Satisfaction Survey	£13.95	£4.57	£7.59	£3.26	£29.37
Complaints metric (penalty only)	£0	£0	£0	£0	£0
Unplanned Interruption	n/a	£0	-£3.06	£0	-£3.06
Unplanned Interruption [Cadent only]	£0	n/a	n/a	n/a	£0
Shrinkage Management	£1.81	£0.43	£1.21	£1.13	£4.58
Collaborative streetworks [Cadent Lon & EoE, SGN So only]	£3.2	N/A	£3.66	N/A	£6.86
TOTAL	£18.95	£4.99	£9.41	£4.38	£36.29

Innovation

The RIIO-2 innovation package encourages GDNs to do more than business as usual when it comes to finding a better, smarter or more agile way of doing things. The package includes one mechanism continued from RIIO-1: the Network Innovation Allowance (NIA) and one new mechanism for larger schemes, the Strategic Innovation Fund (SIF).

A further mechanism, the Network Innovation Competition (NIC), ran during the RIIO-GD1 price control period to fund innovative low carbon or environmental projects. Although it stopped from 1 April 2021, a condition exists in the RIIO-2 framework to make provision for arrangements relating to the administration and governance of projects in receipt of NIC funding.

NIA performance

The purpose of NIA funding is designed to enable companies to take forward innovation projects that have the potential to address consumer vulnerability and/or deliver longer-term financial and environmental benefits for consumers, which they would not otherwise undertake within the price control. The FD set the following maximum allowance amounts for RIIO-2 NIA.

This year all GDNs have registered additional projects for funding under the NIA funding streams. The position of each GDN as of the third year of RIIO-2 is as follows:

- Cadent (4 regions) spent a total of £8.0 across 52 projects
- NGN spent £5.3m to cover the costs of 46 NIA projects
- SGN incurred £8.6m across 63 projects
- WWU undertook 49 NIA projects at a cost of £3.4m

The summary of what each GDNs have spent to date, and future forecasts of spend, across the eligible NIA projects against the relevant allowance is summarised in the table below.

Table A1.20: Cadent's NIA performance across RIIO-2 period to date

£ million, 2018-19 prices	2021/22	2022/23	2023/24	2024/25	2025/26	TOTAL
Total NIA Expenditure (NIAEt) ¹²	1.59	2.63	3.79	10.79	10.73	29.52
Maximum Allowance recoverable by GDNs	32.5					
Cumulative performance by year: % delivery	4.9%	8.1%	11.7%			
Maximum Allowance recoverable by GDNs	32.5					

Table A1.21: NGN's NIA performance across RIIO-2 period to date

£ million, 2018-19 prices	2021/22	2022/23	2023/24	2024/25	2025/26	TOTAL
Total NIA Expenditure (NIAEt)	1.25	1.69	2.32	2.78	2.32	10.35
Maximum Allowance recoverable by GDNs	11.5					
Cumulative performance by year: % delivery	10.9%	14.7%	20.2%			
Maximum Allowance recoverable by GDNs	11.5					

¹² 90% of the NIA expenditure is customer funded and the other 10% is the GDN's contribution.

Table A1.22: SGN's NIA performance across RIIO-2 period to date

£ million, 2018-19 prices	2021/22	2022/23	2023/24	2024/25	2025/26	TOTAL
Total NIA Expenditure (NIAEt)	2.05	2.84	3.75	5.95	3.18	17.77
Maximum Allowance recoverable by GDNs	35.6					
Cumulative performance by year: % delivery	5.8%	8.0%	10.5%			
Maximum Allowance recoverable by GDNs	35.6					

Table 23: WWU's NIA performance across RIIO-2 period to date

£ million, 2018-19 prices	2021/22	2022/23	2023/24	2024/25	2025/26	TOTAL
Total NIA Expenditure (NIAEt)	0.83	1.16	1.39	4.96	4.96	13.30
Maximum Allowance recoverable by GDNs	13.30					
Cumulative performance by year: % delivery	6.2%	8.7%	10.5%			
Maximum Allowance recoverable by GDNs	13.30					

Strategic Innovation Fund (SIF)

The SIF aims to help transform gas and electricity networks for a low-carbon future. It funds projects that could speed up the transition to net zero at the lowest cost to the consumer as part of the RIIO-2 price controls. Since launching in 2021, we expect to invest £450 million by 2028. The fund aims to make Great Britain the best country for energy businesses to grow and scale.

SIF projects are expected to generate learning for all networks and also be made available to interested third parties through stakeholder meetings run by the projects themselves and on the Smarter Networks Portal. This included NextGen Electrolysis – Wastewater to Green Hydrogen led by WWU, looking at developing cost-effective electrolyzers using impure water sources to produce green hydrogen, and EMStor led by Cadent Gas exploring geological storage options for hydrogen in the East Midlands.

Appendix Two: Expenditures and allowances

This chapter considers the GDN's forecast of totex across the five-year control period, against the current view of adjusted totex allowance. It then presents a further breakdown of each component of GDN's expected performance by the cost categories of Opex, Capex and Repex.

Totex performance

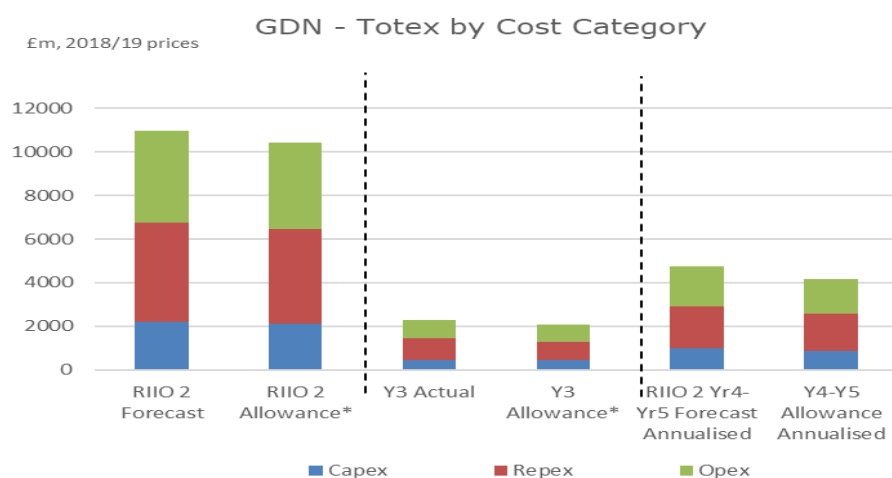
At RIIO-2 FDs, GDNs were given a total expenditure allowance to spend as appropriate to meet their outputs. Following the allocation of these allowances, a disaggregation exercise was carried out to allocate costs to each of the individual cost categories.

While we will discuss GDN performance against allowance at a Capex, Opex and Repex level it should be noted that due to the disaggregation exercise being subjective, there is a degree of uncertainty at analysis down to this level.

At a sector level, across the first three Regulatory Years, GDNs are currently underspending against their allowance £68.9m or 1.1%. This underspend is partly due to the delay in undertaking works in year 1, and in part year 2, due to the Covid-19 pandemic. These delays resulted in GDNs underspending against their allowance by £233m (11.1%) in year 1. Since then, GDNs have made a concerted effort to catch up on workload delivery, which we are encouraged by. As such, in 2023/24, GDNs overspent against allowance by 10.2%, which means that as a whole over the first three years, GDNs are only slightly under allowance by £68.9m or 1.1%.

GDNs are currently forecasting to increase spending over the final two years, compared to year 3, and anticipate that overall, they will exceed their allowance by £534.3m or 5.1%. This underspend value arises from comparing the actual total expenditure (totex) for the period from 2021 to 2024, along with a two-year forecast for the remaining price control period.

Figure A2.1: Totex costs and allowance comparison by cost category (£m, 2022 – 2026)



At a GDN level, across the first three Regulatory Years of RIIO-GD2, there has been significant variation in totex spending compared to allowances, with three GDNs NGN, SGN and WWU currently under their allotted funding and one exceeding it (Cadent).

Table A2.1: Actual Totex v Allowance 2022 to 2024

	Adj'd Allowance	Actual	Variance	
GDN	£m	£m	£m	%
Cadent	3,073	3,182	108	3.5%
NGN	756	678	(77)	(10.2%)
SGN	1,672	1,589	(83)	(5.0%)
WWU	751	734	(17)	(2.3%)

Table A2.2: Costs vs allowance (£m, 2022 – 2024)

£million, 2018/19	Allowance
Opex	2,377.1
Capex	1,279.5
Repex	2,595.5
TOTAL	6,252.1
£million, 2018/19	Actual
Opex	2,342.6
Capex	1,201.7
Repex	2,638.9
TOTAL	6,183.2

Three of Cadent's regions have overspent over this time period (EoE, London and NW), whilst West Midlands (WM), whilst West Midlands (WM), NGN, SGN Scotland, SGN Southern and WWU show an underspend. Cadent has however increased spend against allowance compared to year 1, where it underspent by 5.8%, which has resulted in an overspend across the period to date of £108.2m (3.5%).

