Northern Gas Networks

RFPR - Regulatory Financial Performance Report 18/19

July 2019

Contents

1. Overview

This report sets out the details of our performance in 2018/19 and represents 'Year 6' of the eight year RIIO-GD1 Regulatory Period, with comparison to prior years.

The results for the 2018/19 reporting year shows continued strong performance against the RIIO-GD1 Regulatory Contract both in terms of value (cost to deliver) and service delivery (Outputs):

- **Value (Total Expenditure)** – in 2018/19 we outperformed the Totex allowance by £24.3m and £203.3m over the first six years of RIIO-GD1. This will result in £73.2m being returned directly to customers in the form of lower network charges relating to this six-year period. The majority of this outperformance is driven directly by genuine and enduring efficiency improvements as a result of the initiatives outlined above. These initiatives have changed the way in which we deliver our key services in our operating and replacement activities and more recently in our back office functions through new technologies and systems.
- **Service Delivery (Outputs)** – our strategy is to treat all primary and secondary outputs within the Regulatory Contract as firm commitments over this period and where appropriate go above and beyond those minimum requirements, delivering the best possible service for our customers. The introduction of Asset Risk and the ability to trade risks between assets within the regulatory framework provides the ability to ensure that more optimal investment decisions are being made to deliver value for consumers. It is likely during the RIIO-GD1 period that the requirement to invest in the replacement of metallic services will be lower than we forecasted back in 2013. However, we have ensured that investment levels in the network are maintained and invested this expenditure elsewhere in our network (e.g. additional steel and iron mains) to deliver the overall improvement to risk for customers. Where these trade-offs have been we are in a position to illustrate this fully. Our performance in 2018/19 illustrates we are firmly on track to deliver on our commitments across the 6 output categories over the period and in many areas significantly exceed those targets.

We continue to monitor and evaluate the key risks to our business in an evolving environment. We also continue to see new risks and opportunities develop that were not present when agreeing the RIIO-GD1 Regulatory Contract. At present we have not identified any risks that, with appropriate management, would impact upon the delivery of our commitments over the period.

Further details of performance can be found within NGN's RIIO – GD1 Year 6 Report.

Note on enduring value adjustments

Enduring value is defined as an adjustment made to a licensee's financial or operational performance to reflect true performance against the regulatory targets. This could include any timing differences – past or future – on delivery when compared to the allowance, any future uncertainty mechanism claims, and any future close out mechanism adjustments.

NGN do not consider it appropriate to make any Enduring Value adjustments at this point. We have no plans to make any claims under the uncertainty mechanisms contained within our regulatory settlement, and do not envisage any close out mechanisms will impact our financial performance.

In terms of timing differences, we are in line with all of the key targets within our regulatory settlement and expect to deliver all of our regulatory commitments by the end of RIIO-GD1. They key areas we considered when assessing potential Enduring Value adjustments were:

- Repex – this is our largest programme of work with targeted workload, and costs c£96m per annum. To date we have abandoned 2463km of iron mains against a phased target of 2992km, 0.3% ahead of target. The mix of work slightly favours Tier 1 Mains overs the more expensive Tiers 2 and 3 when compared to the phased targets. However, the allowance for Tier 2a work flexs to reflect the work completed which offsets this. On a value basis we consider ourselves to be on track, with future savings mainly driven by efficiency and not timing.

- Capex – this contains many different network and non-network projects covering a wide variety of activities, costs ranging from low thousands to millions of pounds per project. We expect to overspend the 8 year allowance by c£00m, driven mainly by investment in IT and other network resilience projects, the majority of which is being spent in the second half of the price control. However, as these projects were not planned as part of our regulatory settlement, they do not represent a timing difference when compared to the allowance, and no enduring value adjustment has been made.

- Opex – Holder Demolition – we have completed 19 holder demolitions so far, 1.75 more than the pro rata target at this point. However costs can vary significantly per holder and are difficult to forecast given the nature of the work, and so on a value basis we consider no adjustment is necessary.

RIIO – Performance Overview (Output KPIs)

Northern Gas Networks

Northern Gas Networks
Outputs

Outputs

Safety
- Uncontrolled gas escapes within 1hr - 99.75%
- Controlled gas escapes within 2hrs - 99.94%
- Repairs completed within 12hrs - 68.4%
- Repair risk – 23.6m
- Iron mains off risk - 529km
- Major accident prevention

Environmental
- Outperformed in both our shrinkage & leakage targets
- Business Carbon Footprint – Achieved a 9% reduction in tCO_2e in 2018/19
- Use of virgin aggregate & spoil to landfill

Connections
- Guaranteed Standards of Service

Customer service
8.8/10	Planned interruption surveys
9.5/10	Emergency & repair surveys
8.9/10	Connections surveys
2.8	Complaints metric
5.96	Stakeholder engagement

Reliability
- Number & duration of planned interruptions
- Number & duration of unplanned interruptions
- Network Capacity - (1 in 20 obligations)
- Gasholder decommissioning

Social obligation
- Fuel poor connections
  2,763 fuel poor connections this year – 44% ahead of the inferred annual target
- Carbon monoxide awareness

