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Network Performance Summary **2018-19**

RIIO-GD1

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Introduction

This report provides a summary of the Gas Distribution Networks (GDNs) output delivery and financial performance for year six of the current eight-year RIIO-GD1 price control (RIIO-GD1). The report summarises the performance of GDNs based on data and supporting information submitted by them about the following areas:

1. Delivery against output targets in 2018-19;
2. Expenditure in cost categories to date (including the key drivers of any under/over spend against allowances and forecast spend across the RIIO-GD1);
3. Updated Return on Regulated Equity (RoRE); and
4. An estimate of the average customer bill impact.

Key messages

Annual outputs: GDNs have continued to build on progress made in previous years, with most GDNs exceeding their annual output targets and are on track to achieve their RIIO-GD1 targets. Further improvements in some outputs are still required and Ofgem will actively monitor performance for those outputs and take action to protect consumers interests where appropriate.
Totex performance: GDNs forecast to spend a combined £16.7 billion over RIIO-GD1. That is £2.1 billion (11.2%) less than their collective totex allowances. Key areas of underspend are savings on iron mains replacement programme expenditure (repex) and operational expenditure (opex).
RoRE: GDNs current RoRE range for RIIO-GD1 is between 10.1% and 13.2%.
Customer bill impact: It is estimated that the average GB customer in 2019-20 will pay £118 in real 2018-19 price terms for gas distribution costs .

Unless otherwise stated, all financial values in this report are in 2018-19 prices.

Gas Distribution Network overview and context

Gas Distribution Networks (GDNs) are responsible for operating, maintaining and extending the gas distribution network, and for providing a 24-hour gas emergency service within Great Britain (GB).

There are eight GDNs operating in GB, managed by the four companies listed in Figure 1 below. To ensure value for money for consumers, Ofgem regulate GDNs through periodic price controls. The price controls we set determine the amount of revenue that the GDNs can earn and stipulate the levels of performance we expect GDNs to meet.

To set our price controls we use the RIIO (Revenue = Incentives + Innovation + Outputs) framework. The current price control, RIIO GD1, started in March 2013 and lasts for a period of 8 years until April 2021. The information provided in this report is for 1 April 2018 – 31 March 2019, the sixth year of RIIO-GD1.

Figure 1: Gas Distribution Networks

Company	Gas Distribution Network (GDN)	GDN abbreviation
Cadent	East of England	EoE
	North London	Lon
	North West	NW
	West Midlands	WM
Northern Gas Networks Limited	Northern	NGN
SGN	Scotland	Sc
	Southern	So
Wales & West Utilities Limited	Wales and West	WWU

The gas distribution network consists of iron mains, polyethylene and steel pipes. Aging iron mains have a high risk of corrosion and fracturing. That has the potential to cause major incidents including explosions and loss of service. As a result of that risk, GDNs are required by the Health and Safety Executive (HSE) to carry out a programme ("the repex programme")

of iron mains replacement. The repex programme aims to replace the highest risk pipes and reduce the risks of major incidents occuring.

1. Outputs performance

Table 1: GDN 2018-19 output performance

Key	Score based on annual, cumulative performance and Ofgem's view of GDNs achieving RIIO-GD1 target
	GDNs have successfully achieved an annual output or are on-target to meet the RIIO-GD1 target.
	Some GDNs at risk of failing the eight-year output commitment.
	Some GDNs failed to achieve annual output or we forecast that an eight-year output commitment will fail.

As part of RIIO-GD1, we set a range of outputs which the GDNs are required to deliver. Outputs form the cornerstone of the price control framework and reflect the minimum level of service that consumers can expect from GDNs.

Outputs fall into the six categories listed below:

Safety – GDNs must ensure that they are compliant with legislation that is enforced and regulated by HSE. Overall, GDNs perform well in this area and continue to respond appropriately to notices issued by HSE.

The repex programme is one of the primary measures for this output category. In 2018-19 GDNs continued to deliver the repex programme as mandated by HSE. Five out of the eight GDNs have now exceeded their total output target for RIIO-GD1. The remaining three networks (Cadent's North London, West Midlands and WWU) are on track to achieve their total output target before the end of RIIO-GD1.

Network Reliability – The reliability of the distribution network for 2018-19 was 99.998%. While network reliability has been consistently high over RIIO-GD1 there are some specific performance issues relating to the networks managed by Cadent.