NGN remain the only GDN which has underspent in each of the three years which has resulted in a combined underspend against an allowance of £77.4m or 10.2%. This year the gap between spend and allowance reduced from the previous two years, where NGN underspent by 15.9% and 13.7% respectively.

As of 2023/24, SGN has underspent its allowance by £82.8m (5%) however, this year saw the GDN increase spend significantly compared to the previous two years, which saw it exceed allowance by 11.5%.

The WWU position is similar to SGN, with an underspend in years 1 and 2 and a significant overspend in year 3. As can be seen from table 24, above, WWU has underspent by £17m, or 2.3%, as of the end of year 3.

Over the five years of RIIO-2, three GDNs are forecast to overspend against allowance, and one currently projects an underspend.

Table 2.3: Costs vs allowance (£m, 2021 – 2026)

£million, 2018/19	Allowance
Opex	3,961.0
Capex	2,138.8
Repex	4,305.3
TOTAL	10,405.1
£million, 2018/19	Actual/Forecast
Opex	4,195.2
Capex	2,216.2
Repex	4,527.9
TOTAL	10,939.4

Table A2.4: Actual/Forecast Totex v Allowance across RIIO-GD2

	Adj'd Allowance	Actual	Variance	
GDN	£m	£m	£m	%
Cadent	5,085	5,415	330	6.5%
NGN	1,248	1,201	-48	(3.8%)
SGN	2,789	2,960	171	6.1%
WWU	1,283	1,364	81	6.3%

Across the whole RIIO-GD2 period, Cadent currently expects the performance position observed in the first three years to continue across the price control period as a whole. EoE (12.5%), London (9.3%) and NW (3.1%) all currently forecast to overspend their allowance, whilst WM (-4.2%) estimate an underspend.

NGN currently anticipates an underspend (-3.8%). The expectation is that the total costs incurred over the full period will more closely align with its allowance, thereby reducing the level of underspend currently observed

SGN currently expects to outperform its allowance across the full RIIO-GD2 period in Scotland, with a 2.4% underspend indicating a shift from its current overspend position, observed across the first three years.. However, SGN's Southern network is anticipating costs to exceed the allowance by 10.7% over the price control period as a result of a significant increase in forecast spend.

WWU (6.3%) move from its current position of underspending to an overspend across the whole period.

The overall picture across RIIO-GD2 indicates that all regions will increase spend against allowance compared to their current three-year position. There are a number of factors driving this including the delay caused by the Covid-19 pandemic and projects moving from design to build phase. We explore these factors in more detail below.

Operational expenditure (Opex)

Opex generally refers to operational expenditure. These are cost incurred by GDNs to operate and maintain their networks, typically including recurring and necessary cost for the day-to-day operation of the gas distribution networks.

At a sector level, Opex spend, over the first three years of the price control, is in line with the allowance set at FDs. Across the whole RIIO-GD2 period, GDNs are forecast to overspend by ~6% (£234m).

An overview of the Opex performance position for all GDNs is summarised below, covering two timescales: cumulative performance over the first three Regulatory Years and a forecast for the entire RIIO-GD2 period.

Cadent

As shown in table 28, across the first three years, Cadent has exceeded its FD allowance for Opex by £6.8m.

Cadent attributes the overspend to several factors, including significant inflationary pressures affecting various sub-categories, increased repair workloads, and higher Business Support costs driven by IT and cyber security needs. These areas are discussed in turn below.

The forecast picture over years 4 and 5 indicates that this trend of overspending continues, with the GDN indicating that they will exceed allowance by £123m, which would result in an excess spend of £129.9m across RIIO-GD2.

Table A2.5: Cadent Opex costs v allowance

<i>£m 18/19</i>	A. Three-year actual vs adjusted allowance	B. Two-year spend forecast vs adjusted allowance	C. Five-year total
1. Total Spend	1,216.4	891.0	2,107.4
2. Total Adjusted Allowance	1,209.5	768.0	1,977.5
Performance (1-2)	6.8	123.0	129.9

Work Management: These costs cover expenses for planning, executing, and overseeing activities to maintain and improve an organisation's operations and assets. Work Management covers three areas: Holder Demolition, Land Remediation and Other. This final category (Other) is sub-divided into four further categories: Asset Management, Operational Management, Customer Management & Network Support, and System Control.

In 2023/24, Cadent reports an overspend against allowance in this area of 5% across all regions. WM is the only Cadent region to report an underspend in the third Regulatory Year.

To date, the cumulative costs incurred by Cadent has been largely in line with allowance, with an overspend of 5.1% or £12.5m. Cadent expects this situation to continue throughout the price control period, and currently estimates a total overspend across all its regions of 7.3% by the end of the RIIO-GD2 period.

Cadent explain its Work Management costs in 2022/23 were significantly impacted by the major incident in Stannington and the unprecedented operational challenges in December, which led to a peak in workload and costs. The GDN however highlights that these costs have now returned to previous levels, which is representative of its costs which show a reduction of £9.1m compared to the previous year.

Work Execution: This cost category includes activities related to Emergency response, Repairs, and Maintenance activities. The performance reported across the price control period so far for each activity is summarised below.

- **Emergency and Repair costs:** Over the first three years of RIIO-GD2 spend across emergency and repair has significantly exceeded allowance in all Cadent regions. This trend is forecast to continue across the price control as a whole, with Cadent forecasting an overspend on emergency of 20.4% and repair by 22.9%. Cadent explain that these costs continue to remain above forecast due to workload not declining as expected.
- The **costs incurred on Maintenance activities** increased slightly in 2023/24, compared to 2022/23 levels. While there has been a recent increase in maintenance costs, mainly due to an increase in routine works and cost relating to MOB surveys, the level of cost incurred remain significantly below forecast levels (approximately 39%).

Cadent explains that it is challenging to separate costs for emergency, repair, and maintenance activities, as these are often performed simultaneously. It therefore holds the view that these activities should be viewed collectively. Currently, emergency and repair costs exceed allowances by £51.0m, while maintenance is under allowance by £121.0m. Some non-routine maintenance is included in Capex works, saving £37m. Ofgem will continue to monitor Cadent's maintenance spending and provide updates.

Business Support Costs: These cover expenses related to the internal functions, processes, and activities that enable an organisation to operate efficiently and effectively. These costs include IT and Telecoms, Property Management, Insurance, HR and Non-Operational Training, Audit, Finance and Regulation, Procurement, Stores and Logistics, and CEO and Group Management.

Cadent has reported a significant overspend across all regions, continuing the trend from the first two years of RIIO-2. This overspend is expected to exceed 44.6% by the end of the RIIO-2 period. The primary drivers are inflationary pressures, increased insurance costs, project timing, and a new accounting approach. Additionally, some IT costs have been reclassified from Other Network Capex, contributing to the overspend. Ofgem will continue to monitor the situation and provide updates.

Training and Apprentices: These costs refer to the expenses associated with recruiting, training, and developing new employees and apprentices within an organisation. These costs include the resources needed for onboarding, educational programs, skill development, mentorship, and any related materials or tools. The goal is to ensure that trainees and apprentices acquire the necessary knowledge and skills to perform their roles effectively, contributing to the overall efficiency and productivity of the organisation.

Over the RII0-2 period to date, Cadent has spent £40.9m on training and apprentices, which is £7.5m (15.5%) below the allocated allowance. Cadent highlights that this level of expenditure has enabled it to continue investing in its staff and attracting new talent to the organisation. According to the data provided by Cadent, the company has employed the equivalent of 577 FTE apprentices since the start of RII0-2.

SGN

As can be seen from Table A2.6, SGN is current exceeding its Opex allowance by £37.6m. This trajectory is forecast to continue in the final two year, and SGN's current estimate is that it will exceed allowance by £168.6m by 2026.

Table A2.6: SGN Opex costs v allowance

<i>£m 18/19</i>	A. Three-year actual vs adjusted allowance	B. Two-year spend forecast vs adjusted allowance	C. Five-year total
1. Total Spend	619.8	537.0	1,156.8
2. Total Adjusted Allowance	582.2	406.0	988.2
Performance (1-2)	37.6	131.0	168.6

SGN explain that the overspend is driven by a range of factors including a substantial investment to recruit and retain frontline staff, taking on a large number of apprentices and a significant increase in Business Support costs to enhance IT, Cyber and digitalisation efforts.

