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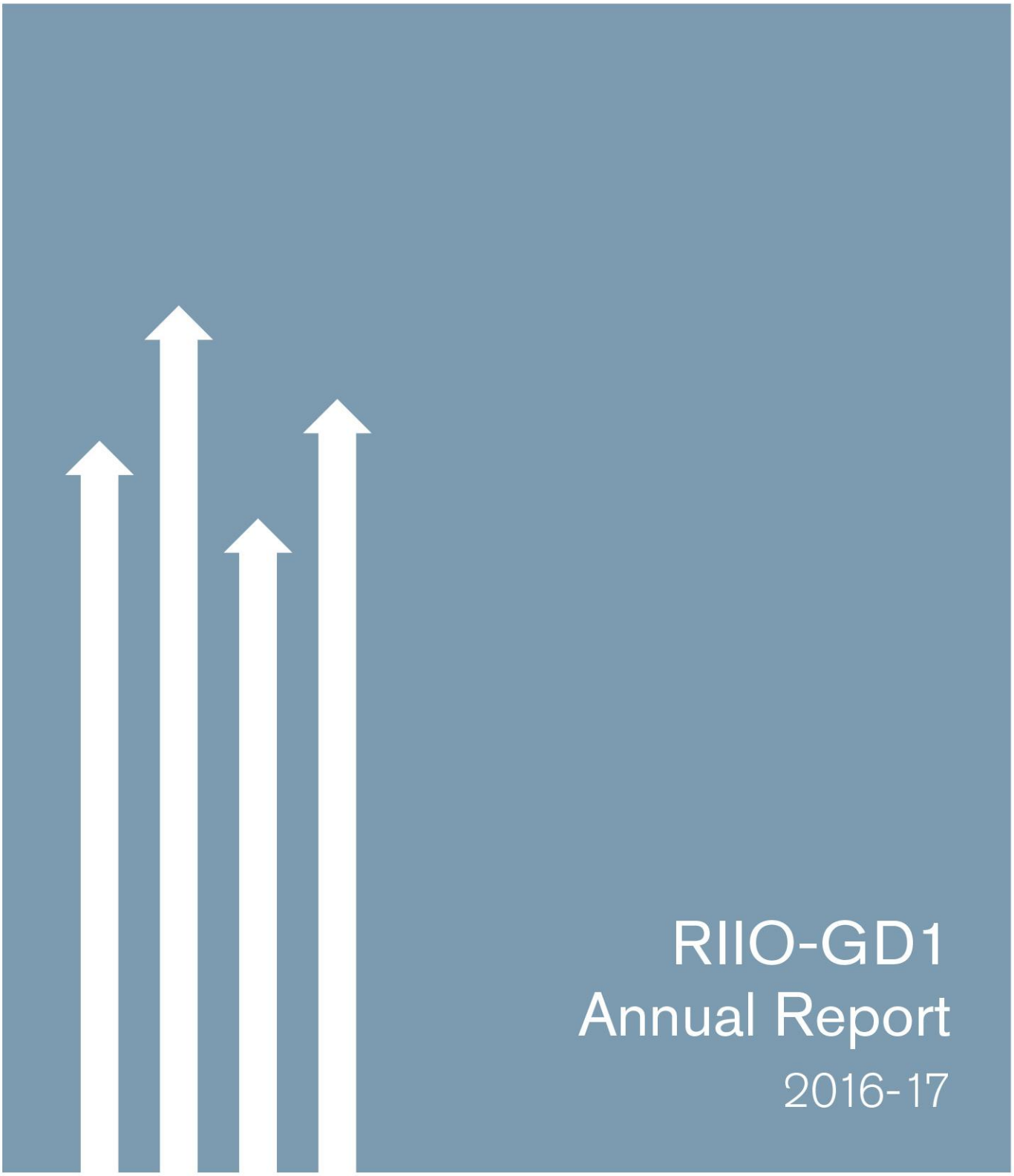

RIIO-GD1 Annual Report 2016-17

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Contact: Pete Wightman

Team: RIIO Gas Networks

Tel: 0141 331 6031

Email: pete.wightman@ofgem.gov.uk

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Executive summary

2016-17 was the fourth year of the RIIO-GD1 price control. In the RIIO framework the focus is on outputs, incentives and innovation, as well as total expenditure (totex).

Output performance and drivers

Gas distribution network companies (GDNs) have made good progress in delivering against their outputs so far in the price control. All GDNs met their annual output targets in 2016-17, with the exception of three of the four Cadent networks which did not meet all of their customer satisfaction targets. Cadent has committed to driving improvements in this output.

All GDNs are forecasting to meet all of their eight year output targets by the end of the RIIO-GD1 period. The GDNs are encouraged to meet their output targets through RIIO-GD1 incentives. These include licence or other regulatory requirements on outputs and public reporting on delivery.

Financial performance and drivers

The financial performance of GDNs is presented using the return on regulatory equity (RoRE) measure. Based on GDNs' forecast performance for RIIO-GD1, we have calculated that RoRE will range from 9.6% to 11.9% for the price control period. This estimate depends on current forecasts and future delivery of outputs. It may change during RIIO-GD1.

Under the RIIO framework, GDNs are encouraged to cost-effectively deliver all their outputs, using innovation and efficiency improvements to deliver savings compared to their spending allowances. GDNs are allowed to retain a part of any savings achieved, with the rest being passed on to consumers. Collectively, the GDNs have an allowance of £17.6 billion over the RIIO-GD1 period to deliver their outputs. They are now forecasting to spend £15.5 billion, which is £2.1 billion (12%) less than their allowances. Through the totex incentive mechanism, GDNs will retain approximately 63% of this underspend and the remainder will go back to consumers after allowing for corporation tax. In this 2016-17 report, Cadent's return of £66 million of allowances for London Medium Pressure has been reflected in forecasts. SGN's £145 million contribution will be reflected in next year's annual report figures.