In May 2019 Cadent agreed to pay a total of £24m for past failures related to reliability. This included leaving residents in blocks of flats without gas for longer than necessary. Cadent has committed to double the statutory compensation payments it makes to customers who

experience an unplanned gas supply interruption for longer than 24 hours, and will establish a specialist team to improve their interruptions performance in blocks of flats.[1]

We are continuing to monitor Cadent's performance in this area. If Cadent fails to deliver improvements in its network reliability we may revisit these issues and take appropriate action to protect consumers, including possible enforcement action.[2]

In addition to the above payment, Cadent has committed to set up a community fund of circa £20m to support consumers in vulnerable circumstances.

The number of unplanned interruptions experienced by NGN has risen since 2016-17. NGN has told Ofgem that, despite that increase, it is confident that it will meet its target for this output. We think there is a risk that NGN may miss its target and this risk is reflected in our output overview score in the supplementary Datafile table 2.1.

Guaranteed standards of performance (GSOPs) set the minimum levels of service which GDNs must provide to consumers. If a network fails to provide the minimum service level specified in the GSOP it must make a payment to affected consumers. In 2018-19 GDNs made payments of c.£3.9m to consumers (please refer to supplementary Datafile tables 2.310 and 2.320 for the breakdown of those payments).

Customer satisfaction - This is measured by customer satisfaction survey scores. The average survey score for 2018-19 improved slightly from 8.81% in 2017-18 to 8.85%. Two networks, Cadent North London and West Midlands, failed to meet their target customer satisfaction survey scores for, respectively, main gas connections and planned work (please refer to supplementary Datafile table 2.260 for additional data). However, we note the improvement in the average scores for both these networks upon previous years and this has been reflected in their reward under the incentive.

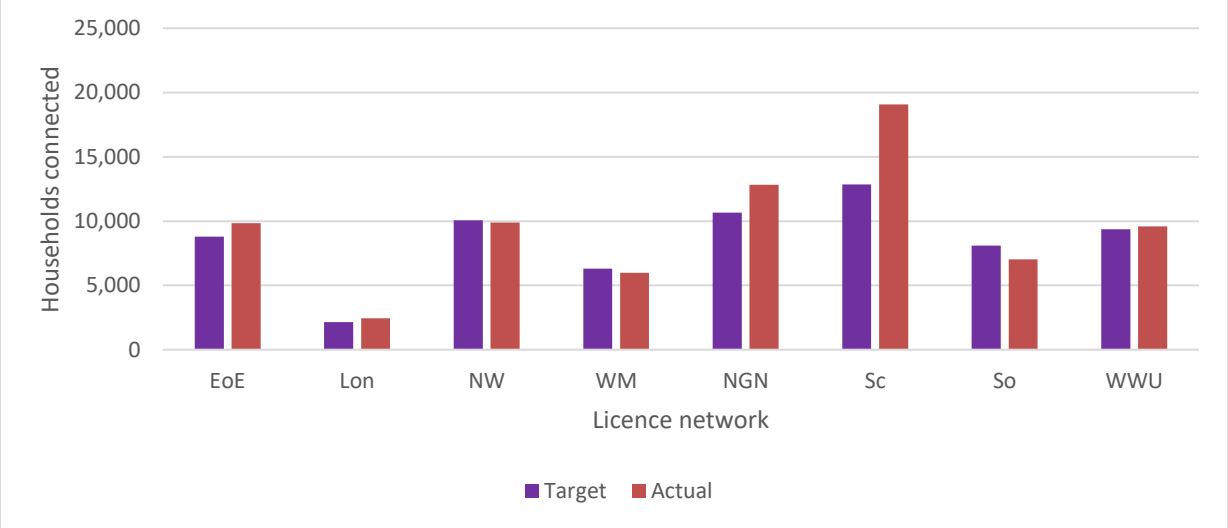
Connections – During 2018-19 GDNs made just under 64,000 new gas connections. That is an increase of 4.4% on the previous year. The new connections in 2018-19 were made up in the following proportions: 34% from new housing; 42% from existing housing; 5% from non-domestic and 19% from fuel poor connections as part of the GDNs' social obligation output. We provide further information on the social obligation output below. (Please also see supplementary Datafile table 2.300 for more information).

[1] https://www.ofgem.gov.uk/publications-and-updates/cadent-pays-24-million-past-failures-and-establishes-20-million-community-fund

[2] Any decision to take enforcement action will be made in accordance with Ofgem's Enforcement Guidelines - https://www.ofgem.gov.uk/system/files/docs/2017/10/enforcement_guidelines_october_2017.pdf

Social obligations – GDNs have committed to connecting more than 91,200 fuel poor households to the gas network during RIIO-GD1. That commitment is delivered under the Fuel Poor Network Extension Scheme (FPNES). To date, GDNs have connected nearly 76,600 fuel poor households (84% of the total target for RIIO-GD1). GDNs are forecast to exceed the 91,200 target for RIIO-GD1 and achieve 97,000 connections by the end of RIIO-GD1. GDNs have however, noted that meeting their FPNES targets is now more challenging given our decision to change the scheme criteria.[3]

Figure 2: RIIO-GD1 FPNES connections - cumulative as at year 6



SGN Southern, and Cadent's North West and West Midlands networks have reported a shortfall in their individual FPNES connection targets but forecast that they will make up that shortfall by the end of RIIO-GD1 (pPlease refer to supplementary Datafile Table 2.330 for GDNs forecast figures against the RIIO-GD1 target.