Work Management (Holder Demolition, Land Remediation, and Other): As of 2023/24, SGN has spent £94.2m on Work Management, which is £24m below its disaggregated allowance. Both regions currently underspend on the area, with Scotland £6.1m, and Southern £17.9m below allowance.

In year three, SGN underspent against allowance by 18%. This underspend was largely driven by the Southern network (26% below allowance). The Scottish region reports a marginal underspend (2%) in 2023/24. Both regions forecast that the underspend on work management will continue for the remaining years of the price control (with the exception of 24/25 for Scotland).

Work Execution: As of year 3, SGN has exceeded allowance by £48.2m, and this has been entirely driven by activity in the Southern network where the level of spend exceeded designated allowance (£51m). An overspend is also currently forecast for

both regions across the whole price control period, with the Southern network estimating an excess of £115.4m and the Scottish network also over but significantly lower at £16.1m.

The cost increase of repair works is driven by the following factors:

- an increase in the total number of repairs associated with Public Reported Escapes.
- a movement from lower to higher diameter repairs which incur higher costs
- increased reliance on contractors to carry out repair works
- increased numbers of front-line staff, and
- Inflationary cost pressures in relation to transport and plant.

SGN highlight that repair allowances were set based on submitted workloads within its business plan submission in 2019. The GDN explains that whilst early workload trends followed forecasts, a significant increase has been observed in recent years. This has led to higher-than-expected activity levels and increased associated costs. SGN also explain that along with increased activity it is also due to the move to larger diameter repairs which are more expensive.

Maintenance costs are forecast to sharply increase over the remainder of the price control compared to previous years from £105m for the first three years to a total of £183m by year five. SGN explain that this is due to a number of factors including reliance on third party contractors in Southern and increased maintenance driven by increased workload on Local Authority MOBs.

Business support: For SGN as a whole, the GDN overspent by £10.0m in the first 3 years, and this is forecast to increase with an overall projected overspend of £64.2m across the RIIO-2 period. SGN explain that the ramping-up in business support costs, particularly in IT and cyber security, are to help enhance operational efficiency and protect against digital threats.

Training and Apprentices: Spending in 2023/24 more than doubled compared to the previous year, for both SGN regions, which has resulted in an overall of overspend of £3.4m to date. Across the price control however, SGN are forecast to spend in line with allowance in both regions.

SGN explain that this year's spend increased significantly in this area, and across both regions SGN recruited an additional 223 apprentices (147 in Scotland and 76 in Southern) which drove this overall increase in training costs.

NGN

Opex spend reported in 2023/24 was elevated compared to the value in previous years (£85.7m to £93.1m) as NGN sought to catch-up from the delays caused by the Covid-19 pandemic.

As can be seen in table 30 below, the combined spend from 2021/22 to 2023/24 is £252.7m and, despite the large increase in year three, NGN is still below allowance by £34.0m.

Table A2.7: NGN Opex costs v allowance

<i>£m 18/19</i>	A. Three-year actual vs adjusted allowance	B. Two-year spend forecast vs adjusted allowance	C. Five-year total
1. Total Spend	252.7	193.5	446.1
2. Total Adjusted Allowance	286.7	189.9	476.6
Performance (1-2)	-34.0	3.6	-30.4

NGN currently expects the outperformance trend will continue over the remaining years of the price control, an underspend against Opex allowance across RIIO-2 of £30.4m is anticipated.

NGN explain that this forecast underspend is driven by a number of factors including the capitalisation of certain Opex activities (moving costs from Opex to Capex), and a mild winter which resulted in a reduction of PREs by 23% below forecast. NGN also note in some areas there has been upwards pressures on costs and highlight additional contractor costs as an example.

Work Management: Over the first three years of RIIO-2, NGN report an underspend of £7.8m in Work Management. Looking ahead, NGN anticipate this underspend to grow to £14.9m over the entire RIIO-2 period.

NGN explain that underspend within this category is mainly driven by savings across Asset Management, Operational Management, Customer Management & Network Support, and System Control. NGN note that they spent £1.9m on Asset Management this year, £0.1m below the £2m assumed in its business plan, and expect to spend in line with its plan for the remainder of RIIO-2.

NGN also explain that they spent £0.5m on System Control this year but expect costs to increase marginally to £0.7m over the remainder of RIIO-2. This is below its business plan forecast. They also explain that they now flex the resource in this area to support other asset management activities to increase efficiency and maximise output across Totex.

NGN highlight that Operational and Customer Management costs are impacted by levels of workload, with the main drivers being PRE and Repair. From the data provided, we can see that PRE volumes are 22.6% below forecast and goes some way to explaining the current and forecast underspend.

During the current Regulatory Year (2023/24), NGN successfully demolished five gas holders, one more than initially planned. With only one holder remaining, NGN still

forecasts an underspend of £1.6m in this area over the final two years, even after accounting for the remaining workload.

Work Execution: Having underspent against allowance in the first two years, NGN reversed this and overspent by just under £3m in 2023/24. This takes overall spend for the three-year period to £135.4m, which is £11.5m below allowance for the period. NGN currently forecasts that it will increase spend over the final two years resulting in an overall overspend of £4.2m against an allowance of £239.6m.

Emergency costs decreased by £0.2m from the previous year due to milder winter conditions, leading to fewer reports and resulting in the reallocation of engineering support to the Repex programme. We are encouraged by this strategic reallocation of underutilised staff to various areas within the organisation.

However, NGN expects repair costs to exceed the allocated allowance during the RIIO-2 period due to the ageing network and a higher ratio of RPEs to repairs. To manage this, staff from areas with reduced workloads have been reassigned to repair works.

Increased costs in 2023/24 are attributed to additional work on governor sites, higher utility costs, and catching up on delayed compliance tasks. NGN has also recruited more staff to reduce reliance on contractors.

Emergency, Repair and Maintenance spend is forecast to ramp up over the remainder of the price control, with an anticipated overspend of 5.2% against an allowance of £216.4m currently forecast across the RIIO-2 period.

Business support: NGN spent £60.1m across the three-year period, which is slightly below its allowance of £72.2m by £12.1m. The underspend is forecast to continue in years four and five of the price control, and overall, NGN currently forecast to be below allowance by £19.2m across RIIO-GD2.

NGN explains that there are a number of cost saving initiatives that have, and continue to, help drive the anticipated underspend. These include taking on new service providers which has reduced IT&T costs by £0.6m annually, and through the purchase of its Head Office in Leeds which will lower rental payments and associated charges.

Training and Apprentices: Spend has increased throughout the price control, with the value of spend reported in 2023/24 (£3.8m) being double those reported in 2021/22 (£1.9m). Across the first three years, NGN underspent by £2.6m or 23.8% but across RIIO-2, underspend is anticipated to decline with spend reaching £17.5m, which is £0.6m below the level of allowance (£18.1m).

A review of data submitted by NGN shows that recruitment of apprentices and trainees increased from 62 in the first two years of RIIO-2 to 66 in the third which would go some way to explaining the increase in costs 2023/24. The recruitment of these Full Time Employees (FTEs), according to NGN, is to ensure it has the level of staffing to ensure support across its Repair, Maintenance, and business support functions.

WWU

Table A2.8 shows that WWU, as of 2023/24, has underspent against its disaggregated allowance by £44.9m. Whilst the GDN do expect to catch-up to some degree over the final two years of the price control period, the current projected underspend is £33.8m.

Across the entire price control period, WWU continue to forecast an underspend (£33.8m). However, due to a forecast overspend over the final two years, this underspend is estimated to reduce from 15% currently to 6.5%. WWU explain that this is partially down to efficiency savings through the utilisation of staff to carry out other activities, and by the movement away from external contractors to delivering works in-house which is more cost effective.

Table A2.8: WWU Opex costs v allowance

£m 18/19	A. Three-year actual vs adjusted allowance	B. Two-year spend forecast vs adjusted allowance	C. Five-year total
1. Total Spend	253.7	231.2	484.9
2. Total Adjusted Allowance	298.7	220.1	518.7
Performance (1-2)	-44.9	11.1	-33.8

Work Management: WWU forecast to underspend in every year, with the exception of a small variance of underperformance in 2024/25. In 2023/24, WWU's spend was below allowance by 20%, with the three-year total coming to 15% below allowance. Across the price control, WWU anticipate it will be around 13% below allowance. WWU explain that it has now removed all of its gas holders, with the last one taken down in 2023/24, resulting in £0.9 million less expenditure compared to the previous year.