Northern Gas Networks
Financials

Regulatory Asset Value
Opening value - £2126.4m
Closing value - £2212.6m

Total Annual Revenue
£409m

Innovation
Funding awarded in 2018/19
NIA - £2.55m
NIC - £8.92m

Customer Bill Impact
£134 down to £131 – Average of £128

RoRE

18/19	RIIO
10.2%	10.9%

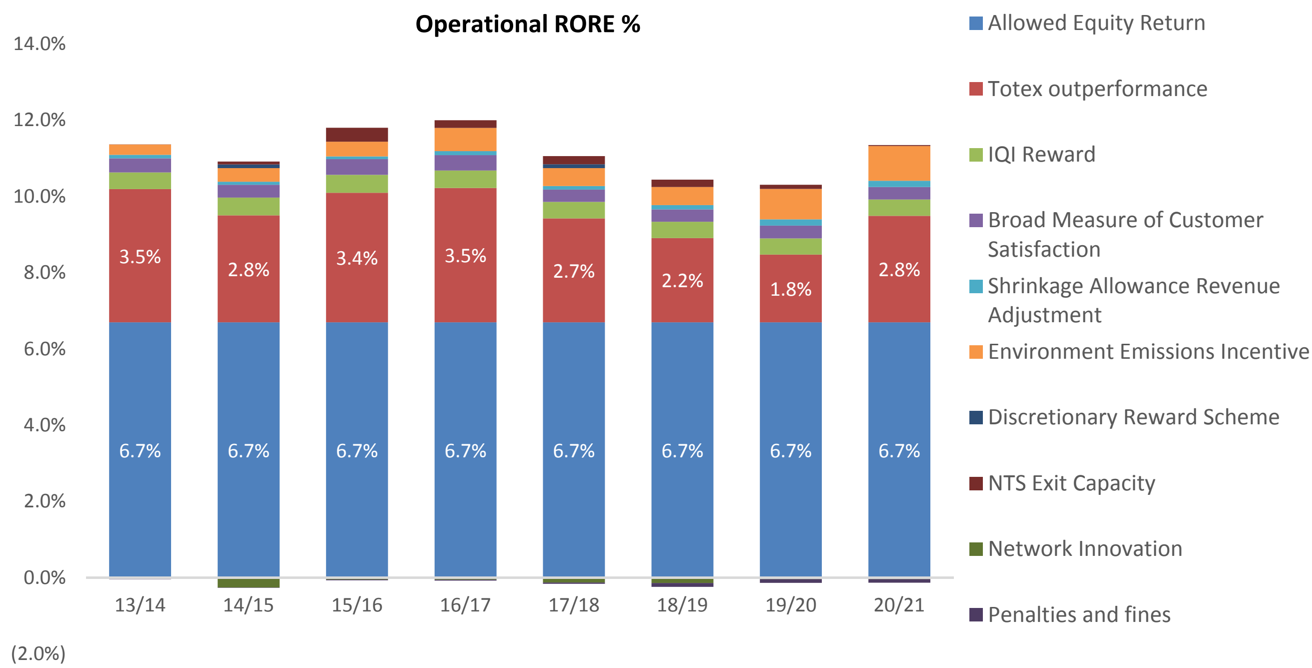
Other Incentives	£m 18/19	RIIO
Customer Service	2.1	17.3
Shrinkage	1.0	7.9
Leakage	4.3	38.7
Exit capacity	1.8	10.6
Total	9.2	74.5

TOTEX Incentive	£m 18/19	RIIO
Actual	237	1925
Adjusted allowances	262	2185
Outperformance	26	260
Outperformance %	9.8%	11.9%
Return to customers	12	93

2. (R1) Return on Regulatory Equity (Rore)

Ofgem use the Return on Regulatory Equity (RORE) to measure the potential financial returns or penalties on the portion of the value of the company that is financed by equity. RORE is calculated by using the cost of equity (6.7%) as the starting point as this amount is funded directly in revenue. The cash value of any outperformance from the incentive mechanisms is then divided by the 35% notional equity portion of the Regulatory Asset Value to calculate the additional return on equity earned. The table and graph below shows our annual, cumulative and forecast 8 year RORE:

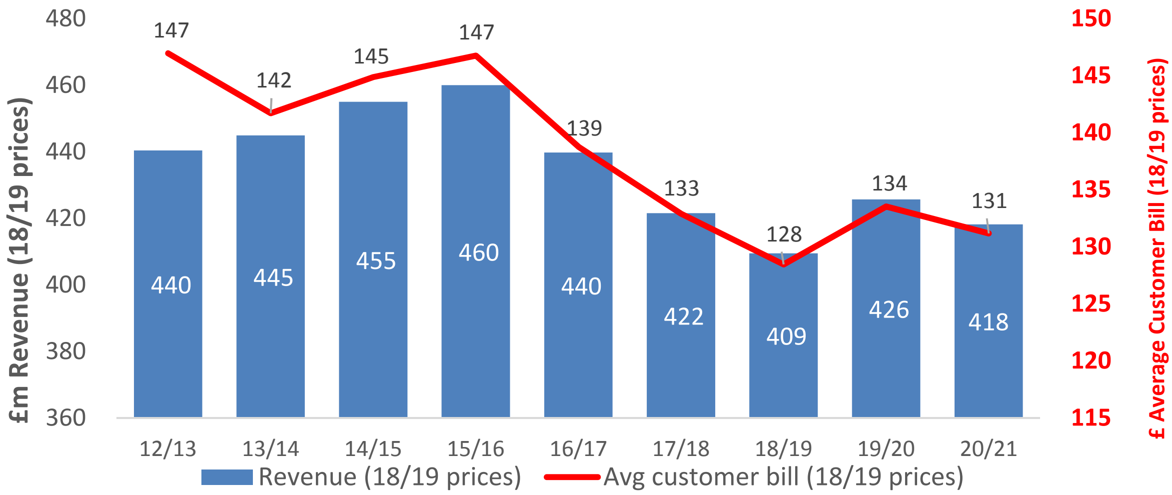
RORE	13/14	14/15	15/16	16/17	17/18	18/19	RIIO to date		RIIO 8year forecast
Base cost of equity	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%		**6.7%**
Totex	3.5%	2.8%	3.4%	3.5%	2.7%	2.2%	3.0%		**2.8%**
IQI Income	0.4%	0.5%	0.5%	0.5%	0.4%	0.4%	0.4%		**0.4%**
Customer Satisfaction	0.4%	0.3%	0.4%	0.4%	0.3%	0.3%	0.4%		**0.4%**
Shrinkage	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%		**0.1%**
Environmental Emissions	0.3%	0.4%	0.4%	0.6%	0.5%	0.5%	0.4%		**0.4%**
Discretionary Reward	0.0%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%		**0.0%**
NTS Exit Capacity	0.0%	0.1%	0.4%	0.2%	0.2%	0.2%	0.2%		**0.1%**
Network Innovation	(0.0%)	(0.3%)	(0.0%)	(0.1%)	(0.1%)	(0.1%)	(0.1%)		**(0.1%)**
Penalties and Fines	(0.0%)	(0.0%)	(0.0%)	(0.0%)	(0.0%)	(0.1%)	(0.0%)		**(0.1%)**
RoRE - Operational	**11.3%**	**10.7%**	**11.7%**	**11.9%**	**10.9%**	**10.2%**	**11.1%**		**10.9%**
Debt Performance (notional gearing)	4.2%	1.9%	(0.2%)	1.7%	4.5%	2.9%	2.5%		**2.4%**
Tax performance (notional gearing)	(1.3%)	(1.3%)	(0.6%)	1.5%	0.0%	0.1%	(0.3%)		**(0.0%)**
RoRE – including Finance and Tax	**14.3%**	**11.3%**	**10.9%**	**15.1%**	**15.4%**	**13.2%**	**13.4%**		**13.3%**



3. (R2) Revenue

Customer Bills

The graph below shows our actual and latest forecast allowed revenues for the 8 years of RIIO-GD1.



Our domestic customer bill analysis shown above is calculated based on NGN average Annual Quantities (AQ) and peak daily capacity requirements. This shows an average Domestic customer bill of £128 for 2018/19.