In RIIO-GD1, totex is a key driver of RoRE. Consumers fund a significant portion of GDNs' totex underspends, so it is important for us to understand why the companies are forecasting to spend 12% less than their allowances. GDNs are reporting improved company efficiency, for example through changing working practices, new ways of managing their businesses, and through innovation. Some of the underspend is down to factors outside Ofgem's and the GDNs' control, for example, the GDNs have been able to spend less on emergency and repair because winters haven't been as harsh; and the GDNs have benefitted from a slower than anticipated growth in input prices relative to the RPI inflation index (Real Price Effects, RPEs). Finally, some of the underspend is likely due to variations in assumptions made at the time of setting RIIO-GD1 compared to actuals, for example, actual costs for GDNs to replace iron mains.

Customer bills

The financial and output performance of GDNs affects the allowed revenue that they can collect through customer bills. The performance in 2016-17 will impact on allowed revenue, and therefore customer bills, in 2018-19. We estimate that the average GB customer will pay £118 (in nominal prices) for the year in 2018-19 for gas distribution network costs.

1. Introduction and context

1.1. This report reviews the activities of gas distribution network companies (GDNs) in 2016-17. It also covers company progress in the first four years of RIIO-GD1 and company forecasts for the remainder of the eight-year period. It reviews company performance against the outputs we set and the costs incurred against allowed revenues.

1.2. GDNs are responsible for operating, maintaining and extending the gas distribution network and for providing a 24-hour gas emergency service. There are eight GDNs operating in Great Britain, managed by four companies. To ensure value for money for consumers, we regulate the GDNs through periodic price controls that limit the amount by which costs can rise, and that stipulate levels of performance. To set our price controls we use the RIIO (Revenue = Incentives + Innovation + Outputs) framework. The latest price control was set in December 2012 and lasts for an eight-year period from April 2013 until March 2021. We set the baseline revenues that GDNs can earn at the start of the price control. There are mechanisms to adjust revenues year-on-year depending on GDNs' performance against pre-set targets. There are outputs associated with baseline revenues that GDNs must deliver either on an annual or on an eight-year basis.

1.3. Using data and supporting information submitted by the GDNs, this report reviews how the GDNs are delivering against the financial and output requirements of the price control. The report has a further three chapters. Chapter 2 gives an overview of output performance, including an explanation of why any targets were missed and a summary of some wider RIIO-GD1 output considerations. Chapter 3 provides an outline of financial performance, presenting information on company returns, total expenditure, allowed revenues and the impact this will have on customer bills. Given that all GDNs are forecasting to underspend total expenditure allowances in RIIO-GD1, Chapter 4 provides our view of the drivers of this underspend.

1.4. Unless otherwise stated, all financial values in this report are in 2016-17 prices.

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

2. Outputs, incentives and innovation

Chapter Summary

This chapter examines GDNs' performance against their RIIO-GD1 output commitments. Where GDNs have failed to achieve an output, or are forecasting to do so, we explain the reasons and what is being done in response. This chapter also considers wider RIIO-GD1 output considerations and innovation.

Outputs and Incentives

2.1. GDNs must deliver a range of outputs during RIIO-GD1. Some outputs must be met each year of the price control, while others must be met over the eight-year RIIO-GD1 period.

2.2. All GDNs met their annual output targets in 2016-17, with the exception of three of the four Cadent networks which did not meet all of their customer satisfaction targets. Cadent has committed to driving improvements in this output. All GDNs are forecasting to meet all of their eight-year output targets by the end of the RIIO-GD1 period. An overview of GDN output performance is shown in Table 2.1 and in more detail in the supplementary data file.

Table 2.1: GDN 2016-17 output performance[1]

	Reliability & Availability[2]	Environment	Connections / wider works	Customer Satisfaction	Social Obligations	Safety
Cadent	Meeting	Meeting	Meeting	Missed some customer satisfaction surveys	Off track from FPNES connections 8 year target.	Meeting
NGN	Meeting	Meeting	Meeting	Meeting	Meeting	Meeting
SGN	Meeting	Meeting	Meeting	Meeting	Off track from FPNES connections 8 year target.	Meeting
WWU	Meeting	Meeting	Meeting	Meeting	Meeting	Meeting

[1] **Red** - the GDN has failed to achieve an annual output, or we forecast that it will not meet an eight-year output; **Amber** - the GDN is at risk of not meeting an eight-year output; **Green** - the GDN has met the annual output, or are on-target to meet the eight-year output commitment.
[2] The GDNs are meeting their targets in achieving the 1 in 20 obligation (related to the provision of NTS exit capacity at the GDN's offtakes) and in maintaining operational performance. The loss of supply targets are under review so we can't provide a view of whether these are being met.

2.3. The GDNs are encouraged to meet their output targets through RIIO-GD1 incentives. These include the broad measure of customer service with associated rewards and penalties for customer survey scores, and reward for stakeholder engagement initiatives; the discretionary reward scheme to encourage companies to deliver environmental and social obligation outputs not funded at price review; and reputational incentives such as public reporting on delivery.

Customer satisfaction surveys

2.4. We are concerned that Cadent continues to miss the customer satisfaction output. Cadent was penalised £1.98 million in 2016-17, and has been penalised a total of £8.44 million in the first four years of RIIO-GD1 for its low customer satisfaction survey scores. Cadent has committed to improving customer experiences so that it starts meeting the targets and so that its relative performance levels are consistent with the other GDNs in RIIO-GD1. We expect performance in this area to improve in the future years of RIIO-GD1.

Fuel Poor Network Extension Scheme (FPNES)

2.5. SGN Southern, Cadent North London and Cadent North West are currently offtrack from their FPNES connections target, but all three networks forecast to meet the target at the end of RIIO-GD1. SGN has committed additional resource in 2017 to identify qualifying households and potential partnerships. Cadent has reduced the shortfall in North London from last year to this year as a result of working with their partners to increase connections in 2016-17. GDNs have noted that meeting their FPNES targets will be more difficult given our decision to change the scheme criteria[3].