Work Execution: Costs to date are £22m (16.5%) below the disaggregated allowance for the same period. WWU explain that this underspend has been driven by utilising the emergency workforce for additional activities and reducing reliance on contractors in favour of in-house staff. WWU further highlight that the use of performance management tools has enhanced efficiency, while previous intervention works have provided ongoing benefits. Similar to NGN, we are encouraged by WWU's approach to efficiently utilising their staff.

Business Support: Spending has varied annually, with a reported underspend of 9.1% in 2023/24 taking the total over the three-year period to £8.4m below allowance. However, for the final two years of the regulatory period, WWU forecasts significant overspends of £30.7m which, if realised, will result in an overall overspend of £22.3m (13.2%) above the allowance. WWU explain that this increase over the remaining years are driven by increase in IT and Cyber spend along with the phasing of works, such as on Net Zero, towards the latter part of the price control.

Training and Apprentices: To date, WWU has spent a total of £8.9m across the first three-years of RIIO-GD2 compared to an allowance of £12.6m. WWU expects this underspend to continue to the end of the price control period, with total spend below allowance by £6.1m.

WWU explain that the underspend is driven by a number of factors including the capitalisation of costs and, due to insourcing of the Repex programme, WWU confirms that it has brought all training in-house, which has generated savings. Additionally, we note that WWU has recruited 40 FTE apprentices to date which will help to ensure that it has the right level of resource to carry out its operations.

Opex - Additional comment

- **Training and Apprentices:** We recognise that the GDNs have faced challenges in recruiting and retaining staff and we recognise the actions and measures taken to improve staff retention and recruitment, ensuring the GDNs meet their obligations effectively. By enhancing the training of existing employees, enabling them to develop and take on additional roles, and by recruiting apprentices and equipping them with skills in areas like engineering, GDNs ensure they have a capable workforce to meet their commitments. This demonstrates proactive business planning, and we encourage GDN to continue leveraging this strategy throughout their operations. This strategy also reduces their reliance on external parties

Capital expenditure (Capex)

Capex generally refers to capital investments made by GDNs to develop, upgrade and expand their network infrastructure. Capex focuses on long-term investments that enhance the capacity of the networks, as well as the safety and efficiency.

At a sector level, over the first three years of RIIO-2, GDNs spent £1,201.7m against an allowance of £1,279.5m which represents a £77.8m underspend.

Over the final two years of RIIO-GD2, GDNs are currently forecasting to continue to overspend with Capex spend, over the whole price control period, anticipated to be 3.6% greater than allowance.

There are a number of factors that drive this, including catching up on projects delayed as a result of the Covid-19 pandemic; projects moving from the design to the construction stage, significant investment in IT and Cyber, and a range of economic factors. We will discuss these in more detail when looking at the GDNs individually.

Cadent

Table A2.9: Cadent Capex costs v allowance

<i>£m 18/19</i>	A. Three-year actual vs adjusted allowance	B. Two-year spend forecast vs adjusted allowance	C. Five-year total
1. Total Spend	564.7	416.3	981.0
2. Total Adjusted Allowance	522.8	355.4	878.2
Performance (1-2)	41.9	60.9	102.8

Table A2.9 above demonstrates that, over the first three-years as a whole, Cadent spent £42m on Capex in comparison to its allowance over the same period.

Overall, Cadent are forecast to overspend by £102.8m (11.7%) across the price control period.

Cadent explain that cost pressures are driven by material prices, supply chain issues, and work complexity. Overspend in these areas has been partially offset by reclassifying IT spend as Opex, in line with accounting standards.

Local Transmission System (LTS), Storage and entry: The LTS is the pipeline network that transports gas from National Transmission System (NTS) offtakes to distribution systems. Storage sites are utilised to hold gas for balancing network pressures. Entry points refer to the locations where gas enters the network.

In 2023/24, Cadent reports that total spend over the first three years has reached £101.9m, which is £22.6m less than allowance. Of the four regions, only London is currently above the allowance threshold. However, this is due to reverse in the final two years, and Cadent forecast that it will overspend by £4.6m (2.4%) over the RIIO-2 period.

Cadent explained that the Pressure Reduction System (PRS) workload going forward is expected to be significantly higher than delivered to date and as such an overspend expected going forward.

Connections: This covers the provision of new mains and services to supply new and existing domestic and non-domestic premises.

As of year 3, Cadent had spent a total of £84.9m on connections which is £14.9m less than allowance. Annual spending on connections is forecast to continue to decline year-on-year through RIIO-2.

Connections volumes, which include works on new and existing housing, non-domestic properties, and Fuel Poor customers, have declined year-on year for all Cadent regions. Mains connections volumes have reduced by 46.5%, and service volumes by 46%, compared to regulatory year one.

Given the uncertainty on connection volumes, a Domestic Connections Volume Driver was set as part of the RIIO-GD2 framework. This mechanism enables the adjustment of cost allowances to reflect differences between outturn workloads and baseline forecasts provided by the GDNs. The benefit of this is that it protects customers and GDNs from inaccurate volume assumptions made when setting the price control, and enables the adjustment of connections allowance (upwards or downwards) depending on the volumes of work carried out,

Reinforcement: Reinforcement involves expanding the general network capacity to accommodate increased load demand.

Across all four regions, Cadent overspend against allowance by £10.6m (26.5%) across the first three years of RIIO-GD2. Cadent explain that this increase in spend resulted in an additional workload of 7.8km. As of the end of regulatory year 3, Cadent has delivered a total of 105 km of Mains Reinforcement.

Governors: These are pressure reduction devices installed in a gas pipeline system to lower the operating pressure of the gas on the network.

Cadent has exceeded its allowance by £55.1m across all regions to date, with a total spend of £65.6m across the first three years of RIIO-GD2. This significant overspend is forecast to continue throughout the RIIO-2 period, with a total spend of £80.5m anticipated, taking the GDN to £63.8m above allowance for the full period.

Cadent explain that in the Business Plans it only included replacement and refurbishment for District Governors, and had no costs forecasts for Full Replacement, Decommissioning or Service Governors. Due to changes in Cadent's delivery plan, work was required to be carried out on the three areas. Consequently, this unfunded element has increased the GDNs overall costs and goes some way to explaining the overspend.

Cadent also explain that the Governor programme involved upgrading components, replacing assets and constructing new housing units, and as a result of this work it has successfully completed a three-year programme of improvements.

Other Capex

Other Capex relates to spend on the GDN's capital program of work that is not covered by the areas described above. It is split into two areas; network and non-network Capex.

- **Network Capex** covers security, Physical Security Upgrade Programme (PSUP), Critical National Infrastructure (CNI Security), pipelines (including overcrossings, sleeves, CP, and valves), and electrical and mechanical instrumentation. Each of these components plays a crucial role in maintaining the integrity and functionality of the gas pipeline system, ensuring safe and efficient operation.
- **Non-network Capex** includes IT and telecoms, plant, tools and equipment, vehicles, property and workspace, and other miscellaneous items such as compensation. These elements support the overall infrastructure and operations, providing the necessary resources and environment for effective management and maintenance of the gas pipeline system.

In 2023/24, Cadent underspent on its allowance by £2.1m (2%) which takes the GDN to an overall underspend across the first three regulatory years of £16.1m (16%). This underspend has mainly been driven by London which is currently below allowance by £18.0m (27%). For Cadent the picture across the whole RIIO-2 period mirrors the current position, with an anticipated underspend of 6%. And whilst spend compared to

allowance is forecast to reduce for London to 18%, NW are forecast to go from a current overspend of 8% to an underspend of 10%.

Additionally, Cadent explain that allowances set at Final Determinations for both Network and Non-Network have undergone several adjustments. These include changes in accounting treatment due to a shift to a cloud-based IT model, reclassification of certain costs, and a decision to lease rather than purchase commercial vehicles.

Key variances between the GD2 Business Plan and actual expenditures include significant spending on the Governor Improvement Programme, and increased IT and Telecoms costs due to the transition to a cloud-based model. The Property strategy has also seen substantial investments in rationalising and upgrading facilities, including the opening of new offices and the relocation of key operational teams.

SGN

Table A2.10: SGN Capex costs v allowance

<i>£m 18/19</i>	A. Three-year actual vs adjusted allowance	B. Two-year spend forecast vs adjusted allowance	C. Five-year total
1. Total Spend	320.8	291.2	612.0
2. Total Adjusted Allowance	408.2	258.5	666.7
Performance (1-2)	-87.4	32.7	-54.7

In 2023/24, Capex spend for both regions was significantly below allowance with a combined underspend of £16.7m (11.5%). This underspend follows on from the previous two years for both regions, resulting in a total underspend to date of £87.4m. SGN Scotland did however significantly reduce underspend compared to the previous year.

