Promoting choice and value
for all gas and electricity customers

RIIO-GD1: Final Proposals - Overview

Final decision

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Overview:

This document sets out our Final Proposals for the next gas distribution price control (RIIO-GD1). The price control will be set for an eight-year period from 1 April 2013 to 31 March 2021.

This is the first gas distribution price control under the new RIIO (Revenue = Incentives + Innovation + Outputs) model. Under RIIO we are adopting a different process for setting price controls. Companies are required to develop and submit well-justified business plans, supported by the views of stakeholders, setting out what they will deliver. Those plans inform the setting of the price control components.

This document sets out: the outputs that we will require gas distribution network companies (GDNs) to deliver over the next price control period; the incentive framework to reward or penalise GDNs according to their output performance; our proposed cost and revenue allowances; and, our approach to dealing with uncertainty.

Associated documents

Supporting Documents

RIIO-GD1: Final Proposals Supporting Document – Outputs, incentives and innovation

RIIO-GD1: Final Proposals Supporting Document – Finance and uncertainty

RIIO-GD1: Final Proposals Supporting Document – Cost efficiency

Associated Documents

RIIO-GD1: Final Proposals Financial Model

RIIO-GD1: Final Proposals – Real price effects and ongoing efficiency appendix

Consultants report: PKF Audit letter on the financial models

Consultants report: RIIO Reviews Financeability Study (Imrecon working with ECA)

Other Relevant Documents

RIIO-T1: Final Proposals for National Grid Electricity Transmission and National Grid Gas – Overview

RIIO-GD1: Initial Proposals

Decision on strategy for the next gas distribution price control – RIIO-GD1 Handbook for implementing the RIIO model - Ofgem, October 2010

Glossary for all the RIIO-T1 and RIIO-GD1 documents

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Executive Summary

Britain's gas and electricity network companies face unprecedented challenges. They will need to invest over £30 billion over the next decade to develop smarter networks, to meet environmental challenges and to secure energy supplies. Against this backdrop, it is more important than ever that network companies can show consumers they are getting value for money.

Along with the transmission price control (RIIO-T1), the gas distribution price control (RIIO-GD1) is the first price control to be conducted under our new RIIO (Revenue = Incentives + Innovation + Outputs) model. The objective of RIIO is to encourage network companies to play a full role in the delivery of a sustainable energy sector, and to do so in a way that delivers value for money for consumers.

In this document we set out our Final Proposals (FP) for the eight gas distribution networks (GDNs) that transport gas from the national transmission system (NTS) to homes and businesses throughout Great Britain. The price control will apply for an eight-year period from 1 April 2013 to 31 March 2021. We published our Initial Proposals (IP) for GDNs in July 2012, and this document sets out our decision taking into account respondents' views.

Overview of our proposals

We set out a comprehensive set of outputs that we will require GDNs to deliver, and associated output incentive mechanisms to reward or penalise their performance.

The RIIO framework identifies six output categories: safety; reliability; environmental; social; connections; and, customer services.

Relative to our IP, we have revised the output levels that we expect GDNs to deliver over the RIIO-GD1 price control. In particular, in relation to iron mains replacement (which delivers safety and environmental improvements) we have provided increased funding for those companies that have provided us with further evidence to support an increase in the level of outputs relative to IP. As we set out below, this is the principal change in FP relative to IP in terms of the level of funding.

In relation to network safety outputs, consistent with the new Health and Safety Executive (HSE) iron mains policy which provides greater flexibility for GDNs in managing the risk associated with iron mains, we expect GDNs to reduce the safety risk by 40-60 per cent during RIIO-GD1. We also expect GDNs to reduce gas transport losses, which comprise 95 per cent of GDNs' carbon footprint, by 15 to 20 per cent by the end of the period.

As set out at IP, we will require GDNs for the first time to deliver an improvement in the public awareness of the risks of carbon monoxide (CO) poisoning, a key gas safety issue. We will publish an assessment of GDNs' comparative performance. We will also require GDNs to connect around 80,000 fuel poor customers to the gas network over the price control period.

We will require the GDNs to deliver improvements in customer services. We have set out a financial incentive mechanism to reward (or penalise) their performance.

Overall, GDNs will need to improve customer satisfaction from current levels to the upper quartile GDN performance to avoid a penalty and earn a reward. We are also confirming standards for connecting new customers to their network, as well as our intention to develop voluntary standards for biomethane connections.

Finally, our reliability output measures will require GDNs to maintain the integrity of network assets, as well as meet the current network capacity and security of supply standards.

Cost allowances reflect our view of efficient costs of delivering the required outputs and services.

At IP, we assessed GDNs' cost forecasts using a range of benchmarking techniques. Our analysis identified material differences between GDNs' proposed costs and our assessment of the efficient level of costs. We proposed to require GDNs to close three-quarters of the efficiency gap over the RIIO-GD1 period. Our cost allowances also required GDNs to more than offset increases in real prices, eg labour costs, through continued productivity improvements.

Respondents to IP broadly supported our overall approach to cost efficiency. However, we have made some changes to address specific concerns, notably in relation to our treatment of opex-capex trade-offs, modelling of emergency service costs, and business support costs. The overall effect of these changes is to limit the reductions we require for cost efficiency over the RIIO-GD1 period from an industry average of 10 per cent to around 7 per cent.

As set out above, we have allowed for increased funding for safety and environmental outputs which explains more than half of the increase in funding relative to IP of around £1.5 billion or 12 per cent of controllable costs. However, overall our controllable cost allowances are around 8 per cent lower than GDNs' second plans, and 19 per cent lower than their first plans, reflecting our view of the scope for improvement in cost efficiency, and lower levels of investment to maintain a safe and reliable network.

A financial package which ensures efficient GDNs can finance their activities.

We confirm our proposed financial packages set out at IP. The package consists of an assumed cost of equity of 6.7 per cent (post-tax real), and a notional gearing level of 65 per cent; reflecting our view of the relatively low cash-flow risk associated with GDNs' businesses relative to other energy networks. We will allow GDNs to recover efficient debt costs based on an index of comparable companies' debt costs.

Impact on customer bills

Overall, our final proposals result in an increase in allowed revenues of around 5 per cent on average over the RIIO-GD1 period relative to the last year of the current control (2012-13). The increase in revenues translates into a little less than £7 in the average gas customer's bill, on average over RIIO-GD1, or around £6 taking into account the reductions in allowed revenues for National Grid Gas (NGGT), the owner of the gas transmission network. The resulting changes in network charges will therefore increase the average household gas bill from £704 per annum (as per our May 2012 factsheet) to £710 on average over the price control period.

1. Introduction

Chapter Summary

This chapter explains the structure and purpose of this document and sets out the context of the Final Proposals.

Purpose of this document

1.1. This document sets out our Final Proposals (FP) for the gas distribution price control (RIIO-GD1) that will apply to the eight gas distribution networks (GDNs). The eight GDNs are: East of England, London, North West, West Midlands (all owned by National Grid Gas), Northern (owned by Northern Gas Networks), Scotland, Southern (both owned by Scotia Gas) and Wales and West (Wales and West Utilities).