Wider RIIO-GD1 output considerations

2.6. At this stage in RIIO-GD1, there are three additional areas that we think are worth highlighting:

1. Reliability (loss of supply)

2.7. This is an eight-year output requiring GDNs to achieve minimum levels of network reliability performance for consumers, specifically in managing the number and duration of planned and unplanned interruptions of gas supply. Following our July 2017 decision on the mid-period review (MPR) parallel work[4], we are currently consulting on revised RIIO-GD1 targets for this output[5]. We decided as part of our MPR parallel work that it is in consumers' interest to revise the current RIIO-GD1 targets because we don't think they were set correctly in all cases[6], and because revising them now will ensure the GDNs have realistic and challenging targets to strive for. We expect the revised targets set out in our consultation to promote the right behaviour and to help reduce the impact of interruptions on consumers.

[3] Decision on change to the criteria for the Fuel Poor Network Extension Scheme September 2017
[4] MPR parallel work decision
[5] Consultation on updated reliaibility (loss of supply) targets for RIIO-GD1
[6] WWU told us that it does not want new targets. It is on track to meet its original targets and we welcome the efforts it has made to date to improve interruptions performance in its network. We believe its targets are suitably challenging and we are not proposing to change them.

2.8. Since 2011, the total (across industry) number of unplanned and duration of planned interruptions to gas supply has reduced[7]. The picture for the number of planned interruptions is more mixed, given the increase in iron mains replacement work within RIIO-GD1. The duration of unplanned interruptions has reduced since 2011 for all GDNs except for Cadent. We are concerned that for Cadent the duration of unplanned interruptions has increased since 2011, which has been partly driven by the time taken to resolve interruptions in multiple occupancy buildings, such as high rise flats. We expect GDNs to be taking innovative and proactive steps to reduce the duration of interruptions across their networks.

2. Iron mains risk reduction

2.9. To comply with safety legislation and requirements, GDNs are undertaking a long-term programme to replace risky iron mains[8] on their networks. The mains replacement programme is mandated by the Health and Safety Executive (HSE).[9] Under RIIO-GD1, the 'iron mains risk reduction' output sets the level of iron mains risk that GDNs must remove from their networks.

2.10. GDN performance in the 'iron mains risk reduction' output varies considerably, though all have removed more risk than would be expected at this stage of RIIO-GD1. Cadent North London has removed the smallest percentage (53%) and SGN Scotland has removed the highest percentage (133%). Although we are not concerned with this picture of variability, we note that the degree of outperformance achieved to date by some GDNs (eg SGN Scotland and NGN at 127%) is not what we expected to occur when we set the price control.

3. Guaranteed standards of performance (GSOPs)

2.11. GSOPs set service levels to which the GDNs must adhere. They cover supply restoration; reinstatement following works; provision of alternative heating and cooking facilities for priority domestic customers (eg when there is an outage); complaint response times; notification periods for planned gas supply interruptions; and connection services. If a GDN fails to meet the service level specified in the GSOP, it must make a payment to the customer affected[10].

2.12. We monitor compliance with the connections GSOPs as one of the primary RIIO outputs for connections. We monitor compliance to other GSOPs as part of the picture of performance in reliability and customer service.

2.13. In 2016-17, all the GDNs met the 90% target pass rate for GSOPs related to connections. The GDNs also met their GSOP targets for responding to emergency phone

[7] This is based on analysis which has excluded large events (those affecting over 250 customers) from 2014-2017 data. We also excluded an estimate for annual large events in 2011-2013.
[8] The gas distribution network consists of 65,000 km of iron mains, representing 25% of the total mains population. The remainder is constructed mainly from polyethylene and steel. Iron mains are known to fail in service and can potentially cause major incidents (fires and explosions), which can injure or kill people and damage property.
[9] More info on the HSE's programme can be found on their website: http://www.hse.gov.uk/gas/supply/mainsreplacement/enforcement-policy-2013-2021.htm
[10] See Appendix 10 of RIIO-GD1 Regulatory Instructions and Guidance and the Energy Networks Association Notice of Rights

calls and gas escapes. Performance against the other GSOPs[11] is mixed, leading to a total of £3.2 million in compensation payments in 2016-17, 84% of which were Cadent's. Cadent reports that the majority of these were due to major incidents or interruptions in multiple occupancy buildings. Cadent's low relative performance last year was highlighted in a report by Citizens Advice[12]. Adhering to the GSOPs is important and we expect better performance from Cadent.

Innovation

2.14. The Network Innovation Allowance (NIA) and gas Network Innovation Competition (NIC) have now been in place for four years. These aim to encourage GDNs to innovate in the design, build and operation of their networks to facilitate the transition to a low carbon economy.

2.15. Table 2.34O in the data file provides a summary of the number of NIA projects undertaken by the GDNs, their costs and percentage of NIA allowance used to date.

2.16. In 2016, two GDN projects were selected by us to receive a total of £11.6 million of NIC funding.

- Cadent and NGN's joint funded **HyDeploy** project was awarded £6.8 million to demonstrate on Keele University's private network that natural gas containing levels of hydrogen (10% to 20%) beyond those permitted by the current safety standards (0.1%) can be distributed and utilised safely.

- Cadent's **Future Billing Methodology** project was awarded £4.8 million to develop options that may lead to new gas billing methodologies to better reflect the world of more varied gas qualities.

2.17. Table 2.35O in the data file provides more information on these GDN NIC projects. Further information is on our website.[13]

[11] GSOP 1 supply restoration; GSOP 2 reinstatement of customer premises; GSOP 3 heating and cooking facilities for priority domestic customers; GSOP 12 notification and payments under GSOPs; GSOP 13 notification in advance of planned interruptions; GSOP 14 responding to complaints

[12] Citizens Advice 'Living up to the Standards' 2015-16, October 2017

[13] Gas Network Innovation Competition

3. Financial performance

Chapter Summary

This chapter explains how the financial performance of GDNs in RIIO-GD1 translates into their actual revenue and the impact this has on consumer bills. We report estimates of GDNs' returns (RoRE), total controllable expenditure (totex), Allowed Revenue and the impact on consumer bills.

Return on Regulatory Equity (RoRE)

3.1. We assess the overall financial performance of GDNs using a measure called the Return on Regulatory Equity (RoRE)[14].