Going forward regional spend is anticipated to follow different trajectories across the remainder of the RIIO-GD2 period. Spend in Scotland is due to ramp up substantially over the final two years of the price control and forecast are that spend will be in line with allowance by the end of RIIO-GD2. For SGN Southern, this is not the case as this region is forecast to underspend in every year, except for year four. Overall Southern are forecast to underspend by £53.7m (14.3%).

SGN's explain that spending on capital projects is on an increasing trajectory throughout RIIO-GD2 (increasing in years 3 and 4) as projects moved into construction. In Scotland, costs rose significantly in 2023/24 as some projects exceeding forecast expenditure. In Southern, despite a forecasted underspend across the period, all outputs are still expected to be delivered.

LTS, Storage and entry: By the end of the 2023/24 reporting year, SGN had a combined underspend of £38.3m across the first three regulatory years. This position is anticipated to switch to an overspend in the remaining years of RIIO-GD2, reducing the underspend to £8.9m. SGN explain that projects have generally progressed as expected

however, it has faced a number of challenges with higher-than-expected contractor costs and, and a delay to one project due to issues around a tender.

Connections: Whilst demand for connections have declined in both regions, SGN reported an overspend of £14.8m as of the end of year three.

Volumes of work over that the price control period to date, compared to year one, have reduced by 47.5% for Mains and 45.4% for Services. SGN explain that regardless of the level of workload, overheads have remained fixed which has resulted in cost pressures. We will continue to monitor this situation and will provide an update in the next round of annual reporting.

Reinforcement: In 2023/24, SGN report spend to be below allowance by £9.3m (65%). This underspend mirrors the two prior years where both Scotland and Southern significantly underspent and takes the total allowance unutilised to £34.9m over the three-year period. In total, SGN delivered over 15km and 5 district governors across the two regions.

SGN explain that workload in year four for both Scotland and Southern is anticipated to exceed that of the first three-years of RIIO-GD2. However, we still predict that the overall workloads for RIIO-GD2 and beyond will likely average below the forecasts made in the 2019 business plan. As of the end of 2023/24, SGN has delivered a total of 30.3 km of mains reinforcement.

Governors: SGN spend on governors was £4.5m below allowance for the three-year period, mainly driven by Southern who were £4.4m below the allotted figure. The overall picture across SGN for the RIIO-2 period indicates that it currently expects spending to be below allowance, with the GDN currently anticipating to underspend by £18.7m or 32.2%.

SGN explained that in Scotland to date it has completed 42 governor interventions and replaced 107 service regulators, aligning with its business plan. SGN aim to deliver 355 service governors across GD2, needing 98 per year for the remaining RIIO-2 period. In the Southern Network, SGN completed 124 governor interventions and replaced 344 service regulators. While these figures align with the business plan, there were resource challenges with service governors. SGN plans to address this shortfall by increasing replacements in the remaining years of RIIO-GD2.

Other: In 2023/24, SGN underspent against its allowance by 10% and this continues the pattern seen to date, with the GDN current under allowance by 16% across the three years. This, however, is entirely driven by Scotland who are currently £23.2m below allowance of £60.8m. Both regions are however forecasting to increase spend in each of the final two years, and, if achieved, would result in spend falling in line with allowance.

SGN explain that it expects the capital asset upgrade and replacement work for security to continue as planned for the rest of RIIO-GD2.

Investment in 2023/24 focused on providing equipment for new starters, refurbishing major plant and equipment, and replacing equipment beyond economical repair. Land and buildings investment aligned with planned end-of-life asset replacement for offices and depots, with significant spending across various projects and increased workload expected next year. In IT and systems operations, £24 million was spent on IT Capex in 2023/24, a slight reduction from the previous year.

NGN

Table A2.11: NGN Capex costs v allowance

<i>£m 18/19</i>	A. Three-year actual vs adjusted allowance	B. Two-year spend forecast vs adjusted allowance	C. Five-year total
1. Total Spend	125.5	122.6	248.0
2. Total Adjusted Allowance	156.8	100.6	257.4
Performance (1-2)	-31.3	22.0	-9.4

For Capex, NGN were set an allowance of £156.8m up to and including year three. Of this, NGN has spent £125.5m which is an underspend of £31.3m. NGN forecast that costs over the final two years of RIIO-2 will exceed allowance by £22m (21.9%), however, it expect to be below the allotted allowance over RIIO-2.

Drivers of underspend to date are due to delays to major projects (e.g. TransPennine Electrification), economic conditions (long lead times, contractor shortages), and increased resource demand across the utility sector are causing challenges.

LTS, Storage and entry: Spend on LTS, Storage, and Entry is currently £25.9m less than allocation for the three-year period to date. NGN explain that this is largely down to the delay in the TransPennine Electrification projects.

NGN also advised that it is facing delays due to long lead times and a shortage of expert contractors, influenced by economic conditions and high demand in the utility sector. Despite these challenges, NGN expects costs for LTS, Storage, and Entry to exceed allowance over the final two years however, it still anticipates an underspend of £14.9m.

Connections: Spend by the end of year three reached £18.4m, which is £9.5m above allowance. Whilst workload was around half the allowed volume, actual connections increased marginally from the previous year. NGN note that demand for connections increased following the energy crisis in 2022/23 and it anticipates that this will continue into the next Regulatory Year (2024/25).

Reinforcement: Spend by the end of year-three reached £14.0m on mains reinforcement, £2.6m below allowance for this period.

Overall NGN delivered around 13.6km of mains in 2023/24, taking its total for the price control to date to 38.1km. NGN explained that in 2023/24 workload decreased due to fewer enquiries from large load energy producers, resulting in unused allowance, which NGN plan to use for network reinforcement to support delivery of the Repex programme.

Governors: Costs in 2023/24 were £2.6m which takes total spend to date to £4.6m across the first three years of RIIO-2, which is in line with allowance for the period. The GDN forecast a large increase in spend over the final two years, resulting in an overspend across the price control of £11m. NGN explain that this increase in spend, compared to forecast, reflects an increased workload.

NGN completed 213 district governor projects in 2023/24, compared to 3 in 2021/22 and 78 in 2022/23. NGN explain that the start of the service governor programme and site upgrade programme, which included significant governor housing replacements, drove the increased volumes. NGN expects to deliver the planned Business Plan volumes over the price control period.

Other: NGN overspent against its allowance by £1.4m (6%) in 2023/24. This marks a turnaround from the previous two years, during which NGN significantly underspent. As a result, it is currently £12.2 million below the allocation of £74.1 million. NGN forecasts increased spending over the final two years; however, it is projected to fall below the total RIIO-2 allowance by £13.7 million (11%).

NGN explain that the forecast underspend is expected to be driven by lower expenditure on IT and Telecoms, due to insourcing a significant portion of the IT development team and reducing spend on pipelines due to issues with Network Rail and contractor resourcing. Despite these challenges, the agreed units are expected to be delivered within the regulatory period.

WWU

Table A2.12: WWU Capex costs v allowance

<i>£m 18/19</i>	A. Three-year actual vs adjusted allowance	B. Two-year spend forecast vs adjusted allowance	C. Five-year total
1. Total Spend	190.7	184.5	375.2
2. Total Adjusted Allowance	191.6	144.9	336.5
Performance (1-2)	-0.9	39.6	38.7

Unlike previous years, WWU has overspent against its allowance by £12.8m in 2023/24. Total expenditure has reached £190.7m, slightly below allowance. This trend is expected to continue for the remainder of the price control with an overspend of £26.1m (40.3%) and £13.5m (16.8%) in years four and five respectively.

Overall, across the price control, WWU forecast to overspend by £38.6m (11.5%).

Drivers of underspend in years one and two, and overspend in later years, is driven by the commencement of works to later in the price control, economic conditions including cost pressures as a result of inflation, and underspending in the early years of the price control, on areas like IT and vehicles, which is reversed with overspending in the latter years.

LTS, Storage and entry: Total spend in 2023/24 was £38.2m which is almost double spend on the previous two years. Whilst WWU overspent against allowance by around £1.1m in the third year, in total to date it has an underspend of £14.4m.

WWU explain that in 2023/24 it completed its investment programme, which helped ensure the safety and integrity of the LTS system. It also notes that works are ongoing to replace legacy infrastructure which will help reduce emissions and address obsolete components.

Connections: In 2023/24, WWU spent £7.7m on connections, taking the total spend on connections over the first three years to £29.3m and is £7.0m above allowance for this period. WWU explain that connections request declined by 16% compared to the previous year and, at the time of discussions with the GDN, it forecast that this will continue throughout RIIO-2 due to government legislation, incentives to encourage the uptake of low carbon alternatives, and the cost-of-living crisis. Whilst volumes of work have reduced, WWU explain that cost pressures in labour and materials have increased.