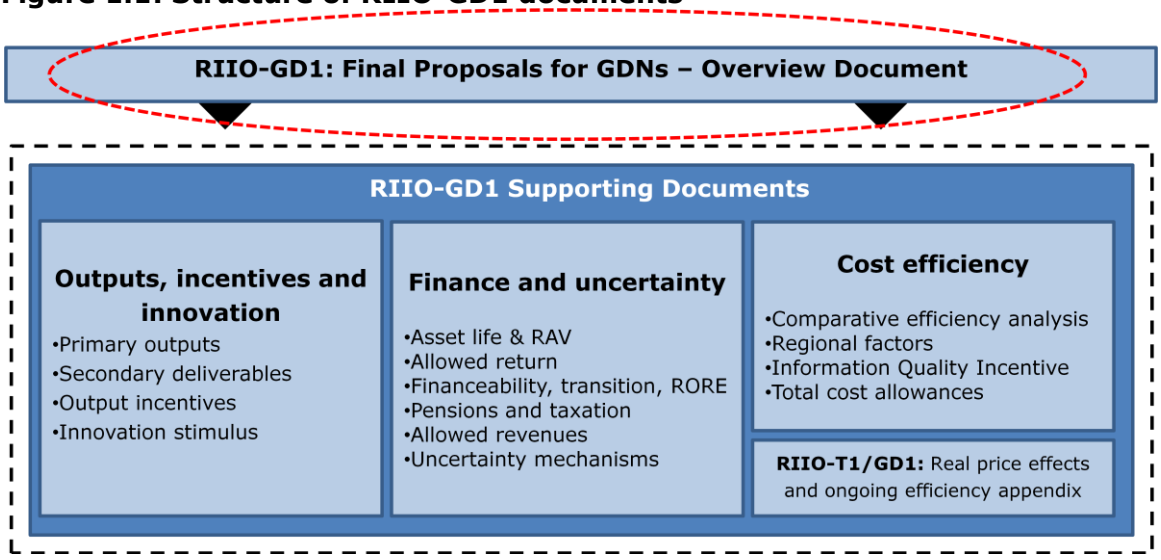
1.2. The GDNs maintain and operate the local gas networks that transport gas from the national transmission system (NTS) to homes and businesses throughout Great Britain. The price control will apply for an eight-year period from 1 April 2013 to 31 March 2021.

1.3. This document aims to provide an accessible overview of the Final Proposals for GDNs. Alongside this document we have published three Supporting Documents covering: (i) outputs, incentives and innovation; (ii) cost efficiency; and (iii) finance and uncertainty, and a real price effects and ongoing efficiency appendix. The Supporting Documents are aimed primarily at network companies, and those who require a more in-depth understanding of our decision. We are also publishing the financial model that underpins our Final Proposals.

1.4. Our FP will come into effect through changes to the gas distribution licences on 1 April 2013. We intend to publish our Statutory Licence Consultation for GDNs on 21 December 2012.

1.5. Figure 1.1 below sets out the structure of these documents.

Figure 1.1: Structure of RIIO-GD1 documents



Regulatory process to date

1.6. In October 2010, we announced a change in the way we will regulate the GB onshore network companies.[1] We introduced the RIIO (Revenue = Incentives + Innovation + Outputs) model. The overriding objective of the RIIO model is to drive benefits for consumers by providing energy network companies with strong incentives to meet the challenges of delivering a low carbon economy and a sustainable energy sector whilst ensuring value for money to consumers.

1.7. In March 2011 we published our strategy (Strategy Document) on the key elements of the regulatory framework for RIIO-GD1. This included the proposed outputs that we would require companies to deliver, the proposed incentive framework, and financial parameters. We also provided business plan guidance and set out the tools we would use for assessing network companies' plans.[2] We stated that we would take a proportionate approach to our scrutiny of companies' plans, ie that the level of our regulatory scrutiny would vary according to the quality of each GDN's plan. Under the new framework, companies that submitted very high quality plans may be offered the option of agreeing price controls early – "fast-tracking".

1.8. In November 2011, the GDNs submitted their first business plans, and in mid-February 2012 we published our initial assessment of their plans.[3] In our

[1] Regulating energy networks for the future: RPI-X@20 decision document: http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=116&refer=Networks/rpix20/ConsultDocs
[2] See Ofgem (31 March 2011) Decision on strategy for the next gas distribution price control – RIIO-GD1 http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=312&refer=Networks/GasDistr/RIIO-GD1/ConRes
[3] Ofgem (3 February 2012) RIIO-GD1: Decision letter on fast-track process http://www.ofgem.gov.uk/Networks/GasDistr/RIIO-GD1/ConRes/Documents1/120217_fast_track_decision_letter.pdf

initial assessment, we noted that the GDNs' plans were of a much higher quality relative to previous price control submissions, and the plans were informed by a much greater degree of stakeholder engagement. In general, the GDNs demonstrated strong commitment to the implementation of the new RIIO framework, and we identified a number of key areas in each individual plan that we could broadly agree to (ie where we expected to apply proportionate scrutiny).

1.9. However, we also identified a number of material issues with all plans which we considered could not be resolved in the customer interest within the fast-track process.[4] We therefore decided not to fast-track any GDN, and required all GDNs to submit a second business plan addressing the issues we raised in our initial assessment.

1.10. The GDNs submitted their second RIIO-GD1 business plans to us in April 2012.[5] We published Initial Proposals (IP) in July 2012, and we are now publishing our decision following consideration of respondents' views.

1.11. Throughout the process, we have conducted extensive stakeholder engagement, which has informed our consultation documents and our final decision. Our Strategy Document, Initial and Final Proposals have been subject to challenge by the Consumer Challenge Group (CCG), our internal panel of experts on social and environmental issues. We have also held price control review forums (PCRF) at key stages of the review. The PCRF brings together the networks and other stakeholders to discuss key price control issues. We have also held numerous bilateral discussions with networks, shippers/suppliers, consumer and environmental groups, as well as with central government. Our stakeholder engagement is in addition to the engagement undertaken by companies in developing their plans.

Overview of decision

Addressing strategic challenges

1.12. In our Strategy Document, we identified a number of strategic challenges for the RIIO-GD1 control. The challenges we identified comprised: the uncertain role of gas networks in a low carbon energy sector; the requirement to improve asset management to ensure least-cost service provision; ensuring the GDNs play a full role in facilitating the move to a low carbon economy;

[4] Under the fast-track process, we would have published initial proposals for fast-tracked companies on 23 April 2012, and final proposals at the end of July 2012. See: Ofgem (9 December 2011) RIIO-GD1: Gas Distribution Networks' (GDNs) business plans - publication and next steps, Annex 1.