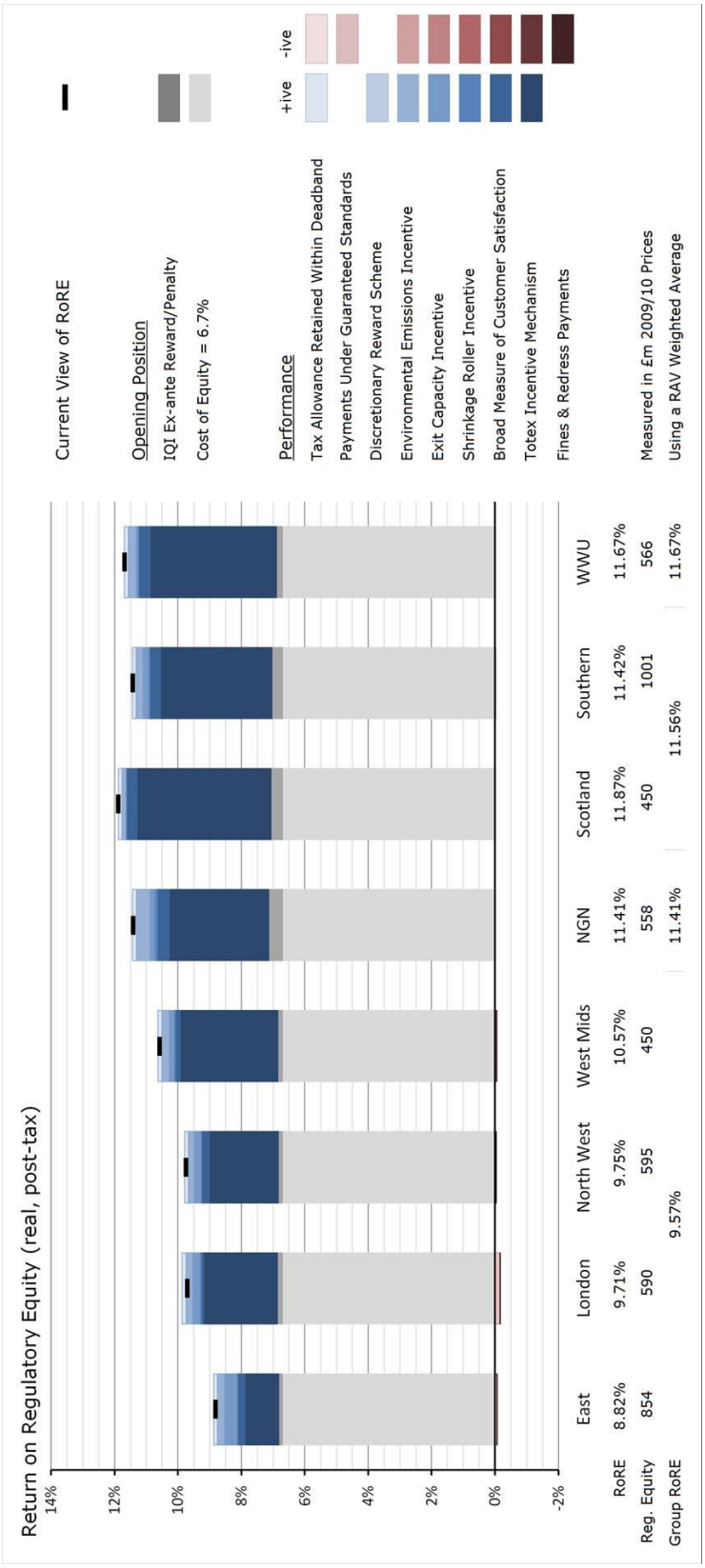
3.2. Our RoRE in Figure 3.1 (also available in the data file) should be compared to the cost of equity allowed at the start of the price control. For gas distribution, this was set at 6.7%. Each company was also given an ex ante reward or penalty based on business plan quality (IQI). Further drivers of RoRE include spending against total expenditure (totex) allowances and performance against incentives. Totex underspending and incentive outperformance increase companies' return, while overspending and penalties resulting from incentive underperformance decrease their return.

3.3. Based on current forecasts, SGN Scotland has the highest RoRE. The RoRE across the sector is 10.6%[15]. No companies are forecast to earn returns below their assumed cost of equity.

[14] RoRE is the financial return achieved by shareholders in a licensee during a price control period from it's out-turn performance under the price control. RoRE is calculated post-tax and is estimated using certain regulatory assumptions, such as the assumed gearing ratio of the companies, to ensure comparability across the sector. We use a mix of actual and forecast performance to calculate eight-year average returns. These returns may not equal the actual returns seen by shareholders.

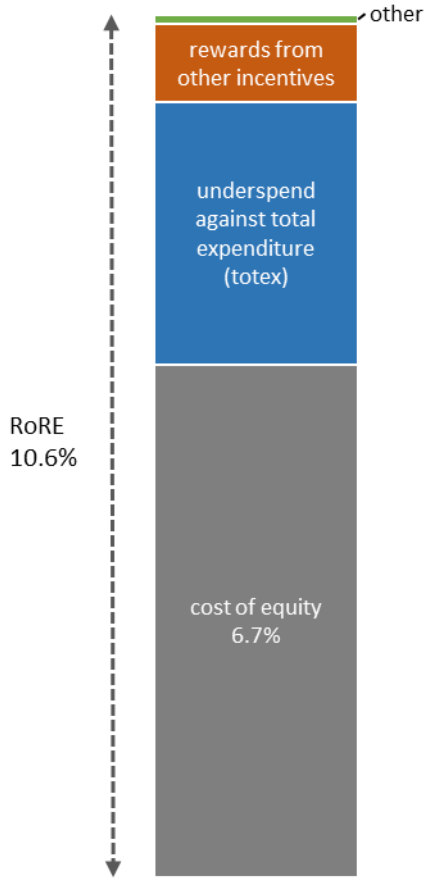
[15] The industry RoRE is RAV-weighted. To calculate this, all individual GDN RoRE figures are weighted by the value of their assets – their Regulatory Asset Value (RAV) – and then summed together.

Figure 3.1: Eight-year average RoRE



3.4. As can be seen in Figure 3.1 and the simple graphical representation in Figure 3.2, RoRE is predominately driven by totex[16] underspends. We outline our view of totex underspend drivers in Chapter 4. All GDNs have also gained through the other incentive mechanisms (see paragraph 2.3 and Table 3.08F in the data file).