Reinforcement: WWU spent £3.4m in the third reporting year, with an underspend of £1.1m. This underspend mirrors the previous two years, with a combined figure of £4m to date.

WWU explain that total mains reinforcement fell by ~50% in 2023/24 resulting in 10km of works being completed. General and specific mains works also decreased by a similar amount over the same period, with 4.3km and 5.7km of work completed respectively. Overall unit rates were higher, driven by cost pressures from labour, reinforcement infrastructure and an increase in reinstatement costs.

WWU forecast that Reinforcement volumes will rise over the final two years of RIIO-GD2 along with investment in Large Load Connections for which it has been successful in its reopener application to offset the cost of delivery which was not in the RIIO-GD2 final determination allowances

Governors: To date, WWU report an underspend of £4.2m against the allowance.

WWU advise that in the third year of the programme almost half of the planned governor programme has been completed, and that it is on track to deliver against its commitments by the end of the price control.

Other Capex: Across the three-year period, spend has exceed allowance by £14.6m. WWU forecast that this will continue throughout the price control which, if realised, would result in a significant overspend of £45.9m.

The drivers for the current and anticipated overspend include:

- expenditure on vehicles increased significantly due to the post-pandemic recovery and supply chain delays. Investments focused on replacing end-of-life vehicles to ensure a fit-for-purpose fleet, despite rising costs and delays.
- Various plant and equipment items were replaced to support operational activities, with inflation and rising raw material prices impacting costs.
- Significant investments were made in new depots and refurbishments, although global supply chain issues and planning delays affected timelines and costs.
- IT and Telecoms expenditure focused on maintaining and upgrading the technology landscape to ensure secure and efficient operations, with key projects enhancing workforce connectivity and flexibility.

Capex - Additional comment

- Decline in demand has largely been driven by the introduction of legislation aimed at phasing out the installation of gas boilers in new and existing homes. Initially, the UK government planned to ban the sale of gas boilers by 2035. However, recent changes to this legislation have removed the proposed ban, reflecting a shift in policy. The government now focuses on reducing the installation of gas boilers in new homes from 2025 and promoting alternative heating solutions, such as heat pumps

We will closely monitor the impact of these legislative changes on the demand for gas connections and will provide updates on these assessments in future annual reports to keep stakeholders informed of any significant developments

Replacement expenditure (Repex)

Repex is a specific subset of Capex which focuses on the replacement of aging, obsolete or unsafe gas distribution infrastructure. Repex forms a main part of GDN's expenditure to ensure safety and reliability of the gas distribution networks.

In 2023/24, GDNs had a combined spend of £962m which is almost £115m (14%) greater than allowance. This is a significant increase from year one, where GDNs underspent by £73.9m, and year two where spending was in line with allowance.

The three-year combined spend is £2,638.9m which is £43.4m or 1.7% above allowance.

GDNs forecast to maintain overspend for the final two years and, as a result, forecast spend across the RIIO-GD2 period is estimated to be £222.6m (5.2%) above allowance. There are a number of factors that influence this overspend, including the delay in starting works due to the Covid-19 pandemic and a number of economic factors.

Cadent

Table A2.13: Cadent Repex costs v allowance¹³

<i>£m 18/19</i>	A. Three-year actual vs adjusted allowance	B. Two-year spend forecast vs adjusted allowance	C. Five-year total
1. Total Spend	1,400.6	926.3	2,326.9
2. Total Adjusted Allowance	1,341.1	888.3	2,229.4
Performance (1-2)	59.5	38.0	97.5

Over the three years of RIIO-2 as a whole, EoE and London exceeded allowance but by less than in 2023/24. NW, over the three years, exceeded allowance by around 14% above allowance, whilst WM has reported an underspend.

Total spend across the Cadent group to date is £1,400.6m against an allowance of £1,341.1m resulting in an overspend of £59.5m.

Across RIIO-GD2, the picture is similar to cumulative three-year position with EoE and London overspending and NW and WM underspending. Total costs forecasts across RIIO-2 are estimated to be £2,326.9 which is £97.5m above allowance.

Cadent explain that the anticipated performance position is the result of a number of different factors, including a challenging settlement at final determination which applied stretching efficiency assumptions; Inflationary pressures being exacerbated by the competitive market for resources (labour) and the rising cost of materials. The GDN also note that the complexity of the network in London, for instance, its dense population, complex underground networks, results in increased costs and delivery times.

Tier 2A Mains and Services:

Tier 2A Mains and Services are medium-sized iron gas pipes (>8 to <18 inches) that pose potential safety risks. Identified through a risk assessment model by the HSE, these pipes are replaced or decommissioned to ensure public safety and compliance with

¹³ This table includes Tier 1 Mains and Services costs and allowance. Details on performance of these can be found in section X above.

regulations. A volume driver mechanism has been applied to this category to ensure GDNs are only funded for the work the completed.

In 2023/24, Cadent have slightly underspent against its allowance of £1.14m by £0.4m. Going forward, Cadent forecast an increase in spend over the remaining two years, and it is currently forecast to exceed allowance by £1.5m.

As of year 3, Cadent has decommissioned a total of 6.3km of Tier 2A Mains. Current forecasts indicate that Cadent will deliver lower volumes of Tier 2A Mains and Services than the volumes set out in the RIIO-GD2 Final Determinations. Cadent explain that Predicting Tier 2A Mains can be challenging, which is why they are subject to a volume driver revenue adjustment mechanism. Cadent acknowledge that delivery to date is below forecast but it does anticipate an increase in workload in the fourth year of the price control which will closely align with its forecast of 28km.

Tier 2B and 3 Mains and Services:

Tier 2B involves Iron pipes with diameters above 8 and below 18 inches that fall below a risk action threshold may be subject to decommissioning or other risk management measures. These actions are justified by a cost-benefit analysis under the HSE Enforcement Policy for the Replacement of Iron Gas Mains.

Tier 3 involves iron pipes with a diameter of 18 inches or more may be subject to decommissioning or other risk management measures. These actions are justified by a cost-benefit analysis under the HSE Enforcement Policy for the Replacement of Iron Gas Mains.

For 2B Mains and Services, Cadent has overspent its cumulative allowance across the first three years by £1.6m, spending slightly above its allowance of £4.7m in 2023/24. Cadent forecast that it will increase spend in this area over the final two years, which would result in an overspend of £6.3m

For Tier 3 Mains and Services, the GDN spent £17m on an allowance of £7.1m in the third regulatory year. Cadent combined has spent £36.6m on an allowance of £27.3m.

Cadent has delivered 50% of 2B mains compared to the values set out in the Final Determinations and given the delays in year 1 due to Covid-19, this is a positive achievement. For Tier 3, Cadent has delivered 9.6km to date which is well under its linear target. Cadent explain that Tier 2B and Tier 3 are managed through the Network Asset Risk Measure (NARM) mechanism which allows networks to risk trade across asset groups so long as the overall Baseline Network Risk Output is achieved. As such, this is what it has done with these two tiers.

Other Repex (NARM categories excluding Tier 2B AND Tier 3)

This section is compiled of the following cost categories:

- Steel mains <=2” in diameter & services
- Diversions mains and services (partial NARM)
- MOB Risers
- Steel mains >2” in diameter & services
- Iron mains >30m from building mains & services
- Other policy & condition mains & services

In 2023/24, Cadent underspent against its allowance by £3.05m (2.7%). This is a reduction on the overall underspend to date (5.5%) however, across the price control Cadent are forecast to fall below allowance by £20.9m (4.0%). As with Tier 2B and 3, Cadent are able to risk trade across categories if it results in improved outcomes.

SGN

SGN’s spend across the first three years is in line with allowance, and the GDN forecasts that it will overspend by £13.9m (4.5%) across RIIO-2 period as a whole.

Table A2.14: SGN Repex costs v allowance¹⁴

£m 18/19	A. Three-year actual vs adjusted allowance	B. Two-year spend forecast vs adjusted allowance	C. Five-year total
1. Total Spend	648.4	542.6	1,191.1
2. Total Adjusted Allowance	681.4	452.4	1,133.8
Performance (1-2)	-32.9	90.2	57.3

Repex spend varies significantly across SGN regions.

SGN Scotland Repex costs were in line with allowance in year three. This is the exception, with the region’s actual and forecast spend being below allowance in all other years in the price control. Overall, the region is forecast to underspend against its allowance by £33.8m (-10%).