[5] These are available at the following links: National Grid Gas plc:http://www.talkingnetworksngd.com/; Scotia Gas Networks: http://www.sgn.co.uk/index.aspx?id=6553&rightColHeader=87&rightColContent=15&rightColFooter=237&TierSlicer1_TSMenuTargetID=565&TierSlicer1_TSMenuTargetType=4&TierSlicer1_TSMenuID=6; Wales and West Utilities: http://www.wwutilities.co.uk/stakeholders.aspx; Northern Gas Networks: http://www.northerngasnetworks.co.uk/cms/54.html#riio

and addressing social issues, notably the need to address fuel poverty and the number of carbon monoxide (CO) poisoning incidents.

1.13. We consider our Final Proposals enable and encourage GDNs to meet these strategic challenges. For example, in our appraisal of GDNs' investment plans, we have taken account of the uncertainty over the future role of gas networks, and the requirement to improve asset data. Our proposed approach is to defer capital investment decisions where this is in the consumer interest, ie where there is uncertainty over the future payoff and there is no detrimental effect on consumers in the meantime. With respect to asset data, the GDNs have generally not provided sufficient improvements in the data we required to support their proposed investment levels. We have therefore decided to introduce an uncertainty mechanism so that GDNs may request higher levels of capital expenditure where they can provide improved asset data at the mid-period review.

1.14. Our cost allowances will allow GDNs to deliver substantive environmental and social benefits. We will require GDNs to realise reductions in gas transport losses, which comprise 95 per cent of GDNs' carbon footprint, of 15 to 20 per cent by the end of the period. The required output level will be supported by an enhanced incentive mechanism which will reward or penalise GDNs for their performance. We are also setting out measures to facilitate biomethane connections, a renewable source of gas. This is also the first price review where we will fund GDNs to improve awareness of the risk associated with carbon monoxide (CO), and we will publish an assessment of GDNs' comparative performance.

Overall cost allowances

1.15. For FP, our cost allowances are around 8 per cent lower than GDNs' April 2012 plans, and 19 per cent lower than GDNs' first business plans submitted to us in November 2011 (see Table 1.1). The reductions in our allowances relative to GDNs' first and second plans reflect our proposed disallowance of outputs which we do not consider are in the customer interest, as well as proposed reductions in unit costs as a result of our benchmarking of GDNs' costs.

1.16. The final cost allowances for FP represent approximately a 12 per cent increase relative to IP. The increase represents principally an increase in funding of around £750 million for NGGD, SGN and WWU for the delivery of additional safety and environmental outputs through the mains replacement programme. At IP we disallowed almost all such expenditure for these three groups as they had not provided their plans in a form consistent with our guidance, although we stated at IP that we would reconsider any resubmissions. Since IP, NGGD, SGN, and WWU have provided us with additional information and revised cost benefit analysis which now conform to our guidance. We have therefore decided to allow the additional proposed outputs.

1.17. We have also made a number of other smaller changes in cost allowances, including minor changes for correction of model errors (equivalent to less than two per cent of allowed costs), as well as changes to our cost assessment methodology (as we describe in chapter 4).[6]

Table 1.1: Controllable cost allowances vs GDPCR1 and GDNs' plans (£million p.a., 2009-10 prices)[4]

	GDN Plan (Nov 11)[1]	GDN Plan (Apr 12)[2]	IP	FP	% change: GDN Plan (Apr 12) to IP	% change: GDN Plan (Apr 12) to FP	% change: IP to FP	% change: GDN Plan (Nov 11) to FP
Industry	**2,208**	**1,950**	**1,612**	**1,797[3]**	**(17%)**	**(8%)**	**+12%**	**(19%)**
NGGD EoE	317	281	242	265	(14%)	(6%)	+10%	(16%)
NGGD Lon	334	277	206	245	(26%)	(12%)	+19%	(27%)
NGGD NW	252	227	181	200	(20%)	(12%)	+10%	(21%)
NGGD WM	183	173	146	157	(16%)	(9%)	+8%	(14%)
NGN	253	229	199	210	(13%)	(8%)	+5%	(17%)
SGN Sc	200	177	148	168	(16%)	(5%)	+14%	(16%)
SGN So	407	346	308	343	(11%)	(1%)	+11%	(16%)
WWU	261	242	182	210	(25%)	(13%)	+16%	(20%)

(1) November 2011 business plan. (2) April 2012 business plan. Note, negative figures in red/ parentheses. (3) This equates to an 8-year total of £14.4 billion of which, £8.7 billion is for repex/capex. (4) The GDNs' plans and Ofgem allowances are for controllable costs excluding shrinkage costs, licence fees, business rates, NTS pension deficit charges, street works costs associated with the implementation of permitting by additional highways authorities, lane rentals and smart metering. Both GDNs' plans and our allowances are gross of real price effects (RPEs). The GDNs' plan cost figures are not adjusted for outputs and costs assigned to uncertainty mechanisms, eg smart meter costs.

1.18. At the industry level, our proposed cost allowances and financial package equate to a marginal increase in revenues over the RIIO-GD1 period relative to the final year of GDPCR1 (net of the tax changes arising from the adoption of International Financial Reporting Standards or IFRS) and around 5 per cent higher on average over the RIIO-GD1 period taking into account IFRS related tax changes.

1.19. The 5 per cent increase in GDNs' charges equates to an increase in the average household bill of a little less than £7. Taken together with the proposed revenues allowances for NGGT which will result in a decrease of

[6] We do not intend to make any further amendments to our Final Proposals to correct any inaccuracies identified after publication, as we consider our approach to applying the upper quartile and closing 75 per cent gap (as we explain in chapter 4) adequately accounts for the possibility of residual error.

around £1, the expected increase in the average household gas bill over the period is around £6 of an average bill of £704.[7]

1.20. As well as tax effects, the other upward pressures on allowed revenues come from increases in pension deficit funding, as well as higher depreciation charges (relative to GDPRC1) from increasing regulated asset values (RAV).

Interaction with other policy areas

RIIO-T1

1.21. Alongside our RIIO-GD1 FP documents, we are publishing Final Proposals for National Grid Electricity Transmission (NGET) and for National Grid Gas (NGGT) for the next transmission price control, RIIO-T1. NGET owns and maintains the electricity transmission network assets across England and Wales. NGGT owns and maintains the gas transmission network assets across Great Britain (GB). This price control will cover the eight-year period from 1 April 2013 to March 31 2021.

Charging volatility

1.22. In our Strategy Document we noted concerns raised by stakeholders that charging volatility arising from the price control settlement (as distinct from the charging methodologies) has an adverse impact on consumers. We published a consultation on this issue in April 2012, and our final decision in October.[8] In our decision, we set out a number of measures to mitigate charging volatility, including limiting intra-year charge changes, as well as providing a period of notice between the announcement of the revenue change, and the amount being recovered through charges. Our FP for RIIO-GD1 (and RIIO-T1) incorporate the measures set out in our charging volatility decision.