Figure 3.2: Simplified RoRE to show key drivers of industry performance



3.5. There are a number of factors which are not reflected in our RoRE calculations, but which may impact the return realised by shareholders. We have not included the potential end-of-period clawbacks for under delivery on Network Output Measures (NOMs). The methodologies for these are still under development. The current RoRE calculation assumes delivery of all RIIO-GD1 outputs. Our RoRE analysis also excludes companies' actual debt costs relative to our regulatory assumptions, innovation funding, legacy assumptions from prior control periods and un-funded pension deficits. We may include some of these items in the future as we continue to refine our RoRE model.

3.6. We apply an arithmetic mean to calculate our 8-year average RoRE, rather than applying a geometric mean or weighted mean. While other averaging methodologies may better represent a long-term investment in a single company, our approach is consistent with how we informed our judgement on return on equity. For our RIIO-GD1 cost of capital decisions, we used the Capital Asset Pricing Model (CAPM) framework, which expresses the cost of capital as the amount needed to attract investment from a diversified investor that invests every year. The arithmetic average more accurately reflects this, and we are not considering a project return from a long-term investment in one particular company.

Total expenditure (totex)

3.7. The totex approach to setting price controls aims to incentivise companies to deliver outputs at the lowest total cost, without preferring either operating expenditure (opex) or capital expenditure (capex) solutions[17]. This approach encourages GDNs to choose the most efficient way of meeting their outputs.

[16] The totex incentive mechanism component of RoRE uses company provided forecasts for the entire control period.
[17] This is achieved by setting the same totex incentive rate (the percentage that the licensee bears

3.8. At the start of RIIO-GD1, we provided GDNs a totex[18] allowance of £17.6 billion. Since then, allowances have been adjusted to reflect uncertainty mechanisms[19] and voluntary company returns. In this 2016-17 report, Cadent's return of £66 million of allowances for London Medium Pressure has been reflected in forecasts. SGN's £145 million contribution will be reflected in next year's annual report figures. For this report, performance will be measured against the adjusted allowances, still totalling £17.6 billion when rounded, for the eight years of RIIO-GD1.

3.9. GDNs are incentivised to outperform their totex allowance as part of the totex incentive mechanism (TIM) element of RoRE (paragraph 3.1). Through the TIM, any underspend compared to the 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.

3.10. Table 3.2 shows that in 2016-17, the totex allowance was £2.2 billion and actual expenditure was £1.9 billion resulting in an underspend of £326 million or 15%.

Table 3.2: Totex allowances and actual expenditure in 2016-17 (£m, 2016-17 prices)

	Cadent			
	EoE	Lon	NW	WM
Total allowed expenditure	327	301	244	188
Actual expenditure	304	257	207	171
Overspend (underspend)	(23)	(44)	(37)	(17)
Totex incentive rate	63%	63%	63%	63%
Allowed expenditure after sharing	318	285	230	182
		SGN		
	NGN	Sc	So	WWU
Total allowed expenditure	264	224	427	257
Actual expenditure	227	170	360	211
Overspend (underspend)	(37)	(54)	(68)	(45)
Totex incentive rate	64%	63.7%	63.7%	63.2%
Allowed expenditure after sharing	251	205	403	240

of an under or overspend against allowances) for both capex and opex solutions.

[18] Totex excludes business rates, license fees, pensions contributions and shrinkage (uncontrollable costs).

[19] At the time of setting RIIO-GD1 allowances, there was uncertainty around some costs and because of this, the price control allows the GDNs to apply for adjustments to their allowances by means of a reopener mechanism, in order to accommodate particular uncertain costs.

3.11. Table 3.3 shows four-year totex performance[20] and eight-year forecast totex performance. Forecasts for the reminder of the price control have been conducted by the GDNs based on their expectations. All eight GDNs have underspent totex allowances to date and are forecast to underspend for the whole RIIO-GD1 price control period by £2.1 billion (12%).

Table 3.3: Totex allowances and actual four-year cumulative expenditure and RIIO-GD1 forecast

GDN		4 Year Cumulative				RIIO-GD1 Forecast			
		Adj'd Allowance[1]	Actual	Variance		Adj'd Allowance[1]	Actual (forecast)	Variance	
		£m	£m	£m	%	£m	£m	£m	%
Cadent	EoE	1,318.36	1,237.43	(80.9)	(6.1%)	2,610.7	2,503.7	(107.0)	(4.1%)
	Lon	1,191.70	980.77	(210.9)	(17.7%)	2,347.1	2,106.2	(240.9)	(10.3%)
	NW	993.21	935.98	(57.2)	(5.8%)	1,958.3	1,800.3	(158.0)	(8.1%)
	WM	766.37	677.06	(89.3)	(11.7%)	1,522.1	1,331.7	(190.4)	(12.5%)
NGN	NGN	1,050.65	913.73	(136.9)	(13.0%)	2,042.5	1,786.9	(255.6)	(12.5%)
SGN	Sc	845.92	664.15	(181.8)	(21.5%)	1,664.5	1,380.9	(283.6)	(17.0%)
	So	1,712.71	1,378.44	(334.3)	(19.5%)	3,401.5	2,874.7	(526.8)	(15.5%)
WWU	WWU	1,054.42	869.89	(184.5)	(17.5%)	2,074.5	1,726.9	(347.6)	(16.8%)
Industry		**8,933.3**	**7,657.4**	**(1,275.9)**	**(14.3%)**	**17,621.2**	**15,511.3**	**(2,109.9)**	**(12.0%)**