Allowed Revenue

(18/19 Prices)	Actual				Forecast				RIIO Total	Avg. Year
	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21		
BASE REVENUE	**446**	**450**	**467**	**448**	**433**	**438**	**445**	**448**	**3,576**	**447**
Adjustments to Base Revenue Allowances:										
Cost of debt	0.0	(2.6)	(5.0)	(7.4)	(9.7)	(12.6)	(21.1)	(26.7)	**(85.1)**	**(10.6)**
Non-Controllable Costs	1.4	2.3	(4.2)	(5.2)	(4.9)	(5.3)	0.5	(3.7)	**(19.2)**	**(2.4)**
Totex Incentive	0.0	0.0	(2.7)	(1.9)	(3.6)	(3.7)	(2.2)	(0.6)	**(14.8)**	**(1.8)**
RPI true up	0.0	0.0	1.6	(6.3)	(9.7)	(1.7)	1.1	(0.3)	**(15.4)**	**(1.9)**
Pension Deficit	0.0	0.0	0.4	0.4	0.4	(3.7)	(4.1)	(4.1)	**(10.6)**	**(1.3)**
Other	(0.0)	(0.0)	(1.5)	(1.1)	(3.5)	(4.8)	(5.5)	(7.0)	**(23.3)**	**(2.9)**
Total	**1.4**	**(0.3)**	**(11.6)**	**(21.4)**	**(31.0)**	**(31.8)**	**(31.2)**	**(42.4)**	**(168.3)**	**(21.0)**
Incentive Income:										
Earned during RIIO-GD1 (with 2 year lag)	0.0	0.0	6.2	8.2	10.7	11.2	10.6	9.6	**56.6**	**7.1**
Earned before RIIO-GD1	1.3	4.9	1.5	1.7	1.9	2.1	2.4	2.6	**18.3**	**2.3**
Total	**1.3**	**4.9**	**7.7**	**9.9**	**12.6**	**13.4**	**13.0**	**12.2**	**74.9**	**9.4**
(Over) / Under Collection	(3.5)	0.0	(3.5)	3.0	6.7	(10.4)	(1.3)	0.6	**(8.4)**	**(1.1)**
ALLOWED REVENUE	**445**	**455**	**460**	**440**	**422**	**409**	**426**	**418**	**3,474**	**434**

Allowed revenue for 2018/19 was £409m, a decrease year on year of £13m / 3.2%. The main driver for the variance was the movement in the amount of revenue Over Collected from the prior year, which was given back in this year.

4. (R3 & R4) Totex

The largest contribution to our RORE performance comes from our Totex outperformance (against RRP reported allowances). Under the Totex incentive mechanism any outperformance is shared with our customers who receive 36% of any outperformance through lower bills.

Totex forecasts 2018/19 prices (£m)	13/14 Actual	14/15 Actual	15/16 Actual	16/17 Actual	17/18 Actual	18/19 Actual	19/20	20/21	Total	Allowed	Variance
Opex	90.7	92.9	87.4	87.9	85.7	82.1	88.8	89.8	705.3	861.7	(156.4)
Capex	45.3	53.6	66.6	63.0	54.0	59.7	59.1	57.6	458.9	438.4	20.5
Repex	99.3	104.2	94.0	91.2	93.9	96.2	98.3	89.4	766.5	884.5	(118.0)
Totex	**235.3**	**250.7**	**248.0**	**242.2**	**233.5**	**238.1**	**246.2**	**236.8**	**1930.7**	**2184.6**	**(255.4)**
Allowance	**273.9**	**281.8**	**285.9**	**282.1**	**264.9**	**262.4**	**267.2**	**266.3**	**2184.6**		
Variance	(38.6)	(31.1)	(38.0)	(40.0)	(31.4)	(24.3)	(21.0)	(29.5)	(253.9)		
Cumulative Variance	(38.6)	(69.7)	(107.6)	(147.6)	(179.0)	(203.3)	(224.4)	(253.9)			

In 2018/19 we have outperformed the Totex allowance by £24.3m (9.3%) which generates a RORE of 2.2%, below the average of 3.0% we have achieved in the first six years of RIIO-GD1. Over RIIO-GD1 we expect our Totex outperformance to be £253.9m, an average of £31.8m, which generates a RIIO period RORE of 2.8%.

Overall this is a strong performance. It is important to remember that the allowances were benchmarked against the other GDNs and, as the frontier performer, the allowances we have been set are in some cases higher than our base costs were when the allowances were set. Further details on our performance are set out below.

Opex financial and output performance

The table below provides a summary of our controllable Opex performance against the allowance over the whole RIIO-GD1 period.

Opex forecasts 2018/19 prices (£m)	13/14 Actual	14/15 Actual	15/16 Actual	16/17 Actual	17/18 Actual	18/19 Actual	19/20	20/21	TOTAL
Work management	15.0	17.5	19.1	19.6	16.4	14.6	15.8	15.0	**133.1**
Emergency	11.0	11.3	11.3	11.0	11.2	10.6	11.5	11.4	**89.2**
Repair	18.4	16.5	14.8	14.3	15.2	16.1	16.5	16.1	**127.8**
Maintenance	9.4	10.3	10.7	10.8	11.2	12.0	13.5	14.5	**92.4**
SIUs	-	-	-	-	-	-	-	-	**-**
Other direct activities	7.6	7.5	7.1	7.0	6.1	5.7	5.4	5.3	**51.6**
Of which Xoserve	4.3	4.7	4.7	4.1	3.4	2.5	2.6	2.6	**28.8**

Total direct Opex	**61.4**	**63.2**	**62.9**	**62.7**	**60.1**	**58.9**	**62.6**	**62.3**	**494.1**
Business support	26.5	27.1	22.5	23.1	23.8	21.2	23.9	24.1	**192.3**
Training/apprentices	2.7	2.6	2.0	2.1	1.8	2.0	2.3	3.5	**18.9**
Total indirect Opex	**29.2**	**29.7**	**24.5**	**25.2**	**25.6**	**23.2**	**26.2**	**27.6**	**211.3**
Total controllable Opex	**90.7**	**92.9**	**87.4**	**87.9**	**85.7**	**82.4**	**88.8**	**89.8**	**705.3**
Allowance	109.0	110.2	110.8	111.0	107.0	105.8	104.7	103.2	**861.7**
Variance	**(18.3)**	**(17.3)**	**(23.4)**	**(23.1)**	**(21.3)**	**(23.7)**	**(15.9)**	**(13.4)**	**(156.4)**
Cumulative Variance	**(18.3)**	**(35.6)**	**(59.0)**	**(82.1)**	**(103.4)**	**(127.1)**	**(143.0)**	**(156.4)**	

To date we are outperforming the controllable Opex allowances by £127.1m (19.6%), generating an average RORE of 1.9% p.a. We expect to continue outperforming the reducing Opex allowance, delivering a total outperformance over RIIO-GD1 of c£156.4m or c18.2%, and a RORE of 1.8%.