Unusual income/ expenditure

1.23. Under RIIO we apply the same incentive rate, or sharing factor between the company and its customers, in the treatment of all types of income or expenditure. This means that over and under spend is shared at this rate, which varies from company to company but is broadly 50:50 across all sectors. This means that, for example, customers and the company share the benefits from efficiency savings from the year these are made. We made it clear in our consultation on the RIIO framework that some expenditure such as penalties would not be covered by the sharing factor – as customers and

[7] Updated Household energy bills explained (May 2012): http://www.ofgem.gov.uk/Media/FactSheets/Documents1/household-bills.pdf
[8] Mitigating network charging volatility arising from the price control settlement: http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=368&refer=Networks/Policy

consumers should not bear the cost of a failure by a company to comply with its obligations – and that we would not apply the sharing factor if the network company had manifestly wasted money.

1.24. We are aware that there might be cases where income or expenditure derives from unusual circumstances, eg compensation resulting from legal proceedings, including any settlement. In such cases, we still propose to apply the sharing factor, subject to the caveats we indicated in the establishment of the RIIO framework. However, we also recognise that judgments made in legal proceedings might take this regulatory treatment into account and may be of such a nature that we are prompted to review the application of the sharing factor in this way in future cases. Therefore we will keep this approach under review in the light of emerging decisions.

DECC consultation on providing redress to consumers

1.25. In July 2012 DECC consulted on a new power for us to compel regulated energy businesses to provide redress to consumers.[9] On 29 November the Secretary of State for Energy and Climate Change confirmed the introduction of the Energy Bill to the House of Commons.[10]

1.26. The power would only be applicable if a regulated energy business breached its licence. Under the existing arrangements, we have the power to fine regulated energy businesses for licence breaches of an amount up to 10 per cent of their total annual turnover. The measures set out in the Bill would give us the power to mandate paying compensation to consumers in appropriate circumstances. The Bill proposes that the aggregate penalty / redress under the new regime should similarly be capped at 10 per cent of annual turnover. Whilst it is conceivable that in practical terms financial exposure might increase under the new system, it does not necessarily follow that we would award the same under the redress powers that we would under the current regime. We will be required to consult on and publish a statement on how we will exercise our new powers. We will be able at that stage to address the issue of overall risk levels including interactions with price control settlements and licensees will be able to respond on these issues.

[9] Consultation on a proposed new power for Ofgem to compel regulated energy businesses to provide redress to consumer: http://www.decc.gov.uk/assets/decc/11/consultation/4975-consultation-on-a-proposed-new-power-for-ofgem-to-.pdf

[10] Energy Bill 2012-2013: http://www.decc.gov.uk/en/content/cms/legislation/energybill2012/energybill2012.aspx

Structure of this document

1.27. The remainder of this document is structured as follows:

- Chapter 2 sets out our decision in relation to outputs and associated incentives.
- Chapter 3 sets out our decision in relation to encouraging innovation.
- Chapter 4 sets out our adjustments for cost efficiency.
- Chapter 5 discusses our decision on dealing with uncertainty.
- Chapter 6 sets out our decision on financial issues.

2. Outputs and associated incentives

Chapter Summary

This chapter summarises the set of outputs that we will require GDNs to deliver over RIIO-GD1. We provide more detail in the Outputs, Incentives and Innovation Supporting Document. We also discuss how we will monitor, incentivise and hold GDNs to account for output delivery.

Outputs framework

2.1. The adoption of an outputs based framework is a key element of the new RIIO framework. By defining the outputs companies need to deliver (eg risk-removed), instead of prescribing a set of inputs (eg length of mains abandoned), the framework provides incentives for companies to innovate and deliver the services that customers require at least cost. An outputs based framework also provides greater transparency for customers (as well as companies) in relation to the services companies need to deliver.

2.2. In our Strategy Document, we defined the primary outputs and secondary deliverables that we would require GDNs to deliver over RIIO-GD1. We required companies to set out in their business plans the optimal level of outputs, based on investment appraisal and customer research (or, where there are statutory obligations), to achieve these.

2.3. In IP, we set out our proposed output levels drawing on our assessment of GDNs' proposed output levels, including their cost benefit analysis (CBA) supporting non-mandatory investment. Our decision on output levels is broadly similar with our IP. The main change since IP is in relation to environmental and safety outputs associated with iron mains. In particular, at IP we disallowed almost all of NGGD, SGN and WWU's proposed non-mandatory investment in iron mains (which delivers environmental and safety outputs) as their investment appraisal did not conform to our guidance. Following IP, all three GDNs resubmitted revised investment appraisals, and we propose to allow substantive elements of their revised non-mandatory investment and associated output levels for the reasons set out below. As we set out in chapter 4, the increase in environmental and safety outputs accounts for around 80 per cent of the increase in funding for FP relative to IP.

Decision on outputs

Safety outputs

2.4. At IP, we proposed to fund GDNs for iron mains replacement (or repex) on the basis of the Health and Safety Executive's (HSE's) new iron mains policy.

2.5. Under the old policy, the HSE required GDNs to replace all iron mains within 30 metres of buildings within 30 years ("30/30" programme). The new policy is referred to as the "three-tier approach". Under the new policy, for tier 1 mains GDNs have to replace the same length of mains as under the old policy but can prioritise replacement based on a wide range of benefits, including reductions in gas losses, operating costs, as well as improvements in safety risk.[11] Tier 1 mains comprise around 80 per cent of the mains population. For tier 2 and 3, in general, the new policy only requires GDNs to replace mains if the pipe replacement is justified in cost benefit terms. The exception is high risk tier 2 mains, where there is a mandatory requirement.

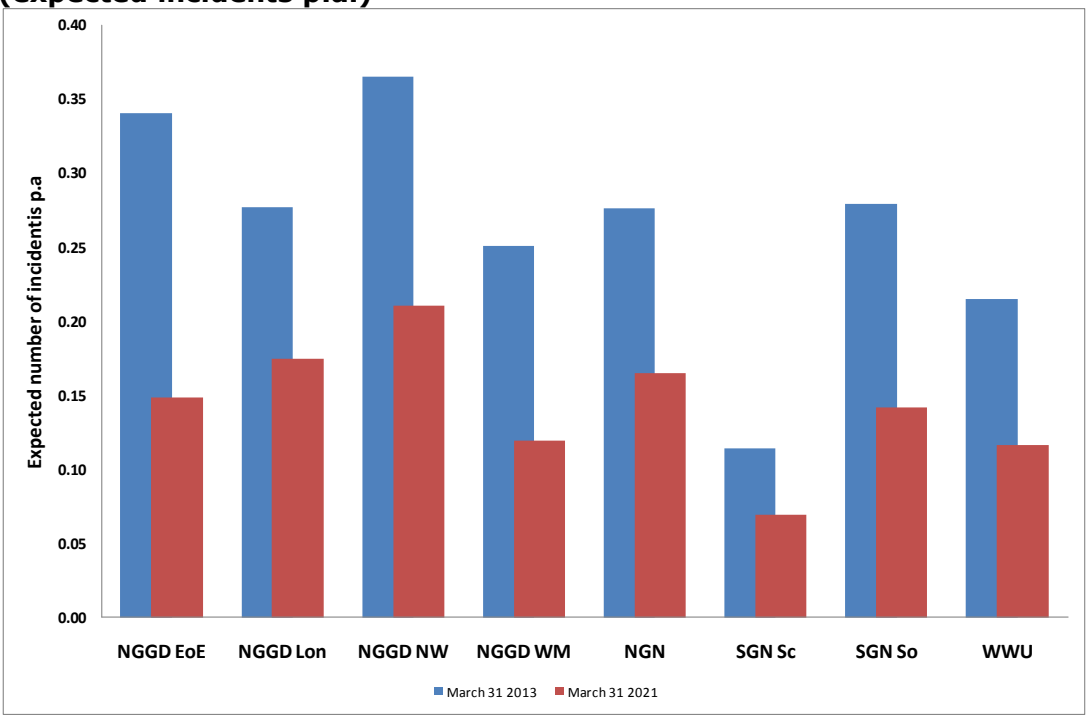
2.6. At IP, we provided no funding for tier 2 and 3 mains for WWU and very limited funding for NGGD and SGN as we did not consider that they had undertaken their investment appraisal consistent with our appraisal guidance. We have not made any changes in relation to NGN's tier 2 and 3 iron mains related outputs relative to IP, as its plan was consistent with our guidance and at IP we proposed to fund it in full.