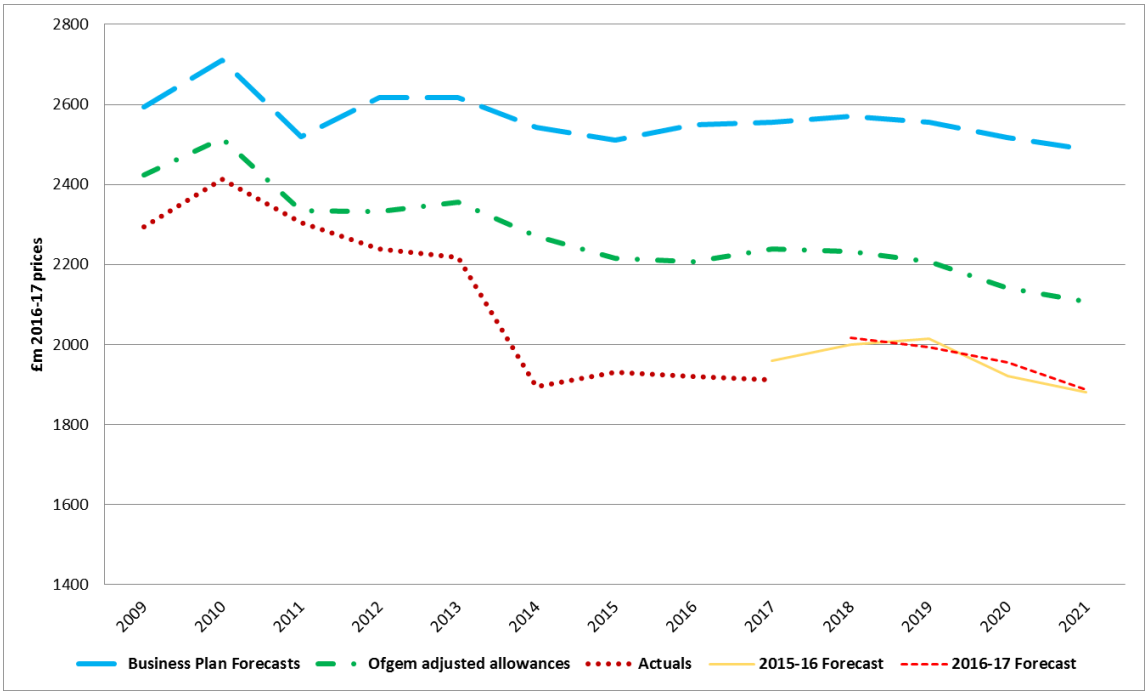
[1] Adjusted allowance - includes adjustment for Tier 2A and additional allowances for Physical Site Security, Streetworks (incl. forecasted), London Medium Pressure adjustment, fuel poor and Xoserve. These costs do not include PCFM policy adjustments.

3.12. The eight-year picture in Figure 3.3 demonstrates that companies expect to continue to underspend through RIIO-GD1. However, their forecast underspends are lower than they have been to date. This is mostly because companies plan to increase their spend towards the end of the price control.

3.13. Figures 3.01F and 3.02F in the data file show costs split betwen the categories of capital expenditure (capex), iron mains replacement expenditure (repex) and operational expenditure (opex).

[20] The allowed totex reported for the years 2013-14 to 2016-17 is not yet final and may be revised in the future. The view presently held for 2016-17 will, through the TIM adjustment, be used when setting the 2018-19 Allowed Revenue.

Figure 3.3: Industry totex forecasts, adjusted allowances and actuals trends[21]



Allowed Revenue

3.14. Each year we calculate the Allowed Revenue that each GDN can collect from customers through their gas bills. To calculate the Allowed Revenue, the forecast Opening Base Revenue[22] is adjusted for a number of factors (see Figure 3.4, with further detail in the data file). The main factors are: totex performance, specifically the share of over or underspend borne by the company; and incentive payments.

3.15. As shown in Table 3.4, GDNs will collect £3.8 billion (2018/19 prices) through customer bills in 2018-19 to cover expenditure and reflect incentive performance in 2016-17.[23] Further detail is available in the data file.

[21] The business plan forecasts line does not directly compare with the Ofgem adjusted allowances line due to changes to requirements following business plan submissions.
[22] Opening Base Revenue is a best view of the amount of money a GDN needs to earn on its regulated business to recover the efficient cost of carrying out its core activities. It is determined through ex ante forecasts conducted by Ofgem and the GDN prior to the start of the price control.
[23] Note that minor constituent parts of the final Allowed Revenue are still subject to uncertainty or are not forecast in advance

Figure 3.4: Simplified process for calculating Allowed Revenue[24]

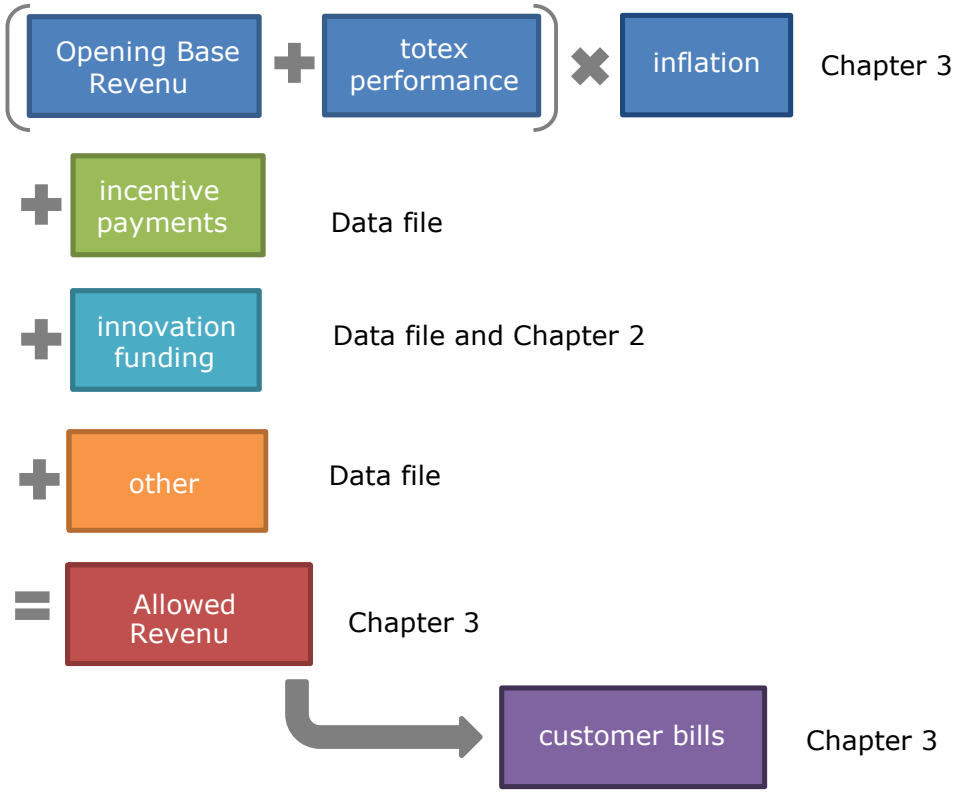


Table 3.4: Allowed Revenues in 2018-19[25] (2018-19 prices)