GDNs have been actively promoting carbon monoxide awareness, with a particular focus on vulnerable groups including the elderly and primary school aged children and Cadent as part of its settlement stated above has committed to set up a community fund of circa £20m to support customers in vulnerable circumstances.

Environmental outputs – The sector total annual business carbon footprint (from running their business excluding shrinkage), measured in tCO2e, rose marginally (by 0.2%) from 140,829 in 2017-18 to 141,065 in 2018-19. The increase was primarily attributable to Cadent East of England and SGN Scotland networks which recorded increases of 7.4% and 6.8% respectively. All GDNs are forecasting to meet their RIIO-GD1 business carbon footprint

[3] Decision on change to the criteria for the Fuel Poor Network Extension Scheme September 2017

targets (please refer to supplementary Datafile Tables 2.030 and 2.040 for additional data on GDNs business carbon footprint, shrinkage and leakage volumes).

2. Innovation

In 2018-19, GDNs were awarded £15.2m under the Network Innovation Competition (NIC) to continue developing two flagship innovation projects. The first project aims to develop a robotic roadworks and excavation system to lower the cost of, and improve the safety and environmental impact of, utility excavations and activity. The second project is to continue to operate pilot hydrogen supplies (the H21 pilot). The purpose of the H21 pilot is to provide quantified safety based evidence to confirm that the current gas distribution networks are suitable to transport 100% hydrogen (please refer to supplementary Datafile Tables 2.340 and 2.350 for additional information on the current innovation projects).

GDNs are incorporating various innovative practices into their normal ways of working in order to reduce operational costs, minimise disruption to consumers and reduce the impact of their work on the environment. Examples of innovative practices that have been adopted include greater use of robots inserted into pipes to carry out condition surveys and repairs, as well as investment in expert IT systems for better staff rota scheduling to match work demand patterns.

3. Totex Performance and Drivers

The totex approach to setting price controls aims to incentivise companies to deliver outputs at the lowest total cost, without preferring cost savings derived from capital expenditure (capex) or operating expenditure (opex) solutions. This approach encourages GDNs to choose the most efficient way of meeting their outputs.

GDNs are incentivised to outperform their totex allowance as part of the Totex Incentive Mechanism (TIM). Through the TIM, any underspend against allowed totex is shared between the GDN and consumers. GDNs will retain approximately 63% of this underspend and the remainder will go back to consumers after allowing for corporation tax. It is estimated consumers will benefit by circa £700m from this arrangement over RIIO-GD1.

The totex allowances we provided GDNs have been adjusted since the start of RIIO-GD1 to account for uncertainty mechanisms and voluntary company returns and now represent a combined total of £18.8 billion (2018/19 prices).

Table 2: GDN cumulative totex expenditure against allowance to date

£m, 2018-19 prices	(Cumulative to date – 2013-14 to 2018-19)			
	Adj'd Allowance[4]	**Expenditure**	**Difference**	
	£m	**£m**	**£m**	**%**
EoE	2,142	1,989	(153)	7.1%
Lon	1,902	1,617	(285)	15.0%
NW	1,594	1,443	(151)	9.5%
WM	1,235	1,060	(175)	14.2%
NGN	1,651	1,448	(203)	12.3%
Sc	1,356	1,082	(274)	20.2%
So	2,737	2,280	(456)	16.7%
WWU	1,678	1,347	(331)	19.7%
Total	**14,295**	**12,267**	**(2,028)**	**14.2%**

The cumulative underspend for the sector against this allowance to date is 14.2%. This is predominately driven by savings from the three key cost categories summarised in Table 4 below.