2.7. Since IP, NGGD, SGN and WWU have resubmitted their investment appraisal for tier 2 and 3 mains in a way that is largely consistent with our guidance. In particular, they have submitted plans consistent with our proposed discount period of 24 years to accommodate uncertainty in relation to future network use and the pay-back of network investment. In response to the new information provided by GDNs, we propose to allow additional repex allowances and associated outputs for all three groups. This increase in outputs explains in large part the increase in allowances relative to IP.

2.8. In return for the funding levels, we will require GDNs to improve the safety risk performance of their iron mains population by 40 to 60 per cent (as set out in Figure 2.1).

[11] Tier 1:pipes with a diameter of 8 inches or less; medium diameter / tier 2:pipes greater than 8 inches and up to 18 inches in diameter; large diameter / tier 3: pipes greater than 18 inches.

Figure 2.1: Expected improvements in safety risk over RIIO-GD1 (expected incidents p.a.)



2.9. The HSE has stated that it will undertake a further review of the iron mains programme in time for our mid-period review (which we will conduct in 2016). At IP, we set out a clear framework for how we will reset GDNs' required outputs and cost allowances following the HSE review, and we are retaining our position for FP. We will ensure that we allow GDNs to retain the benefits of unit cost outperformance in relation to the delivery of the iron mains programme for the full eight-year period (subject to the efficiency incentive rate), thereby providing strong incentives for GDNs to develop innovative low-cost techniques to address iron mains risk.

2.10. We set out the environmental outputs (which are principally associated with the iron mains programme) below.

Other safety and reliability outputs (asset integrity expenditure)

2.11. At IP, we identified a number of reliability outputs primarily in relation to loss of supply (measured by the number of interruptions) and network capacity (defined as providing capacity to meet a 1 in 20 peak day winter demand scenario). We also identified corresponding secondary deliverables in relation to asset health and risk, and asset/capacity utilisation indices.

2.12. We proposed to allow integrity expenditure broadly in line with historical expenditure given the absence of robust evidence to support higher levels. We also proposed to allow GDNs to request a reopener mid-period where they

can provide more robust data (eg around deterioration rates) to support increased investment, and where the associated change in expenditure is material (ie greater than 1 per cent of allowed revenues).

2.13. In broad terms, we have decided to retain our proposed approach at IP, ie to provide funding in line with historical levels. However, in some expenditure areas, GDNs have provided improved data to support their integrity related capex proposals. As a consequence, we have to increased allowances in respect to asset integrity expenditure for some GDNs, eg in relation to expenditure on the Local Transmission System (LTS) for WWU.

2.14. As at IP, we have also funded investment in asset classes where the benefits are clear. For example, we have decided to fund GDNs for the decommissioning of gasholders. We consider that the GDNs' CBA supports the decommissioning of gasholders, and we have allowed funding for the removal of the entire population over the next two price control periods. The proposed programme will address concerns over the integrity of these assets, realise reductions in GDNs' operating and maintenance costs, as well as provide wider societal benefits, eg in terms of visual amenity and address development constraints in proximate land.

2.15. We recognise that there may be a case for greater spending on asset health beyond the historical funding levels. However, in the absence of robust asset data it would not be in the consumer interest to fund the proposed investment now. Instead, for all asset classes, as proposed at IP, we have decided to allow GDNs to request a reopener at the mid-period review if they can provide more robust data (eg around deterioration rates) in support of higher asset integrity investment, and where the associated change in expenditure is material.

Environmental outputs

2.16. In relation to gas transport losses, or shrinkage, which accounts for around 95 per cent of GDNs' business carbon footprint, at IP we proposed reductions in shrinkage of around 15 to 20 per cent over the RIIO-GD1 period.

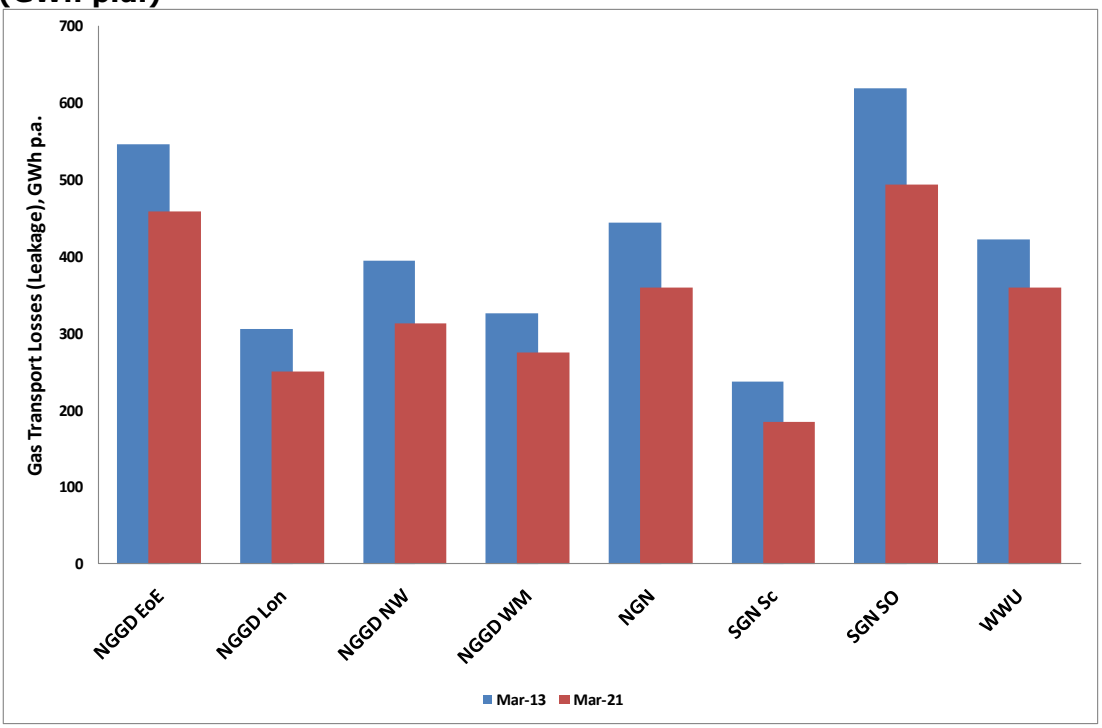
2.17. Following a review of responses, we made some revisions to our approach to setting the targets for gas transport losses which moderated the targets for some GDNs relative to IP. However, we also increased the target reductions for consistency with our higher allowances for repex. The overall effect is that we have decided to set target reductions in gas transport losses at a similar level to IP of between 15 to 20 per cent over the RIIO-GD1 period.