The picture in SGN Southern is different. For the first two years, Southern underspent by £35.1m (10.6%). In year three, Southern overspent by £23.6m (14.9%) and this is forecast to continue with a £49m and £53.6m, in regulatory years four and five respectively, spend above allowance. Across the price control Southern are forecast to overspend by £91.1m (11%).

Drivers of under and overspend are:

¹⁴ This table includes Tier 1 Mains and Services costs and allowance. Details on performance of these can be found in section X above.

- **Overspend in Southern:** For years three to five, overspend is primarily due to challenges in finding suitable contractors. This issue has forced Southern to pay higher rates and accept greater cost risks, resulting in the delivery of fewer target lengths than outlined in the RIIO-GD2 Final Determinations.
- **Underspend in Scotland:** The underspend is attributed to fewer contractor challenges compared to Southern, as there is less competition with other utility companies. Consequently, the unit rates in Scotland are significantly lower.
- **Increased Repair Workload:** There has been a significant increase in repair workload due to higher rates of deterioration in Tier 2, Tier 3, Steel, and Tier 1 pipes beyond the 30m threshold. SGN considers allowances did not account for this increased workload.
- **Decline in Productivity:** Productivity has declined mainly due to the nature of work on lower-risk mains, which has slowed the rate of decommissioning.

Tier 2A Mains and Services: During the third reporting year, SGN (Scotland and Southern) did not identify any Tier 2A pipes that breached the Risk Action Threshold; therefore, no volumes were recorded. This mirrors the previous two years where no Tier 2A mains were decommissioned. SGN forecast that they will decommission a total of 3.2km which is 6.9km below the values set out in the Final Determination. Allowances will be adjusted downward through the volume driver mechanism to reflect this under-delivery compared to forecast.

Tier 2B and 3 Mains and Services: As of 2023/24, SGN has underspent on its allowance for Tier 2B by £3.4m or 24.1%. SGN forecast that by the end of RIIO2, it will reverse the current trend and will exceed allowance by £1.7m. As of year 3, SGN has commissioned a total of 25.2 km of 2B mains against a target, as set out in the RIIO-GD2 FDs, of 47.4 km.

For Tier 3, SGN are currently £5.5m above the allowance of £11.3m for the three-year period to date. Across RIIO-2, SGN forecast that this overspend will decline to £4.2m against an allowance of £18.4m. SGN has, as of 2023/24, commissioned a total of 14.7 km of Tier 3 mains which is over half (54%) of the target set out at FDs.

The GDN explained that whilst it experienced a delay in carrying out work in year 1, due to Covid-19, it has made good progress in catching up in years 2 and 3. The GDN has however notified Ofgem that volumes agreed at final determination were insufficient as it has seen an increase in deterioration. The GDN is currently assessing whether it can go beyond agreed GD2 volumes however, it is of the view that it is unlikely to clear the backlog of works. Ofgem will continue to monitor this situation and will provide an update going forward.

NGN

NGN spend in the third year of the price control was £7.9m less than allowance and given that it has underspent in each of the two prior years, this takes the total to date to £17.6m. NGN forecast this to continue, with a £35.7m underspend across the five-year period.

Table A2.15: NGN Repex costs v allowance

<i>£m 18/19</i>	A. Three-year actual vs adjusted allowance	B. Two-year spend forecast vs adjusted allowance	C. Five-year total
1. Total Spend	300.3	206.1	506.4
2. Total Adjusted Allowance	312.3	202.1	514.3
Performance (1-2)	-12.0	4.0	-7.9

NGN has reported a large underspend against allowance in years one and two of RIIO-GD2 (£7.5m (6.9%) and £10.7m (10%) respectively). In 2023/24, NGN reversed this trend with a £6.2m (6.3%) overspend. This is forecast to continue in year four, and in year five current predictions are that that spend will be in line with allowance.

Across the RIIO-2 period, NGN are forecast to underspend slightly by £7.9m (1.5%). Drivers of over/underspend include additional Tier 1 workload delivery, which allowed NGN to recover from the previous year's shortfall and exceed its target. Increased delivery costs have also significantly impacted overall costs across all tiers.

Tier 2A Mains and Services: As of year three, NGN spent £4.25m and across the price control it forecasts a total spend of £5.0m. This equates to a current underspend of £1.4m, reducing slightly over the whole of RIIO-2 to £1.2m. NGN explain that Tier 2A Mains are harder to predict and are also subject to a volume driver. As of year 3, NGN has decommissioned 5.6kmkm of Tier2A mains replacement, and it expects to deliver 8.2km over RIIO-2, which is slight below of the Final Determination volume of 10.1km.

Tier 2B and 3 Mains and Services: Across the whole period, so far, NGN has spent £23.2m which is slightly under the allowance by £0.78m. In 2023/24, NGN has delivered nearly 60km of mains which is in line with its Final Determination volumes and, according to the GDN, it forecasts to meet the 2b target for RIIO2.

For Tier 3, NGN spent £6.6m in the third reporting year, and £13.4m across 2021 to 2024. This represents an overspend of £3.6m this year and £4.2m to date. NGN has made good progress to date and forecast that it will meet its target workload by the end of the price control.

WWU

WWU overspent by £9.4m in the third reporting year, making it the only GDN to exceed the allowance (£6.4m) during the RIIO-2 period to date. WWU forecasts that this trend of spending above the allowance will continue for the final two years, resulting in a total overspend of £17.2m (13.7%) above the figures set at FDs.

Table A2.16: WWU Repex costs v allowance¹⁵

£m 18/19	A. Three-year actual vs adjusted allowance	B. Two-year spend forecast vs adjusted allowance	C. Five-year total
1. Total Spend	289.6	213.9	503.4
2. Total Adjusted Allowance	260.7	166.9	427.6
Performance (1-2)	28.9	46.9	75.8

In year three, the GDN overspent by £35.5m (42%). This overspend is currently forecast by WWU to be £75.8m (17.7%) across the whole price control period.

WWU explain that overspend is being driven by several factors, including the need to catch up from under delivery in the first year due to the pandemic, increased unit costs compared to Business Plan forecasts due to supply chain issues, inflationary pressures, and local authority traffic management costs.

Additionally, WWU believed the Repex allowance was insufficient, as stated in its CMA appeal. There was also more Repex work than forecasted in its RIIO-GD2 Business Plan. Increased labour costs due to a 7% churn of industrial staff, which raised recruitment and training expenses, and increased challenges with contractors, resulting in a 23% turnover rate, further added to the cost pressures on the Repex workload.

Tier 2A Mains and Services: This year, WWU spent £0.26m and £0.64m to date. WWU had a relatively low Final Determination volume of 3.3km for the RIIO-2 period, of which it has already delivered 2.8km.

Tier 2B and 3 Mains and Services: WWU spent £9.4m in 2023/24 on 2B mains and services, resulting in an overspend of £2.43m. This is a significant increase compared to the combined expenditure of the previous two years. Despite this, WWU has underspent by £5.9m across the price control period so far. To date, WWU has delivered 59 km against its Final Determination volume of 139.9 km.

For Tier 3, WWU has spent a modest £0.34m over the first three years, resulting in a £5m underspend for the period to date. WWU attributes this underspend to the NARM mechanism, which allows it to trade risk across different asset groups, a strategy it has employed with Tier 3 allowances.

¹⁵ This table includes Tier 1 Mains and Services costs and allowance. Details of these can be found in section 2 above.

Repex - Additional comment

We will continue working with the networks to track their progress in delivering what was agreed at RIIO-GD2 FDs. We will continue to focus on ensuring spend is efficient and generates value for money for customers. As discussed above, we recognise that the NARM framework allows in-period flexibility among asset management Repex workload activities so that GDNs can appropriately and efficiently meet risk reduction targets. We expect detailed, clear and transparent reporting at close out to ensure that the related accounting and risk trading is reasonable and appropriate.

Appendix three: Capital Projects PCD

The purpose of this Price Control Deliverable (PCD) is to hold companies accountable for the delivery of specifically funded capital projects. The PCD mechanism ensures that funding is returned to customers if the output is not fully delivered by the end of the period.

As of 2023/24, one project has been fully completed, and all other projects are on track for completion by March 2026, except for one element of a project that was cancelled.

Cadent

Project name: Lowestoft
Licence Condition: Sc. 3.12 Capital Projects PCD
Description of anticipated Output: Replace interim PE pipes within the service tunnel at Lowestoft Harbour with a permanent 8” steel pipe.
Delivery date: 31 March 2026
Total Allowance: £2.25m
Status: Delivered
Cadent info: The Lowestoft Harbour project was completed in the first year of RIIO-GD2 with a permanent steel pipe.