Table 3: Forecast GDN totex expenditure against allowance across RIIO-GD1

£m, 2018-19 prices	(Current RIIO-GD1 GDN forecast)			
	Adj'd Allowance	**Expenditure**	**Difference**	
	£m	**£m**	**£m**	**%**
EoE	2,814	2,722	(92)	3.3%
Lon	2,505	2,305	(201)	8.0%
NW	2,102	1,972	(131)	6.2%
WM	1,636	1,440	(196)	12.0%
NGN	2,185	1,931	(254)	11.6%
Sc	1,751	1,422	(329)	18.8%
So	3,568	3,089	(478)	13.4%
WWU	2,219	1,797	(421)	19.0%
Total	**18,781**	**16,678**	**(2,103)**	**11.2%**

GDNs are forecasting lower underspend for the remainder of RIIO-GD1 compared to their cumulative underspend to date. The forcecast underspend for RIIO-GD1 is 11.2% and the reduction relative to the current position is primarily due to GDNs undertaking more complex iron mains replacement works and anticipated higher labour and market cost pressures.

[4] Adjusted allowance - includes adjustment for Tier 2A and additional allowances for Physical Site Security, Streetworks (incl. forecasted), London Medium Pressure adjustment, fuel poor and Xoserve. These costs do not include PCFM policy adjustments.

Table 4: Forecast cost category underspend against allowance across RIIO-GD1

GD1 FORECAST UNDERSPEND BREAKDOWN (£m)					
Cost category	GD1 Allowance	Forecast	Underspend	% Underspend	As a Percentage of RIIO-GD1 forecast totex underspend
Repex	8,213	6,871	(1,343)	16.4%	63.9%
Opex	7,423	6,726	(697)	9.4%	33.2%
Capex	3144	3,082	(63)	2.0%	3.0%
TOTAL	**18,781**	**16,678**	(2,103)	11.2%	**100.0%**

Iron pipes replacement expenditure cost (repex programme):

The forecast underspend for the repex programme is c.£1,300m. This represents the largest slice (c.64%) of totex forecast underspend. Savings from this programme have been driven by GDNs increasingly opting to insert smaller polyethylene pipes into larger iron pipes as an alternative to complete pipe replacement. Additional savings have been derived from long term contracting approaches and the use of predictive analytics solutions/strategies to optimise the selection of pipes based on risk removed.

GDNs report that skilled labour shortages, due to growth in infrastructure and construction markets, is making it more difficult and more expensive for them to recruit and retain skilled labour. GDNs expect the skilled labour shortage to continue during the remainder of RIIO-GD1. That could result in a lower underspend than forecast.

Operational expenditure cost (opex):

The opex forecast underspend is c.£700m. The main drivers of this forecast underspend reported by GDNs include greater efficiencies in emergency and repair work undertaken and better utilisation of workforce. Some networks have also experienced cost savings as a result of the retention of legacy meter work contracts and the delay in the smart meter roll out.

Capital expenditure cost (capex):

The capex forecast underspend is £63m. GDNs have reported that the underspend is the result of better long term capex planning, which has reduced procurement costs and contract awards. The underspend figure is the net figure of overspends from Cadent's East of England and North West networks and NGN, offset by underspends by the five remaining networks. The overspends are largely driven by the networks implementing transformational strategies which include investing in additional Information Systems, properties and vehicles.

In addition to the efficiencies highlighted above, we also consider from the information provided by GDNs that the following have contributed to the underspend:

- **External factors:** circumstances out of the control of GDNs and that were unforeseeable when RIIO-GD1 was set, including weather and economic conditions.
- **Provision in the price control settlement:** assumptions made when RIIO-GD1 was set but which have not reflected the actual position during the operation of the price control.

GDNs are expected to embark on the most complex phase of their repex programme in the remaining two years of RIIO-GD1. If the reported skilled labour shortages and high labour costs anticipated materialise, that could lead to lower cost underspends being realised compared to current forecasts.

4. Rate of Regulatory Return on Equity (RoRE)

RoRE is made up of several components. The allowed equity return is the return on equity that a company would earn if their expenditure and allowance matched and there were no other incentives. Operational performance (totex) compares the totex allowance to a company's actual totex expenditure and any underspend or overspend is then shared between the company and consumers through the totex incentive mechanism. Operational performance (other) accounts for a company's overall incentive performance. Putting these three component parts together produces operational RoRE. Financing and tax performance is finally added to produce total RoRE.

We have calculated the current RoRE range as being between 10.1% and 13.2% across the GDNs. This is based on our own assessment of the value of GDNs' forecast performance for the end of RIIO-GD1. A summary of our assessment of the GDNs' RoRE performance is shown in figure 3 (comparing this year to last year) and table 5 (showing the RoRE based on notional gearing for RIIO-GD1 period: in other words, what the GDNs' performance would be if they had the level of equity/debt that we think an efficient company would have).