2.18. We have also decided to enhance the existing environmental emissions incentive (EEI) and shrinkage allowance mechanism which provides a reward/penalty in relation to shrinkage performance relative to the baseline. The changes will ensure that GDNs retain the reward (or penalty) associated with out (or underperformance) over a longer time period.

2.19. We have also decided to require GDNs to report their performance in relation to their business carbon footprint (BCF), and to reduce other non-carbon emissions, and resource use, and we will publish their comparative performance to provide reputational incentives to reduce emissions.

2.20. In relation to contributing to the wider decarbonisation objectives, we have decided to put in place a number of measures to create an enabling environment for the connection of biomethane into the grid, a renewable gas. The measures set out in this document include a licence condition to improve information provision to prospective connectees; incentivising voluntary connection standards for biomethane connections; and, a discretionary reward scheme (DRS) to reward companies up to £12 million over the price control period that can demonstrate that they have delivered outputs that contribute to wider environmental objectives beyond those funded at the price control review.

Figure 2.2: Target reductions in gas transport losses over RIIO-GD1 (GWh p.a.)



Social outputs: fuel poor networks extensions and CO awareness

2.21. The principal social outputs for GDNs relate to addressing fuel poverty through the connection of fuel poor households not connected to the gas grid (fuel poor connections scheme), and raising awareness of the risks of CO poisoning.

2.22. In relation to fuel poor households, at IP we set out our intention to continue with the fuel poor networks extension scheme, which supports the extension

of the network to eligible households. We set a target of around 80,000 households over RIIO-GD1. We also set out our intention to undertake a review of the scheme during RIIO-GD1 in the light of government policies to decarbonise domestic heating.[12] Respondents broadly supported the proposed output levels and review, and we confirm our decision to provide funding to connect up to 80,000 households.

2.23. In relation to CO awareness, at IP, we proposed to require GDNs to measure improvements in CO awareness. We did not propose to provide a direct financial incentive on this output given the absence of a robust output measure, problems of attributing improvements in the measure to GDNs' activities, and a clear basis for setting marginal reward/penalty. Rather than providing a mechanistic incentive as supported by SGN, we have decided to incorporate CO awareness as an aspect of assessing GDNs' reward under the discretionary stakeholder engagement element of the broad measure.[13]

Customer satisfaction

2.24. In IP, we set out our intention to introduce a financially incentivised broad measure of customer satisfaction, comprising a customer satisfaction survey, a complaints handling metric, and, a stakeholder engagement measure. We proposed an overall reward or penalty equal to +/-1 per cent of a GDN's allowed revenue. We also proposed to set the point at which GDNs earn a reward for performance measured through the customer satisfaction survey equal to the current performance of the upper quartile company. For the complaints metric, we propose to penalise GDNs which do not improve performance. Overall, our proposals meant that at an aggregate level the industry will need to improve its performance materially to gain a reward.

2.25. Respondents broadly supported the overall incentive mechanism, and the proposed performance levels GDNs need to achieve to avoid a penalty. We have decided to implement the output incentives and levels set out at IP with the exception of a small number of technical changes to reflect respondents' views, eg our approach to weighting energy ombudsman decisions against GDNs.

Connection standards output

2.26. At IP, we noted that GDNs have set out a commitment to maintain or improve existing connection standards, where GDNs pay compensation to customers for failure to meet standards, and introduce voluntary standards for biomethane connectees. We will expect GDNs to work together, in

12 DECC (March 2012) The Future of Heating: A strategic framework for low carbon heat in the UK: http://www.decc.gov.uk/en/content/cms/meeting_energy/heat_strategy/heat_strategy.aspxn

13 We propose to set the reward equal to up to 25% of the total reward for stakeholder engagement (equal to 0.5% of revenues). In £m, we expect the total reward available to be around £30 million over eight years.

consultation with distributed gas customers, to introduce voluntary standards during RIIO-GD1.

Summary of outputs and incentive mechanisms

2.27. Table 2.1 summarises the principal outputs and associated incentive mechanisms.

Table 2.1: Principal outputs, and associated incentive mechanisms

Policy area	Principal outputs / secondary deliverable	Incentive mechanism
Environment (broad measure)	- report on percentage of biomethane capacity connected - new connection standards and provision of information for biomethane connections - separate process to consider connection boundary and charging arrangements for biomethane	- reputational incentive in relation to biomethane connections - discretionary reward scheme (DRS) of up to £12m for companies that deliver environmental outputs not funded at price control review
Environment (narrow measure)	- 15-20% reduction in gas transport losses - reductions in business carbon footprint (BCF), and other emissions and resource use	- strengthened shrinkage allowance incentive and environmental emissions incentive (EEI) by: (i) aligning carbon value with DECC's non-traded carbon value, and (ii) introducing rolling incentive mechanism
Customer service	- broad measure of customer service, comprising customer satisfaction survey, complaints metric, and discretionary reward for stakeholder engagement	- financial incentive of +/-1% of allowed revenue
Social obligations	- connection of up to 80,000 fuel poor households - increased carbon monoxide (CO) public awareness	- fuel poor connections reviewed at the end of period; penalty for under delivery - comparative assessment of CO awareness; reward through stakeholder engagement - DRS for companies delivering outputs in relation to social objectives not funded at review
Customer connections	- maintain current guaranteed standards - new connection standards of service for distributed gas entry customers during RIIO-GD1	- penalty payments through guaranteed standards of performance.
Safety	- 40-60% reduction in safety risk - compliance with statutory health and safety requirements	-safety risk: review of output performance at end of RIIO-GD1, and requirement to carry-over under-delivery - statutory enforcement
Reliability	- expected number and duration of interruptions - asset health/ risk scores - achieving 1 in 20 capacity obligation - asset load/ capacity utilisation - maintaining operational performance	- asset health/ risk/ load: review of output performance at end of RIIO-GD1, and requirement to carry-over under-delivery

3. Encouraging innovation

Chapter Summary

This chapter sets out our decision in relation to the Network Innovation Allowance (NIA) and Network Innovation Competition (NIC).

3.1. There are many elements of the RIIO framework designed to encourage innovation. These include an outputs based framework, as well as a longer price control period which provides greater rewards for companies that innovate. In addition, the framework includes a time-limited innovation stimulus package to fund innovation where the commercial benefits may be uncertain. The innovation stimulus consists of the following:

- **Network Innovation Allowance (NIA)** - The NIA is a set allowance that each GDN will receive to fund small-scale innovative projects as part of its price control settlement.