There are several key drivers for our strong performance against the benchmarked Opex allowances. The main driver is our historic operational efficiency and the further improvements we have delivered in RIIO-GD1. We estimate this will account for 76% of our outperformance over the period, c£119.1m out of c£156.4m, or £14.9m per annum.

A major driver for this efficiency is our modernised employee terms and conditions. These deliver a number of benefits which impact across the network, with the greatest impact in controllable Opex. We have:

- Refreshed our previously ageing workforce;
- Introduced more flexible working arrangements that match business and customer requirements;
- Incentivised employee performance – employee reward is now mainly linked to delivery of the Regulatory Contract;
- Revised terms and conditions that more closely reflect market rates; and
- Recruited, trained and developed a workforce ready to meet future challenges.

So far we have c550 employees on new terms and conditions and over 600 on personal contracts out of an internal workforce of nearly 1,500. In terms of efficiency we estimate this is now delivering around £6m of benefits each year in Totex, with the majority (over £4.3m) being realised in our Emergency, Repair and Maintenance activities in Opex. This will continue to increase over time, and we will continue to invest in new ways of working to deliver further benefits across all activities.

We have also invested significantly in technology and process improvements and will continue to do so in the remainder of RIIO-GD1. We have made significant efficiencies in our IT and Telecoms delivery model and have seen operating costs reduce by nearly £6m over the last three years through the refresh of our service contracts and review of our licence and system requirements. Details on our significant IT investment are provided in the Capex section below.

Further efficiencies have been delivered through business process improvements across all of our back office and front office processes. We have further optimised all of our field based work patterns, reduced head count in many areas such as Street works and Dispatch through process improvements and the use of technology, and seen benefits from reduced overtime and average salaries across our supervisory workforce. We have introduced a Digital Operations room and Remote Hub which allows us to monitor work patterns and results more effectively.

As part of our Repex programme we have consistently targeted replacing some of our poorest performing pipes. This is a key driver for improving our emergency and repair performance over RIIO-GD1, and over time we would expect both costs and workload to trend downwards. In addition winters have been relatively mild in RIIO-GD1 compared to the last price control period, which has impacted overall workload, overtime payments and contractor costs.

	13/14	14/15	15/16	16/17	17/18	18/19
PREs	89,290	83,446	93,411	90,016	90,224	82,713
Reports	24,197	22,082	20,260	18,676	18,672	20,220
Repairs	25,526	22,377	19,933	17,801	17,484	19,169

However in recent years we have experienced short periods of more extreme winter weather which has affected both costs and workload. We have seen severe flooding, in particular in 2015/16, which resulted in three major off-gas incidents, and in 2016/17 where one major incident resulted in 2,756 interruptions. During 2017/18 we saw increased workload across the winter months from December to March with the biggest increase in March during a sustained period of more extreme weather. Overall workload was flat but this spike in workload had a knock on impact on costs which increased by £1.0m.

In 2018/19 we have seen the number of Reports and Repairs actually increase, however this time the largest increase was during the summer months during a period of extreme warm weather. This most likely caused ground movement and increased leaks, leading to increased reports and repairs. This increase in workload had a knock on impact on repair costs which increased by nearly £1m.

Severe weather throughout the year is now becoming more prevalent. We have invested significantly in active pressure management and in adequate capacity at the local level to increase our ability to flexibly manage our system during these periods. This ensure that we minimise the risk of losing supplies during these difficult periods.

For the remainder of RIIO-GD1 our forecast assumes more typical winters which could increase our costs by more than c£1.3m p.a across emergency, repair and associated supervisory activities.
Despite this we estimate that over RIIO-GD1 weather would deliver net savings of c£15.7m compared to the equivalent allowance.

Our Opex allowance in RIIO-GD1 included a one off allowance to manage the risks associated with potentially reinforcing large customers who were currently on interruptible contracts. Our successful management of this risk through network analysis, system balancing and contingency plans is delivering a one off outperformance in this price control period of c£35.7m p.a.

Our maintenance workload has consistently been above the benchmarked workload allowed within the allowances, but has been broadly consistent with the workload we forecast to deliver in RIIO-GD1. We estimate this price control assumption is driving an £18.2m overspend against the allowance over the 8 year period. In addition we expect to increase our maintenance activities from now and into RIIO-GD2. This is a strategic change as we have invested significantly in Capex to replace and upgrade our riskier and more problematic assets. We plan to intervene on more of our assets in future through increased maintenance rather than undertaking full asset replacement. This is reflected in our forecast.

There are two other primarily externally driven factors that are impacting our overall outperformance against the allowance:

- We estimate Land Remediation costs to be £2.2m lower than the allowance over RIIO. Costs for this type of work are very difficult to estimate and are largely driven by what you discover when the work is underway; and

- Xoserve costs are expected to be £6.8m lower than the RIIO period Opex allowances.

In terms of Opex related outputs, the majority are related to our Emergency and Repair activities. We have delivered a strong performance across all of these outputs to date, and expect to continue to do so over the remainder of RIIO-GD1. However the abnormally warm weather we experienced across the summer months has impacted workload, with a knock on effect on some of the outputs. This is factored into our forecasts which are detailed in the relevant sections later in this document. Highlights of our performance this year include:

- We achieved a near 100% response rate for both the 1 and 2 hour emergency response standards for the sixth year in a row, significantly outperforming the 97% target. There was a very small increase in both compared to previous years;

- Our Annual Repair Risk score increased by 22% to 23.62m as a result of the increased workload experienced over the summer months. This is still well below the target of 34.5m;

- We completed 68.4% of repairs within 12 hours against a target of 61.5%. This is an excellent result and the highest we have achieved in RIIO to date;

- We saw 14,030 unplanned interruptions this year which is above the annualised target of 12,960. The duration was also above target at 6.3 million minutes, however the average duration was comparable to last year. Cumulatively we are ahead of the targets for both the number and duration of unplanned interruptions. It is important to remember that whereas we would expect the number of planned interruptions to trend downwards over time as a result of our investment in the Repex programme, the unpredictable nature of the incidents will lead to short term workload swings;

- We delivered a very strong customer service performance, scoring 9.5 out of 10 on our customer satisfaction surveys for unplanned works, so even when customers had an unplanned interruption we generally dealt with it well; and

- We are also targeted with decommissioning 23 gas holders over RIIO-GD1. We are ahead of target having removed 3 holders this year, bringing our cumulative total to 19.

Capex financial and output performance

The table below provides a summary of our capex performance against the allowance over the RIIO-GD1 period.