Figure 3: A summary of GDNs' RoRE performance is shown below. (Cadent & SGN shown at group level)

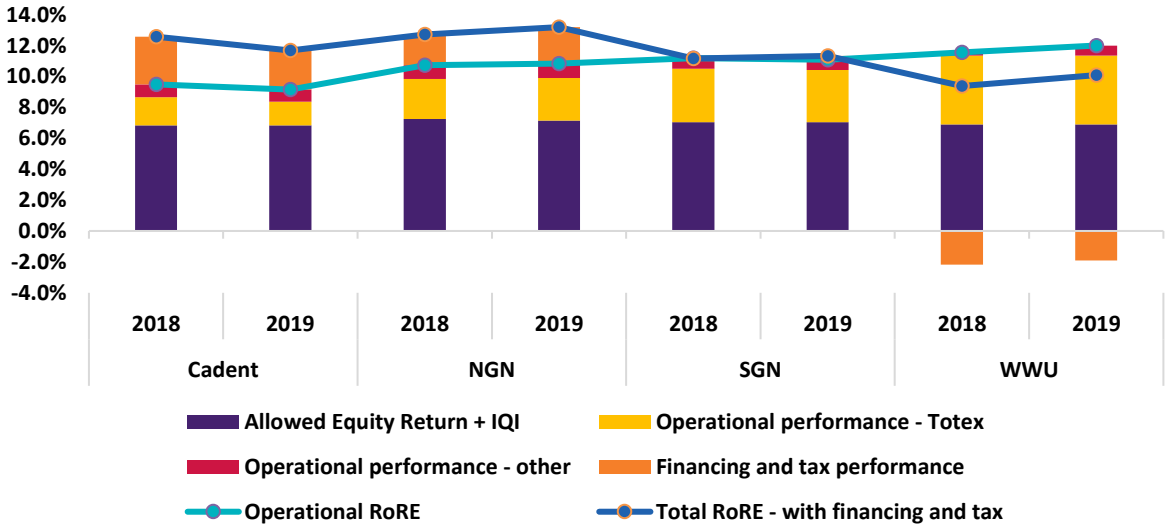


Table 5: RoRE based on Notional Gearing - RIIO-GD1 period (Cadent & SGN shown at group level)

	RIIO-GD1			
	Cadent	**NGN**	**SGN**	**WWU**
Operational RoRE	**9.2%**	**10.8%**	**11.1%**	**12.0%**
Financing and tax performance	2.5%	2.4%	0.2%	-1.9%
Total RoRE - with financing and tax	**11.7%**	**13.2%**	**11.3%**	**10.1%**

Accompanying this report is a regulatory financial performance annex that sets out our assessment of GDNs' regulatory financial performance during RIIO GD1. Our assessment is based on information that the GDNs have provided under the regulatory financial performance reporting (RFPR) process introduced last year.

5. Customer Bill Impact

Our tariff methodology provides an estimate of the overall cost of domestic energy bills. This includes estimates of the proportion of the overall cost of energy which is related to gas distribution. The methodology uses an average gas demand which is applied uniformly across all regions and over time.

Our latest assessment using this methodology estimates that the average domestic GB customer in 2019-20 will pay £118 per annum in real 2018-19 price terms for gas distribution costs.

6. Industry wide note

The way in which energy is supplied and consumed in Great Britain is expected to change significantly in the coming years following the introduction of the net zero carbon emission target ("zero carbon") in the Climate Change Act in June 2019. Net zero carbon seeks to achieve decarbonisation of the UK economy by 2050. It is expected to drive consumer demand for greener energy supplies in the short term as well as long term changes to the ways in which energy is supplied to cosumers including changes to the way gas is transported through the networks.

GDNs believe that gas will continue to be a core element of the UK's energy supply and are working collaboratively with other stakeholders to be at the forefront of decarbonisation solutions, including solutions looking into both bio-gas and hydrogen. Trials in the safety of transporting hydrogen on the current network have been funded under the H21 pilots and HyDeploy pilots. As the energy regulator, Ofgem is laying the foundation for a net zero economy whilst ensuring the networks are run efficiently and costs are kept to a minimum for consumers.

RIIO-GD1 ends in March 2021. GDNs submitted their final RIIO-GD2 business plans to Ofgem for the next price control, in December 2019. We are reviewing these and will engage with stakeholders throughout 2020 on RIIO-GD2. We aim to publish a final determination for RIIO-GD2 by the end of 2020. RIIO-GD2 will commence in April 2021 and will last for a period of five, rather than, eight years.

Additional note

This performance summary is an abbreviated version compared to previous years' annual reports. It highlights the key performance results for the sector in 2018-19 and their performance forecasts for the remainder of RIIO-GD1.

If you require additional performance data and GDN comparative analysis please refer to the supplementary Datafile published along with this report.