- **Network Innovation Competition (NIC)** - The NIC is an annual competition for funding larger more complex projects which have the potential to deliver low carbon and/or wider environmental benefits to consumers. The NIC will comprise of two competitions - one for gas and one for electricity.

- **Innovation Roll-out Mechanism (IRM)** - A revenue adjustment mechanism that enables companies to apply for additional funding within the price control period for the rollout of initiatives with demonstrable and cost effective low-carbon or environmental benefits.

3.2. We have decided to implement the IRM as set out in IP. We briefly summarise IP, respondents' views, and our decision in relation to NIA and NIC below.

Network Innovation Allowance

3.3. Our Strategy Document explained the requirement for each GDN to include an innovation strategy as part of its business plan. We set out that the level of funding available through the NIA would be linked to the quality of the innovation strategy, and we set out the minimum requirements we expected to see included in the innovation strategy. We set out that the NIA would be between 0.5 and 1 per cent of revenues.

3.4. At IP, following an assessment of innovation strategies against our criteria, we proposed that WWU's and SGN's strategies merited funding no greater than the base level of 0.5 per cent of revenues. For NGGD and NGN, we

considered their strategies were better justified and we proposed funding of 0.6 per cent.

3.5. All GDNs disagreed with the proposed levels of funding, and proposed funding of 1 per cent. NGN considered that the quality distinction between its strategy and the other GDNs' strategies warranted more than an additional 0.1 per cent. Both WWU and SGN argued that all GDNs should receive a NIA equal to 1 per cent of revenues, ie the maximum allowance, to maximise innovation opportunities in RIIO-GD1.

3.6. We have further reviewed the GDNs' innovation strategies including further additional information provided at IP. Following our review, we consider that there is justification for providing an additional allowance for both NGGD and NGN (who provided the better quality strategies). Respondents to both the RIIO-T1 and GD1 IP stressed the need to provide adequate reward to those companies who have developed relatively stronger innovation strategies and we consider there is merit in this view – although that should be tempered with the absolute performance of the companies' strategies against our assessment criteria.

3.7. We have decided to increase the funding level for NGN and NGGD to 0.7 per cent of revenues. For WWU and SGN, we have not changed the allowances we provided at IP and they will therefore receive a NIA of 0.5 per cent.

Network Innovation Competition

3.8. In IP, we explained that there was a likelihood of a delay to the commencement of the gas NIC as a result of an ambiguity in the Gas Act, preventing the use of our desired mechanism for raising and transferring funds, ie based on the socialisation of winning bidders' costs across all gas transporters. In light of this expected delay, we proposed two options: delay the competition until the required amendment to the Gas Act is made, or implement an alternative funding mechanism where the winning companies' own customers fund the competition (rather than funding being socialised across all GB customers).

3.9. Since IP, we have been actively working with DECC to resolve the expected delay to the Gas NIC. On 18 October 2012, the government announced that it would introduce the necessary amendment to the Gas Act as part of the Department for Communities and Local Government's (CLG's) Growth and Infrastructure Bill.[14]

3.10. If the clause is included in the legislation and the Bill progresses to schedule, we consider that it will be possible for us to introduce licence conditions in a manner that will allow the Gas NIC to commence in 2013 based on our desired

[14] See DECC press release: 'Ed Davey tells CBI: Coalition will unlock energy investment'

funding mechanism (ie funding would be recovered from all GB customers and transferred to the winning licensee(s)). We have therefore decided to include the NIC licence conditions in the December statutory consultation on licences on this basis. If subsequently there is an unexpected material delay to the legislative timetable that prevents the amendment being delivered in time, we will not award funding in 2013. In this instance, licensees would still be able to recover their efficiently incurred bid preparation costs through the NIA and the unawarded funds would be rolled-over into subsequent years such that the overall level of funding in RIIO-GD1 is unchanged. The total funding available for gas distribution and transmission is £160 million over the price control period.

4. Efficient costs

Chapter Summary

This chapter sets out our decision on the efficiency of GDNs' cost forecasts, as well as our decision on the information quality incentive (IQI) income reward/penalty and incentive rates.

4.1. Under the RIIO framework, we stated that we would draw on a variety of evidence, including the companies' forecasts, our own benchmarking (including both econometric and technical analysis of forecast and historical data), as a means of informing our assessment of companies' efficient costs. We also stated that we would use the information quality incentive (IQI) to incentivise GDNs to reveal their efficient costs, and to reward GDNs that submit cost forecasts that align with our assessment of efficient costs.

Comparative efficiency analysis

Summary of our Initial Proposals

4.2. In IP, we set out our intention to reduce GDNs' cost forecasts for efficiency by between 5 and 12 per cent (net of the proposed reductions we made for disallowed outputs, for example under our cost benefit analysis).

4.3. Our proposed reductions were based on the results of a range of econometric models, comprising models based on analysing aggregated costs (totex models), disaggregated models and other technical and qualitative analysis. For both modelling approaches, we developed models estimated using historical and forecast data. We set proposed reductions for efficiency based on an unweighted average of the different approaches. We considered that using a wide set of models addresses GDNs' concerns that there is no one correct model for assessing comparative efficiency but a number of plausible ones.

4.4. We defined the benchmark as the upper quartile GDN performance, and required GDNs to close 75 per cent of our assessment of their relative inefficiency. In developing the models, we allowed for various company specific factors, including regional wages, a London productivity effect and a sparsity effect.

4.5. We also stated that we intended to update our benchmarking analysis to include the latest set of GDNs' regulatory returns (relating to 2011-12).

Summary of respondents' views

4.6. Most respondents supported our broad approach to cost assessment, ie basing our assessment on a wider range of econometric models and technical analysis. For example, both SGN and WWU appointed external economic consultants to review our modelling and, broadly, both consultants supported the overall framework. However, both SGN and WWU set out a number of specific changes to cost drivers and other adjustments, such as sparsity and the London productivity effect.

4.7. NGN and NGGD consider that we should have developed econometric models based on the eight-year forecasts for RIIO-GD1, and consequently placed less weight on models estimated using historical data. As we set out in IP, we considered that models estimated using the full eight-year forecast data were not as robust as the other models we developed as indicated by the models' poorer diagnostics.

4.8. NGGD considered that, given three of its four GDNs are consistently ranked in the top five (of eight GDNs) whereas its London GDN is consistently ranked least efficient, the approach cannot be robust as it operates the four GDNs as a single business. It considers the results demonstrate flaws in the model specification, and an inadequate allowance for a London productivity effect. In relation to the London productivity effect, NGGD considered that this should be around 20 per cent (compared to our allowance of 15 per cent). SGN also considers that the London productivity adjustment for its Southern GDN is too low.

4.9. NGGD also noted that the different econometric modelling approaches do not provide consistent results for its GDNs. It considers that the totex approach has greater merit as it considers the bottom-up approach fails to model correctly the trade-off between opex and capex solutions. It believes it is penalised for its emphasis on opex solutions. WWU also considered that the bottom-up approach fails to take into account opex-capex trade-offs.