RIIO Capex forecast 18/19 prices (£m)	13/14 Actual	14/15 Actual	15/16 Actual	16/17 Actual	17/18 Actual	18/19 Actual	19/20	20/21	Total	Allowed
LTS, storage and entry	10.0	16.5	21.7	16.0	11.7	15.7	13.3	13.5	**118.6**	132.9
Connections	7.3	7.5	10.8	9.4	10.3	10.3	9.1	8.2	**73.1**	60.7
Mains Reinforcement	3.2	2.0	3.5	2.3	2.3	2.4	4.8	8.9	**29.2**	42.1
Governors replacement	2.3	1.5	2.0	1.8	1.5	2.6	3.4	2.8	**17.8**	14.2
Other Capex	22.4	26.1	28.6	33.6	28.2	28.6	28.5	24.1	**220.2**	188.4
Of which IT	6.0	5.4	6.6	17.1	14.5	23.4	13.9	11.6	**98.6**	47.9
Of which vehicles	4.4	4.9	3.0	2.7	3.3	0.4	2.1	6.0	**26.8**	31.4
Total	44.0	52	64.6	61.2	52.4	**59.7**	**59.1**	**57.6**	**458.9**	**438.4**
Allowance	57.9	62.4	66.5	61.9	47.1	47.4	47.2	47.9	**438.4**	
Variance	**(12.6)**	**(8.8)**	**0.1**	**1.1**	**6.9**	**12.3**	**11.9**	**9.7**	**20.5**	
Cumulative	**(12.6)**	**(21.4)**	**(12.4)**	**(20.2)**	**(13.3)**	**(1.1)**	**10.8**	**20.5**		

To date we are outperforming the cumulative Capex allowances by £1.1m (0.3%), which generates a negligible RORE of less than 0.03% p.a. We plan to continue investing significantly over the remaining two years of RIIO-GD1 and expect to spend £20.5m over the cumulative allowance by 20/21. This will have a negative impact on RORE of c0.2%.

This continuing investment covers both network and non-network areas. On the network side we have seen workload increases in response to unforeseen events, most notably we are investing in the security and erosion protection of our river overcrossings and major pipelines in response to the extreme flooding incidents we have seen over the three previous years. We estimate these factors may increase costs by c£10m over RIIO-GD1.

We expect our connections costs to be c£12.4m over the allowance over RIIO. We have seen a significant decrease in workload due to changes in the connections market place and general demand levels for new gas connections. We estimate these external economic factors will decrease costs over RIIO by c£17.2m or £2.2m p.a. This will be partially offset by an increase in Fuel Poor connections. Our aspiration has always been to exceed our target. We previously agreed a new target with Ofgem of 14,500 fuel poor connections. During 2018/19 we got further ahead of the pro rata 14,500 target, successfully completing 2,763 fuel poor connections. This cumulatively puts us 2,162 ahead of the 10,667 phased RIIO Target. As a result of this and working with new partner organisations we now believe we can beat the 14,500 target and forecast we will achieve in the region of 16,000 fuel poor connections over RIIO-GD1. This will increase costs by c£2.7m over the price control.

The overall reduced workload and the mix of work has also impacted our unit costs and recovery rate Compared to the benchmarked net costs we estimate to spend £18.2m more than the allowance over RIIO, or £2.3m p.a. This is after adjusting the net allowance related to Fuel Poor. There was an assumption in the price control that the near 60% recovery rate associated with connections would also apply to fuel poor which is incorrect. This has a £10.5m impact over RIIO.

We have also seen a significant reduction in reinforcement workload so far in RIIO – 45.3km of main compared to an allowance of 106.9km. There are two key reasons for this. Our pressure management function and a Cost – Benefit based filter process has allowed us to address capacity constraints on the network by managing system pressures rather than installing new pipework. The other driver is reduced demand on the gas network when compared to the assumed levels when the allowances were set. We are required to design and manage the gas network to meet 1 in 20 peak demand requirements, which is the level of demand that would be exceeded in 1 out of 20 winters. Although we are forecasting a slight increase in the Peak demand this year, overall Peak demands have fallen below those levels assumed when setting the allowance.

However we do expect volumes of work to increase over the next two years. We are seeing increased demand for new large load connections and expect to fund significant levels of specific reinforcement associated with these new connections to the network over the second half of RIIO. We also have a £7m reinforcement project for a major pipe reinforcement in Penrith to increase network capacity. This is the main driver for our reinforcement forecast increasing in the final years of RIIO. However we still expect workload over RIIO to be c75km against an allowed workload of c140km, with a cost impact of c£15.8m.

On the non-network side we expect to invest c£99m in IT and c£17m in our depot and office infrastructure over RIIO. This is c£67.3m in excess of the eight year allowance and will deliver a world class smart IT and work place environment, driving improvements in ways of working, decision making, and control. This will enable us to improve both the customer experience and deliver efficiencies and value for money into the future.

In terms of outputs, we have and will continue to invest in all our assets and fully expect to deliver the asset health improvements we committed to in our business plan by the end of RIIO. In addition:

- We have continued to invest in our key above 7 bar assets in order to deliver against the asset utilisation and capacity output targets which is on target to be delivered by the end of RIIO-GD1;
- We are ahead of schedule in delivering the 14,500 new fuel poor connections we committed to following Ofgem's review of the fuel poor extension scheme, having delivered over 12,800 connections so far. We are now targeting to achieve 16,000 connections over RIIO;
- Our Connections GSOS performance is excellent with all measures well above the 90% minimum standard. We missed three of our own internal standards which are much higher, but two of them by less than 0.1%; and
- Our Connections Customer Survey results dropped slightly, achieving 8.93 out of 10 this year which is still a strong position. We are addressing the specific points that have caused this decrease by setting stricter internal service level lead times for connections customers, stricter timescales for reinstatement work, and providing in depth customer training for all customer facing colleagues in the connections process. Over the second part of 18/19 we saw an immediate impact of these improvements, and are forecasting sustained improvement for Connections.

Repex Financial and output performance

The table below provides a summary of our Repex performance against the allowance over the RIIO-GD1 period.

Repex forecasts 18/19 prices (£m)	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	Total
HSE driven mains and services	72.5	79.1	70.7	72.0	68.3	70.2	71.9	66.5	571.1
Non-HSE driven mains and services	26.7	25.1	23.3	19.2	25.4	26.1	26.3	22.8	194.9
Risers	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.5
Repex totals	99.3	104.2	94.0	91.2	93.9	96.2	98.3	89.4	766.5
Allowance	107.0	109.2	108.6	109.2	110.8	109.1	115.3	115.2	884.5
Variance	(7.7)	(5.0)	(14.6)	(18.0)	(17.0)	(12.9)	(17.0)	(25.8)	(118.0)
Cumulative	(7.7)	(12.6)	(27.3)	(45.3)	(62.3)	(75.2)	(92.2)	(118.0)	

To date we are outperforming the Repex allowances by £75.2m (11.5%), generating an average RORE of 1% p.a. We expect to deliver further efficiency benefits, improving outperformance to 13.3% by the end of RIIO-GD1, and increasing RORE to 1.1%.