		Opening Base Revenue (£m)	Final Allowed Revenue (£m)
Cadent	EoE	655	635
	Lon	464	430
	NW	475	449
	WM	358	343
NGN	NGN	439	409
SGN	Sc	359	337
	So	804	771
WWU	WWU	452	430
Total		**4,006**	**3,805**

[24] Appendix 1 of the 2015-16 report explains in detail the Allowed Revenue process and provides definitions of financial terms: https://www.ofgem.gov.uk/publications-and-updates/riio-gas-distribution-annual-report-2015-16
Other refers to all other factors such as non-controllable pass through costs. Revenue is updated annually to reflect the actual cost of these areas. Further detail is in the data file.
[25] This covers projected expenditure, and past performance in 2016-17

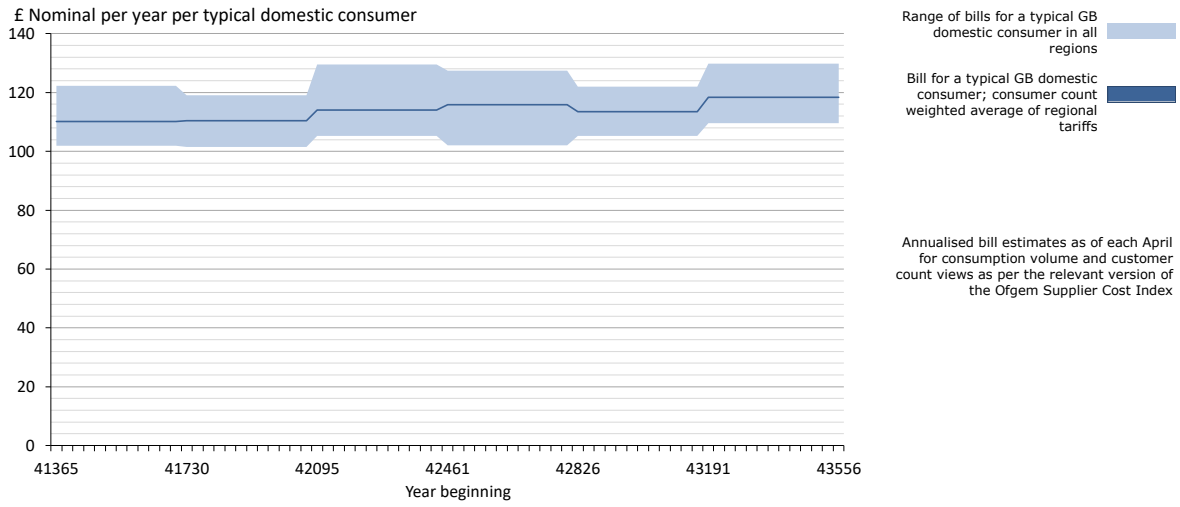
Customer Bills Impact

3.16. Our Supplier Cost Index[26] provides an estimate of the overall cost of domestic energy bills. This includes estimates of the contribution made by GDN Allowed Revenues to the overall energy cost. Our methodology uses an average gas demand applied uniformly across all regions and over time[27]. Actual customer bills are sensitive to geographic region, consumption volume and the timing and duration of contracts.

3.17. Our latest bill estimates using this methodology are reported in Figure 3.5. We estimate that the average GB customer will pay £118 per annum (2018-19 prices) in 2018-19 for gas distribution costs. This is estimated to increase in the immediate years ahead.

3.18. Further detail is available in the data file.

Figure 3.5: Estimate of typical GB consumer costs to cover the allowed revenue payments



[26] We used the November 2017 Supplier Cost Index model: https://www.ofgem.gov.uk/electricity/retail-market/retail-market-monitoring/understanding-trends-energy-prices

[27] Using median domestic consumption behaviour (volume and timing of use) for a 12-month fixed price contract

4. Totex performance drivers

Chapter Summary

This chapter outlines our view on the drivers of GDN total expenditure (totex) underspend, and considers whether these are down to efficiency, variances against assumptions made within the RIIO-GD1 settlement, or other external factors.

Overview

4.1. GDNs are incentivised to outperform the RIIO-GD1 totex allowances as they retain a share of any underspend with a share also being passed on to consumers. In the first four years of the RIIO-GD1 price control, GDNs have underspent totex allowances by 14.3% and are forecasting an eight-year underspend of 12%.

4.2. Consumers fund a significant portion of GDNs' totex underspends, so it is important for us to understand why the companies are forecasting to spend 12% less than their allowances. In this chapter we show some of the key cost drivers outlined by the GDNs.

4.3. Given the scale of the underspend achieved and forecast, and that we are now four years into an eight-year price control, we have focused on understanding GDNs' underspend drivers and whether we consider them to be attributable to the following three expenditure categories:

- **Efficiency:** an improvement in how things are being done, resulting from, for example, innovation and more efficient working practices.
- **External factors:** factors outside of the control of GDNs and unforeseeable at the time of setting the price control. This includes areas such as weather and economic conditions.
- **Provision in the price control settlement:** assumptions made within the RIIO-GD1 settlement that have varied against the actual position.

4.4. We have been engaging with the GDNs to understand their view of key cost drivers. Our analysis is based on our discussions with the GDNs, and our view on information submitted by them. In some areas we also independently assessed the data.

Industry-wide summary

4.5. GDNs have reported efficiencies through new ways of managing their businesses and through innovation. Efficiency is not the only driver of totex underspend. We think that some of the underspend is explained by factors outside of the GDNs' control and some, particularly spend on the programme to replace iron mains, may relate to assumptions made at the time of setting RIIO-GD1 that have varied against the actual

position. We have identified some industry trends below but the effects for individual GDNs may differ. The drivers identified don't apply universally and don't apply for all GDNs at the same magnitude.