Project Name: Capacity upgrades > 7bar
Licence Condition: Sc. 3.12 Capital Projects PCD
Description of anticipated Output: Upsize the following 13 sites to meet peak 1-in-20 year demand: EoE: March, Maltby, Eye Green Offtake, West Winch Offtake, Teversham, Westfield. NW: Ashton Under Lyne, Thornton, Barrowford, Longridge Road, Hambleton PRI. WM: Dawley, Kinver.
Delivery Date: 31 March 2026
Status: All upgrades on track with the exception of one that was cancelled
Total Allowance: £29.34m
Cadent Info: For the 13 capacity upgrades, one project (Hambleton PRI) is cancelled, one project was completed in 2023/24, three projects are in construction and expected to be completed in 2024/25, six projects are in detailed design and planned for delivery in 2025/26, one project is in conceptual design, and one project has had a feasibility study completed.

Project Name: Offtakes & PRS Metering
Licence Condition: Sc. 3.12 Capital Projects PCD
Description of anticipated Output: Replace the flow weighted average calorific value metering systems at the following offtake sites: EoE: Great Wilbraham, Matching Green, Sutton Bridge, Royston, Walesby, Bacton, Kirkstead, Brisley. London: Horndon, Dunstall Green Inter-LDZ. NW: Warburton, Partington, Eccleston. WM: Alrewas (A), Leamington, Hydes Pastures Inter-LDZ, Atherstone Inter-LDZ, Rugby.
Delivery Date: 31 March 2026
Status: On track
Total Allowance: £16.88m
Cadent Info: For the 18 Offtake sites, three projects were completed in 2023/24, six projects are in construction and expected to be completed in 2024/25, one project is in detailed design with the construction tender under evaluation, and eight projects are in detailed design and planned for delivery in 2025/26.

NGN

Project Name: TransPennine
Licence Condition: Sc. 3.12 Capital Projects PCD
Description of anticipated Output: Carry out diversionary works required for the TransPennine electrification upgrade scheme for Ridge Road overcrossing, Dewsbury 17bar overcrossing, Austhorpe Lane overcrossing, and distribution crossings (intermediate, medium and low pressure).
Delivery Date: 31 March 2026
Status: On track
Total Allowance: £19.14m
<p>NGN Info: The LTS asset diversions for the Network Rail Trans-Pennine Upgrade (TRU) project are progressing at different stages:</p> <ul style="list-style-type: none"> • TRU West Scheme: Reduced from three to two diversions, saving costs. Expected completion in Autumn 2024. The remaining diversions at Heaton Junction are set to finish by January 2025, with significant funding from Network Rail. • TRU East Scheme: Diversions have resumed. Ridge Road is nearing land negotiation completion, while Austhorpe Lane is delayed due to ongoing negotiations. A trenchless crossing contractor tender is due in July 2024. Both schemes aim for 2025 delivery, starting in Q4 of Year 4. <p>These projects depend on Network Rail's requirements, and changes could lead to suspension or cancellation.</p>

Project Name: Overcrossings
Licence Condition: Sc. 3.12 Capital Projects PCD
Description of anticipated Output: Remediate 45 overcrossings known to have extreme deterioration in asset condition, and carry out security upgrades at 63 overcrossings.
Delivery Date: 31 March 2026
Status: On track
Total Allowance: £8.14m
NGN Info: Under this PCD, NGN aims to deliver 39 condition upgrades, 11 removals, 2 replacements, and 67 security upgrades for £8.4m over RIIO-2. In Year 3, NGN completed 5 condition upgrades, 5 removals, and 17 security upgrades. The running cost to date is £1.26m, slightly exceeding the £833k allowance. This includes costs for future schemes, significant expenses for agreements with Network Rail, and licenses for the EA and Canals & Rivers Trust. NGN forecasts that costs will exceed the allowance by around £53k.

SGN

Project Name: RO2 Dunkeld
Licence Condition: Sc. 3.12 Capital Projects PCD
Description of anticipated Output: Construct a new pressure reduction station at Dunkeld and a new IP main from the pressure reduction station to the outlet of Logierait PRS. Abandon the elements of the existing steel HP pipeline with compromised integrity from Dunkeld to Logierait and install a new district governor to receive gas from the new IP pipeline.
Delivery Date: 31 March 2026
Status: On track
Total Allowance: £23.11m
SGN Info: PRS commissioned, IP laid and being commissioned, uprating complete

Project Name: T8: Pitcairngreen to Huntingtower - R04 and R05
Licence Condition: Sc. 3.12 Capital Projects PCD
Description of anticipated Output: Reinforce the Pitcairngreen to Huntingtower pipeline (supplying Huntingtower PRS) by installing a new pipeline and facilities to allow Inline Inspection of the new pipeline.
Delivery Date: 31 March 2026
Status: On track
Total Allowance: £6.61m
SGN Info: Reinstatement of washout complete, on target for completion

Project Name: E&I Upgrade Programme
Licence Condition: Sc. 3.12 Capital Projects PCD
Description of anticipated Output: The full, or partial, upgrade of the required electrical, instrumentation and control assets at offtakes and PRS sites: Offtake sites: <ul style="list-style-type: none"> • Scotland Gas Networks plc: 5 Sites • Southern Gas Networks plc: 2 Sites PRS sites: <ul style="list-style-type: none"> • Scotland Gas Networks plc: 4 Sites • Southern Gas Networks plc: 23 Sites
Delivery Date: 31 March 2026
Status: On track
Total Allowance: £7.38m
SGN Info: <ul style="list-style-type: none"> • Scotland: Programme of 9 projects (3 delivered, 6 in flight, all approved). • Southern: Programme of 25 projects (20 delivered, 5 in flight, all approved).

Project Name: Newton Mearns and Waterfoot PRS
Licence Condition: Sc. 3.12 Capital Projects PCD
Description of anticipated Output: Decommission the existing Newton Mearns PRS and Waterfoot PRS. Construct a new PRS and new outlet pipework to connect the Newton Mearns Grid and Waterfoot Grid.
Delivery Date: 31 March 2026
Status: On track
Total Allowance: £8.34m
SGN Info: Alternative delivery plan progressing. Materials procured, Jan 25 for main laying

Project Name: Provan PRS
Licence Condition: Sc. 3.12 Capital Projects PCD
Description of anticipated Output: Full site rebuild of Provan PRS (Beardmores and City), replace above ground pipework (HP, MP, and Local MP) with buried pipelines, and install facilities to allow Inline Inspection of the new pipeline.
Delivery Date: 31 March 2026
Status: On track
Total Allowance: £13.63m
SGN Info: Significant cost pressures. Project on target

Project Name: Mappowder
Licence Condition: Sc. 3.12 Capital Projects PCD
Description of anticipated Output: Replace the pre-heating system and pressure control system at Mappowder NTS offtake.
Delivery Date: 31 March 2026
Status: On track
Total Allowance: £5.10m
SGN Info: Mechanical commissioning expected November 2024

Project Name: Winkfield Offtake - System 1 (South East)
Licence Condition: Sc. 3.12 Capital Projects PCD
Description of anticipated Output: Replace the PRS pre-heating system and pressure control systems including the two stream slam-shut valves on the Winkfield South East LDZ Offtake site.
Delivery Date: 31 March 2026
Status: On track
Total Allowance: £7.76m
SGN Info: Mechanical commissioning expected November 2024

Project Name: Winkfield Offtake - System 2 (South East)
Licence Condition: Sc. 3.12 Capital Projects PCD
Description of anticipated Output: Replace the PRS pre-heating system and pressure control systems including the two stream slam-shut valves on the Winkfield South LDZ Offtake site.
Delivery Date: 31 March 2026
Status: On track
Total Allowance: £7.32m
SGN Info: Mechanical commissioning expected November 2024

Project Name: REDACTED
Licence Condition: Sc. 3.12 Capital Projects PCD
Description of anticipated Output: Decommission a 434m section of 12” steel intermediate pressure main located within the bridge structure and service tunnel. The existing main will be replaced with a suitable and fit for purpose alternative.
Delivery Date: 31 March 2026
Status: On track
Total Allowance: £4.81m
SGN Info: Negotiations near completion

WWU

Project Name: HN039 LTS Pipeline Replacement
Licence Condition: Sc. 3.12 Capital Projects PCD
Description of anticipated Output: Replace 13km of the HN039 pipeline to meet the latest IGEM/TD/1 standards.
Delivery Date: 31 March 2026
Status: On track
Total Allowance: £13.02m
WWU Info: WWU is on track to complete the LTS pipeline replacement in Wales by the end of the price control period, although spending will be delayed compared to the initial plan. The Derwenlas to Aberdovey pipeline (HN039) project is also on schedule and is expected to stay within the £13.0m budget for RII0-GD2