Repex workload and cost impact

We expect to deliver significantly more workload within this forecast than is funded within the allowance. The table below provides further details:

Type (km)	Inferred annual target	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	Total	Total Allowed
Tier 1 – funded	448	445.4	487.8	439.8	452.9	479.4	491.6	459.7	433.2	3689.8	3584.0
Tier 1 – customer funded	15.4	1.8	2.1	2.9	1.9	2.0	2.2	2.1	2.1	17.1	122.9
Tier 2a	8.4	8.8	7.6	5.3	4.1	7.9	3.8	15.0	15.0	67.5	67.5
Tier 2b	20.4	22.1	18.3	12.2	12.4	24.7	26.8	26.1	20.9	163.5	163.5
Tier 3	5	7.4	5.7	3.9	4.3	2.4	4.5	6.8	5.0	40.0	40.0
Iron mains	497.2	485.4	521.5	464.2	475.5	516.4	529.0	509.8	476.2	3978.0	3977.9
Iron > 30m	-	8.7	9.3	11.4	10.8	2.7	7.3	6.6	6.6	63.5	-
Steel	48.7	57.6	75.6	45.9	59.5	59.6	58.6	60.3	60.3	477.4	389.8
Other	-	10.4	10.7	8.6	8.6	13.3	8.1	7.7	7.7	75.1	-
Total	545.9	562.1	617.1	530.1	554.4	592.0	603.0	584.4	550.8	4594.0	4367.7

One of the major outputs associated with Repex is the length of iron mains abandoned over the eight year price control. To date we have abandoned 2,992km of iron main, 8.8km ahead of the inferred target. This target included an assumed 98km of iron mains work delivered from customer driven rechargeable diversions.

Actual volumes have been much lower at c18km. We are expected to fund this shortfall and have now fully recovered the position in 2018/19.

We are delivering more work than is funded in other areas as well:

- We forecast we will abandon over 60km of iron mains >30m from a domestic property in RIIO-GD1. We abandon this type of main where it represents the most cost effective long term option to deliver an all plastic network and to protect the network from encroachment or 'dynamic' growth. There is no allowed target or cost allowance for this;

- We have abandoned c357km of steel to date, c64km ahead of the inferred 6 year target and allowance. This increase has mainly been in <=2" steel which we abandon when found, and volumes have been higher than those we assumed when the Business Plan was set. We expect this to continue and to abandon c477.4km over RIIO-GD1, nearly 88km over the allowed volume; and

- We have abandoned c60km of other materials mains to date and expect to abandon 75km over RIIO-GD1. There is no workload target for this type of work.

We expect this material increase in workload to drive up costs over the 8 year price control. We estimate the combined increase to be £44.3m, £10m related to steel, £34.3m related to iron over 30m and other mains.

Repex efficiencies

Despite this material increase in workload, we expect to continue our outperformance against the allowance. The main driver is our historic operational efficiency and the further improvements we have delivered in RIIO-GD1. We estimate this will account for a c£147m efficiency outperformance against the £885m allowance (16.6%) more than offsetting the increase in workload detailed above. This equates to c£18.4m p.a.

The main driver for our outperformance has been our new operational approach to the delivery of the iron mains replacement programme, which we began reviewing in 2011. Over the next four years we removed the major contracting partners we had previously used, directly contracting with their smaller sub-contractors. This has had 3 main impacts;

- We removed a layer of man marking cost between ourselves and major contractor as well as their profit margin and corporate costs. We estimate this has reduced costs by between c£6m to £8m p.a;

- We rebuilt our own in house workload and programme management structure in order to gain control of the end to end Repex investment process, estimated to have delivered between £3m and £4m savings p.a. We achieved this through a much more rigorous design process with operational reviews, site visits, better enabling works all allowing projects to start on time more often with vastly reduced contractor variations and down time; and

- Our materials and logistics costs have decreased by c£3m p.a. We have reworked and centralised our end to end procurement and logistics processes in order to gain greater control of costs and waste.

Together these changes have delivered significant improvements in workload delivery and efficiency and are the major driver for our outperformance.

Other Repex outputs

We continue to perform strongly against the other outputs associated with the Repex programme:

- Risk removed is the main driver for the Repex programme, and we continue to target pipes with the highest risk score. Total risk removed was 20,268 this year which gives a cumulative total of 184,659 which means we are now 66% ahead of the eight year RIIO target of 111,191. This is an excellent result as we now have a significantly safer network;

- We are c5% behind the cumulative target for the number of services replaced. This is partly down to mix and location of work, but we are also seeing fewer services replaced as a result of an emergency call out, reflecting the success of the replacement programme and the relatively mild winters we have seen so far in RIIO-GD1;
- We delivered a very strong customer service performance, scoring 8.8 out of 10 on our customer satisfaction surveys. Following stakeholder and customer feedback, we have introduced bespoke webpages for each of our replacement schemes, which are kept up to date with live information on useful customer information such as road closures, duration, and gas-on times. We are also continuing to use Roadworks.Org, and more recently have customised this tool to provide better information to road users visiting this website;
- Gas in buildings events and fractures were both significantly below target supporting our approach to targeting the riskiest pipes; and
- We outperformed the revised targets for the number and duration of planned interruptions which both vary in line with the length of mains abandoned.

5. (R5) Output Incentives

The table below details the actual incentive income earned in the first six years of RIIO-GD1 together with a forecast for the final two years. To date we have earned average incentive income per year of £9.8m and expect to earn an average of £9.5m over the eight years of RIIO.

18/19 Prices (£m)	Actuals (Earned)						Forecast (Earned)		RIIO Total	Avg. Yr
	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21		
Customer Satisfaction:										
Customer Service	2.1	2.3	2.4	2.2	2.1	2.1	2.1	2.1	**17.3**	**2.2**
Stakeholder Engagement	1.2	0.7	1.3	1.4	0.9	0.8	1.0	0.9	**8.2**	**1.0**
Complaints Penalty	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	**0.0**
Shrinkage & Environmental Emissions	3.2	3.9	4.0	6.4	5.1	5.3	5.2	5.1	**38.2**	**4.8**
NTS Exit Capacity	0.0	0.7	3.2	1.8	1.9	1.8	1.0	0.2	**10.6**	**1.3**
RIIO - DRS	0.0	0.9	0.0	0.0	0.9	0.0	0.0	0.0	**1.8**	**0.2**
Total RIIO-GD1	**6.5**	**8.4**	**10.9**	**11.8**	**10.9**	**10.0**	**9.3**	**8.4**	**76.2**	**9.5**

Customer Satisfaction

The aim of the customer satisfaction incentives are to improve levels of customer satisfaction and minimise complaints from the activities carried out by the gas networks. The incentives also seek to encourage us to undertake effective engagement with our stakeholders and reflect their views in the day to day operation of our business.