Assumptions in price control settlement

4.6. Of the three major components of totex: operating expenditure (opex), capital expenditure (capex) and expenditure on the programme to replace iron mains (repex), repex is the most significant area of underspend. GDNs estimate to underspend repex allowances by 19% over RIIO-GD1, compared to 12% forecast totex underspend.

4.7. We are developing our understanding of the significance of various assumptions made when setting RIIO-GD1 repex cost allowances: for instance, to what extent these assumptions have turned out to be true and what impact these have had on totex underspends.

4.8. Of the total repex underspend, some may be attributable to efficiency being reported by the companies, for example in project design (see paragraph 4.16). In addition, external factors, such as real price effects (RPEs, see paragraph 4.15) will be contributing to totex repex underspend, alongside assumptions made at the time of setting RIIO-GD1. These assumptions have varied against the actual position - a factor observed in many forward-looking price controls.

4.9. We think that one assumption relates to the profile of work. Repex allowances were set according to a profile of work by pipe diameter in RIIO-GD1 business plans. However, GDNs agreed a flexible iron mains risk reduction strategy with the HSE, which allows them to prioritise abandonment of the riskiest mains. The riskiest pipes tend to be of smaller diameter and cheaper to replace than average, resulting in lower repex costs. Due to the GDNs replacing a higher proportion of smaller diameter iron mains than was originally envisaged at the start of RIIO-GD1, the GDNs are likely to benefit by several hundred million pounds over the course of the price control period should the diameter profile of their iron mains replacement work remain the same. This benefit varies by company, and some companies have told us they expect to make up the difference (ie replace more expensive pipes) over the remainder of the price control.

4.10. Other repex assumptions being investigated include the lay to abandonment ratio (this is amount of new pipe installed compared to old pipe removed from the system), and the number of service pipes to homes and other properties that need to be replaced when the mains are replaced.

4.11. GDNs report that the iron mains risk reduction programme has started delivering benefits faster than expected, which has resulted in fewer leaks, fractures and repairs, leading to savings on capex and opex.

4.12. Assumptions made in the price control settlement for lost metering work also factor into totex underspend. Some GDNs have reported that they haven't lost metering work as quickly as they thought they would, because of a slower than expected take-up of smart meters (though this is now ramping up).

Efficiencies

4.13. Companies have claimed various efficiencies in RIIO-GD1, particularly around innovation, management efficiencies and other company specific initiatives:

- **Innovation**: The GDNs report that innovation has had a positive impact on all areas of work, but they expect to see the biggest savings in the mains replacement (repex) programme area. For instance, the use of robots has reduced the need for digging and reinstatement, therefore driving cost savings.

- **Management efficiencies:** Some GDNs have implemented and refreshed the terms and conditions that they offer to their employees in order to ensure their workforce is flexible to respond to the needs of the business. For example, these GDNs have altered their pension arrangements and used working hours more efficiently in order to outperform allowances.

- **Other company specific efficiencies**: Some GDNs also report efficiency in IT and telecoms by optimising new cloud technologies to make processes more efficient. Other examples of efficiencies reported by the companies include models to optimise vehicle use and efficient practices in decommissioning assets.

External factors

4.14. RIIO pioneered a long-term approach, setting price controls for eight years, which allowed the GDNs a longer-term planning horizon. All forward-looking price controls have to be based on assumptions made about the future, and these assumptions can be affected by external factors such as changes in the weather and broader economic conditions.

4.15. We suspect that a proportion of GDN underspend is down to factors outside of their control, such as Real Price Effects (RPEs), mild weather and slow economic recovery:

- **RPEs**: When setting the Totex allowances for the price control, we acknowledged that several key input costs may not necessarily change in line with the Retail Price Index (RPI) measure of economy-wide inflation. The difference between the RPI and inflation on inputs specific to the GDNs is known as the Real Price Effects (RPEs). To account for this differential, we provided an ex ante allowance based on RPE forecasts. We have now updated the indices used in the price control, replacing four years of forecast indices with actual indices, and retaining the forecasts as per the price control for the remaining four years to understand the impact on allowed Totex. To date, we estimate that eight-year Totex allowances would have been £714 million lower across the industry had we used indexation for RPEs as opposed to setting ex ante RPE allowances. We place this underspend under the category of "external factors" due to lower than expected RPEs.

- **Milder than expected winters**: Recent winters haven't been as harsh as the GDNs had expected. This has meant that GDNs have spent less on dealing with emergencies, gas leaks and repairs.

- **Slower than expected economic growth**: Expectations for GB's recovery from the financial crisis was slower than expected, which has resulted in lower connections activity, particularly from larger industrial and commercial users. This, in turn, has led to less capex expenditure on mains and other asset reinforcement.

Combination of factors

4.16. The GDNs outlined some underspend drivers which we suspect are partly influenced by reported efficiencies, but also by external factors or elements within the RIIO-GD1 settlement.

- **Project design:** GDNs have reported efficiencies in optimising project design to coordinate replacement works in one geographic area. Instead of only selecting high risk iron mains for replacement, we are seeing GDNs design projects such that they replace nearby lower risk pipes at the same time as replacing high risk sections. We consider a proportion of these savings to be efficiency but given that all GDNs are reporting savings in this area, we query why the scale of savings were not factored into the GDNs' business plans.

- **Service provider and procurement contracts**: GDNs have reported cost saving efficiencies in their service provider model and procurement processes. For example, some of the GDNs have said they have outsourced more and renegotiated their existing contracts while others have taken more in-house. We suspect that some savings claimed here are attributable to RPEs (see above) in terms of materials and labour costs. Given that all GDNs are experiencing savings in this area, it is possible that the assumptions in the RIIO-GD1 settlement haven't turned out to be true in practice.

- **Pressure management**: Some GDNs have reported savings from better use of pressure management on their system. For example, this has led to reduced system reinforcement needs and fewer gas escapes. Such practices appear to be efficient, but we query why the potential savings from them were not factored into the GDNs' business plans.