Our results here have been consistently very strong here, and overall have delivered an incentive of £2.9m and a RORE impact of 0.3%. We are targeting to sustain and improve on this strong performance, and continue in our pursuit to deliver the best possible experience for our customers.

Customer Service

We have continued to deliver a very strong performance in our customer service outputs. We achieved an average score of 9.08 across the three customer satisfaction survey areas, a strong performance but there was a minor drop from last year's average score of 9.14. We ranked a close third across the GDNs, just behind the top score of 9.24.

The main reason for the reduced overall performance was a decrease in our Connections score, which reduced from 9.14 to 8.93. We are addressing the specific points that have caused this decrease by setting stricter internal service level lead times for connections customers, stricter timescales for reinstatement work, and providing in depth customer training for all customer facing colleagues in the connections process. Over the second part of 2018/19 we saw an immediate impact of these improvements, and are forecasting sustained improvement for Connections.

Complaints Handling

Complaints handling performance is measured via the complaints metric which is a composite score calculated as the weighted average of our performance against four elements – the percentage of complaints unresolved after 1 day, 31 days, the percentage of repeat complaints, and the number of Energy Ombudsman decisions that go against us

This year we have achieved a weighted complaint score of 2.9 which does not generate any penalties. Penalties would only be imposed if our score was 11.57 or more. This is a very strong performance and is an improvement on last year's score of 3.4. Over the last 12 months we have worked hard to resolve more complaints within D+1 and D+31, and this has had a positive impact on the overall score. We have been working hard to make improvements in both these areas. We have continued to hold our daily complaints call, but introduced an improvement to this by using one of the daily calls to focus on resolution for complaints over 1 day old. This has helped to improve our performance for D+31 complaints. We have also introduced a jeopardy report that focusses on open complaints approaching D+10 and D+20. Finally our robust quality checks ensure that repeat complaints are kept to a minimum. We continue to have had no Ombudsman findings against NGN for RIIO-GD1.

Stakeholder Engagement

In 2018/19 we achieved a score of 5.96, maintaining our strong position within the scheme. We have worked extremely hard this year to continue to better demonstrate how input from our stakeholders is shaping our business and leading to measurable improvements and benefits, and will continue to build on this performance.

Environmental Emissions and Shrinkage

We are responsible for purchasing gas to replace the gas lost through shrinkage and are incentivised reduce these losses over time. Shrinkage comprises leakage from pipelines (c.95%), theft from the gas network (c.3%), and own use gas (c.2%). The table below summarises our actual and forecast performance against the Environmental Emissions and Shrinkage incentives.

18/19 Prices	Actuals						Forecast		RIIO Total	Avg. Yr.
	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21		
Shrinkage GWh:										
Allowed volumes	459	445	433	423	412	401	390	379	**3,342**	**418**
Actual / forecast	421	397	382	354	352	341	330	319	**2,894**	**363**
Variance	38	48	51	69	60	60	60	60	**448**	**56**
Variance %	8.4%	10.8%	11.9%	16.3%	14.6%	15.1%	15.5%	16.0%	**13.4%**	**13.4%**
Incentive Earned in year (£m)	**0.8**	**0.7**	**0.6**	**0.9**	**0.8**	**1.0**	**0.9**	**0.8**	**6.6**	**0.8**
Environmental Emissions GWh:										
Allowed volumes	434	420	408	398	386	376	364	354	**3,140**	**393**
Actual / forecast	399	375	360	332	329	319	307	297	**2,718**	**340**
Variance	35	45	48	66	57	57	57	57	**422**	**53**
Variance %	8.1%	10.7%	11.7%	16.6%	14.9%	15.1%	15.6%	16.1%	**13.4%**	**13.4%**
Incentive Earned in year (£m)	**2.4**	**3.2**	**3.4**	**5.5**	**4.3**	**4.3**	**4.3**	**4.3**	**38.7**	**4.8**

Our actual Shrinkage and Leakage volumes have reduced year on year in line with the target reduction, meaning that our outperformance stayed the same. Average system pressures rose slightly from 31.31 mbar to 31.95 mbar as a result of higher pressure requirements in March 2018, which meant that pressures were lowered later than in the previous year. Average system pressures would have been even higher if we had not introduced remote pressure monitoring and control equipment at targeted governor stations.

We also saw MEG saturation decrease from 29.75% to 22.84%, a decrease of 6.9%. MEG (Monoethylene Glycol) is a 'wet' gas used to saturate and swell metallic joints which otherwise may leak gas. Since last year we have implemented an annual cost benefit analysis on all foggers on our network and by targeting investment in the most beneficial units and turning off those that are uneconomic, we are ensuring we operate a more efficient and cost-effective gas conditioning strategy.

Our results here have been consistently very strong despite the net reduction this year, which still delivered an incentive of £4.9m overall and a RORE impact of 0.6%.

NTS Exit Capacity

The Exit Capacity incentive drives the gas networks to reduce gas exit capacity bookings, which are rights to flow volumes of gas from the national transmission system into our network. Reducing this cost will ultimately reduce overall costs in the gas transmission system and benefit end consumers.

In 2018/19 we have outperformed the target bookings by 17.4%. This delivers an incentive of £1.8m this year and a RORE impact of 0.2%. We are targeting to sustain and improve on this strong performance.

Gwh 18/19 Prices	Actuals						Forecast		RIIO Total	Avg.Yr
	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21		
Allowed volumes	612	618	624	624	624	624	624	624	**4,975**	**622**
Actual / forecast	611	596	546	541	527	514	514	514	**4,361**	**545**
Variance	1	22	78	83	97	110	111	111	**613**	**77**
Variance %	0.1%	3.6%	12.6%	13.3%	15.6%	17.7%	17.7%	17.7%	**12.3%**	**12.3%**
Incentive Earned in year (£m)	**0.0**	**0.7**	**3.2**	**1.8**	**1.9**	**1.8**	**1.0**	**0.2**	**10.6**	**1.3**

Discretionary Reward Scheme

Our 2015-18 submission was ranked Number 1 among the gas networks. We were recognised for our commitment to local communities and the work we've undertaken over the last three years to help address a range of social, carbon monoxide safety and environmental issues.

6. (R6) Innovation

NIA

We have increased our focus this year on maximising the benefits we can realise from innovation funded through the NIA allowance. All innovation projects start with a problem statement which is assessed for qualitative and quantitative benefits. Any assumptions and targets are then fully tested during the development of the solution.

We have fully reviewed and updated our approach to implementation, and have put in place a new process to track, monitor and report on the take up and use of the innovation across our various regions. This involves our implementation managers attending regional performance meetings, highlighting where specific tooling and equipment is or isn't being used. This demonstrates to each region the significant benefits that other areas are achieving from the new products. This process has increased the use of new products across the network, allowing for savings to be passed onto our customers faster than ever before. This year we estimate we have delivered c£1.2m of efficiencies in Totex, c£0.5m in Repex through our Stub End abandonment projects, and £0.6m in Opex in the main from the Core'n'vac, Dog survey team, and Back Blade Protector projects.

For further details on our innovation projects and strategy please visit:

http://corporate.northerngasnetworks.co.uk/innovation/

NIC

In 2018/19 NGN incurred £4.6m of expenditure on 4 NIC Projects (LCGPH, CNG, H21, HyDeploy 1) and contributed £0.7m to Hydeploy 2 project.

Of the projects currently 'live' the LCGPH project is near completion with all site work completed and tested, only project management and associated project reporting to be completed. Forecasted spend on the project is £6.3m which is in-line with initial project budget.

The H21 Project is progressing in-line with plan. Completed build of Buxton and Spadeadam test sites with Hydrogen testing in progress at both due to be completed by end of 2019/20 – a forecasted expenditure of £4.8m in that period. 2020/21 will see completion of the report and official launch. Current total planned expenditure for the project is £9.6m against a £10.2m budget with any financial efficiencies being used to fund operational procedures testing.

Hydeploy 1&2 are both being led by Cadent with NGN providing a financial contribution to the funding (£0.7m in 2018/19 for Hydeploy 2) and resources to support successful project delivery.

In total across all RIIO-GD1 years NGNs expenditure on NIC projects is currently forecasted to be £19.4m with H21 phase 2 still awaiting award. NGN have also contributed £2.9m Licensee Contribution to date for NIC projects showing a significant commitment to Innovation.

7. (R7, R7a, R8, R8a) Financing & Net Debt

Cost of debt

In 2018/19 NGN's net interest cost on a nominal basis (per the regulatory definition) was £48.5m. On a real basis this translates to outperformance of £16.5m against the regulatory cost of debt allowance (on the basis of both actual and notional gearing), contributing 2.9% to RoRE for the year.

As NGN's debt is 100% nominal (i.e. there are no inflation-linked debt instruments or derivatives in the funding structure), and given the relatively low effective rate on date after taking account of the impact of interest rate swaps, NGN will tend to outperform the cost of debt allowance other than in years when RPI inflation is very low or negative.

As an infrequent issuer of debt NGN is not able to manage its actual debt costs against the regulatory allowance purely through the timing of debt issuance. Derivatives (interest rate swaps) are therefore used to manage the extent to which NGN's actual debt costs are sensitive to market rates in any particular year.

Net Debt

Regulatory net debt increased from £1.37bn in March 2018 to £1.42bn in March 2019. The additional debt was used to fund investment in the network and supporting IT infrastructure. Over the remainder of GD1 net debt is forecast to increase by an average of around £70.0m per annum as NGN continues to invest in the network with the consequent increase in the value of RAV enabling NGN to maintain debt to RAV close to the regulatory assumption of 65%.

In January 2019 NGN raised £200.0m through the issue of US Private Placement notes, of which £50m mature in 2029 and £150m in 2031. The proceeds were used to repay a bond maturing in July 2019.

Completion of tables R7a & R8a

In periods before NGN adopted FRS102 for its accounts preparation (i.e. years to March 2014 and March 2015) there were no derivative fair values on NGN's balance sheet.

In table R7a P&L charges and cash flows attributable to interest on European Investment Bank loans and interest rate swaps before 2017/18 have been aggregated for simplicity.

In table R8a the fair values shown against references H1 & H2 include balances on bonds previously in fair value hedge relationships whose value will be progressively written off through P&L in accordance with the relevant accounting standard. In order to maintain consistency with a change in the presentation of these balances in NGN's statutory accounts for 2019/19, for 2018/19 RFPR these balances are now shown against C3 & C5.

8. (R9) RAV

The table below shows our RAV position for the 8 years of RIIO-GD1. This has been prepared in line with the most recent Price Control Financial Model (PCFM) as published in November 2018. We have included our actual costs for 18/19 and the Totex forecast costs for the remaining years of RIIO-GD1.

NGN's closing RAV position at 31st March 2019 is £2.212 bn as shown below:

RAV: 9/10 prices £m	**13/14**	**14/15**	**15/16**	**16/17**	**17/18**	**18/19**	**19/20**	**20/21**	**Total**
Opening asset value	1,577	1,566	1,576	1,597	1,622	1,644	1,665	1,687	**1,577**
Net additions	67	90	96	100	103	108	118	121	**802**
Depreciation	(79)	(80)	(74)	(75)	(81)	(88)	(95)	(105)	**(677)**
Closing asset value	**1,566**	**1,576**	**1,597**	**1,622**	**1,644**	**1,665**	**1,687**	**1,703**	**1,703**
RAV: Closing asset value (RFPR yr. end nominal)	1,852	1,881	1,934	2,030	2,126	2,212	2,300	2,386	2,386

9. (R10) Tax

There is an obvious increase in NGN's tax liability per CT600c between the 2015 and 2016 periods. This is primarily due to the change in accounting standards to FRS102 and how Repex is treated for accounts and corporation tax purposes. Previously a full deduction was allowed for the expense (Circa £90m per annum) but now this expense must be written down over the life of the asset, which is deemed to be 60 years.

There are no reconciling items for any non-regulated tax liability as NGN does not operate any unregulated activities.

The most significant adjustment for other factors is the one-off pension contribution of £58.8m that was made in 2018, this resulted in an effective £11.2m (58.8 @ 19%) reduction in the tax charge per the CT600c. This was a one-off adjustment and would not be expected each year.

Forecast tax allowances are taken from the PCFM and are in line with expectations based on the transition period going into a new price control. The net forecast tax allowance after claw-backs is primarily lower due to the falling corporation tax rates as they reduce to 17% from the 19% they are currently set at.

10. (R11) Dividends

The dividend profile from 2013/14 to 2018/19 is shown below in nominal prices.

Future dividend payments are yet to be approved by the NGN Board.

	13/14	14/15	15/16	16/17	17/18	18/19
Dividend (£m)	71.5	58.4	80.0	90.3	91.4	93.5

11. (R12) Pensions

The pension tables within the RFPR reflect the deficit, contributions and asset / liabilities reported to Ofgem following the last triennial review in 2016.

12. Data Assurance

This is NGN's first submission of the Regulatory Financial Performance Report.

The submission process is compliant with NGN's Regulatory Reporting Policy, which requires a full secure audit trail for the submission, segregated roles and responsibilities including independent completion and detailed checking roles. Step by step processes have been documented. All tables are allocated to members of the NGN Finance Management Team, and have been reviewed through departmental internal sign off, in accordance with our policies, by the Finance Director.

Much of the financial data financial data is based on other Regulatory Submissions including those detailed under Condition A40 in our Licence and it has been reconciled to audited statutory accounts. As such the base data is subject to the controls inherent in those processes.