4.10. Finally, the GDNs also contested cost allowances for individual areas. For example, they considered our proposed level of preparatory funding for smart metering is too low, as well as allowances for business support costs.

Our decision

4.11. We do not propose to make any material changes to our overall approach to our cost assessment, namely, we have decided to retain the approach of calculating GDNs' comparative efficiency based on a range of econometric models supported by technical assessment. However, we have made a number of specific changes to our models in order to address respondents' views. The overall effect is to improve all GDNs' efficiency scores relative to IP, with a resulting change in the reduction for unit costs at the industry level from 10 per cent (at IP) to 7 per cent.

4.12. As indicated at IP, we have updated our analysis to include historical data for 2011-12. The inclusion of an additional set of observations improves the robustness of the econometric models. It increases allowances by approximately £150 million over the eight-year period or around 1 per cent of totex.

4.13. We have accommodated GDNs' concerns about opex-capex trade-offs by incorporating additional capex costs into our opex regressions. We have thereby minimised the scope for identifying a frontier based on the lowest opex GDNs and (potentially different) lowest capex GDNs, where the sum of opex and capex is not achievable by any one GDN. Specifically, we have incorporated within a single regression an assessment of LTS pipeline capex and maintenance opex instead of assessing separately as at IP.

4.14. We have also made some of other changes. For example, we have revised our approach to assessing emergency costs to include the full cost associated with the impact of loss of meter work as part of the emergency baseline cost. We have also undertaken our assessment of business support costs at an aggregate level as opposed to an activity level.

4.15. By contrast, in relation to the London productivity effect, we do not consider that NGGD's evidence supports an increase. We therefore propose to retain our productivity adjustment of 15 per cent (relative to NGGD's request for a 20 per cent adjustment). We note that for historical costs neither NGGD's London GDN nor SGN's Southern GDN are outliers, ie based on our proposed modelling approach the two London based GDNs have similar efficiency scores to the other GDNs within their respective groups. We consider that NGGD London's poor performance on benchmarking is explained by its high projected costs as opposed to a flaw in the modelling.

4.16. We have considered NGGD's concern that the results from our totex analysis differ from our disaggregated or bottom-up approach. In general, GDNs' efficiency scores under our disaggregated modelling approach are around 5 per cent worse relative to totex modelling. The principal reason for this is that our disaggregated approach includes the assessment of some cost areas based on technical analysis which uses external benchmarks, eg business support costs. By contrast, our aggregated approach –which incorporates a wider set of costs within the regression model – effectively identifies the least cost GDN as the benchmark for such costs. We consider that both totex and disaggregated modelling approaches provide plausible approaches to assessing GDNs' comparative efficiency, and we prefer to rely on the wider set of evidence than placing emphasis on any one modelling approach.

4.17. Table 4.1 sets out our cost efficiency assessment for the four modelling approaches.

Table 4.1: IQI or efficiency scores by model

	IQI scores by model				
	Aggregated historical	Disaggregated historical	Aggregated forecast	Disaggregated forecast	Average
NGGD EoE	107%	115%	107%	114%	111%
NGGD Lon	115%	119%	116%	121%	118%
NGGD NW	107%	113%	108%	114%	110%
NGGD WM	101%	110%	103%	113%	107%
NGN	106%	105%	107%	106%	106%
SGN Sc	103%	110%	105%	112%	108%
SGN So	107%	110%	106%	108%	108%
WWU	108%	114%	109%	113%	111%

RPEs net of ongoing efficiency

4.18. At IP, we proposed an assumption of -0.3 per cent p.a. for real price effects (RPEs) net of ongoing efficiency. This means we considered that GDNs should more than absorb expected increases in real prices through productivity improvements.

4.19. NGGD considered that our assumption of a -2.9 per cent reduction in real wage costs in 2011-12 – based on an outturn wage reduction in the private sector– is higher than the real reductions it achieved. NGGD proposed that we draw on energy sector specific data to set real wage allowances rather than private sector or broader comparator sub-sectors. It has also set out a number of technical criticisms of our assumptions for ongoing efficiency. The other GDNs largely accept our assumptions.

4.20. Our overall approach for FP remains the same as that set out in IP. In particular, we do not propose to adopt NGGD's proposed approach of incorporating actual wage growth of the GDNs in setting RPE allowances for 2011-12. We prefer to rely on independent wage indices published by the Office for National Statistics (ONS) for the private sector and sectors comparable to the GDNs. Our approach ensures that we use a consistent set of indices for the entire price control period, ie consistent with our longer term real wage assumption based on the historical average for the cited independent series.

4.21. We have revised our RPEs for latest actual and forecast data. This revision has resulted in a slightly more challenging RPE assumption net of ongoing productivity, reducing GDNs' allowances by around £50 million (less than 0.5 per cent of totex).

Information quality incentive (IQI)

4.22. The IQI is designed to incentivise GDNs to reveal their efficient costs by rewarding GDNs that submit cost forecasts that align with our assessment of efficient costs. The IQI incentive rate also provides incentives for companies to reduce costs within the price control period by allowing companies to retain a proportion of cost outperformance until the next price control.

4.23. At IP, we calibrated the IQI mechanism such that the each GDN faced an IQI efficiency incentive rate of between 60 and 65 per cent, ie the GDN would retain between 60 and 65 per cent of any cost outperformance, and an income reward of between broadly 1.5 and 0 per cent of total expenditure (totex).

4.24. All of the GDNs (with the potential exception of SGN) considered that we should increase the incentive rate to 70 per cent. NGN considered that the income reward and incentive rate are not sufficiently different for the least cost GDN compared to other GDNs. Along with an incentive rate of 70 per cent, it considered that we should increase the income reward to 2.5 per cent versus 1.4 per cent in IP.

4.25. We have decided not to increase the maximum potential incentive efficiency rate from 65 to 70 per cent. As acknowledged by GDNs, the incentive rates set at IP provide greater incentives to GDNs to minimise costs than under the current price control, ie by allowing GDNs to retain a higher proportion of any outperformance. We consider that the IP incentive rates provide a correct balance of incentives for shareholders, as well as benefit (or increased cost) to consumers from any outperformance (underperformance).

4.26. We have also decided not to increase the maximum available reward/penalty. Our IQI matrix provides for a reward of 2.5 per cent of totex for those companies that provide efficient cost forecasts, ie equivalent to our assessment of the efficient level of costs. However, in our assessment of GDNs' cost efficiency at IP (and our latest assessment for FP) no GDN has submitted cost forecasts equivalent to our assessment, and therefore the reward for GDNs is below 2.5 per cent.

4.27. Table 4.2 sets out our proposed income reward/penalty and incentive rate for each GDN. This shows that NGN has set out the least cost forecast and will earn a reward of 1.5 per cent of totex.

Table 4.2: IQI income reward/penalty and incentive rate by GDN

	EoE	Lon	NW	WM	NGN	Sc	So	WWU
IQI score (change from IP)	110.5 (-3.3)	117.8 (-3.9)	110.4 (-2.1)	106.5 (-2.2)	106.1 (-0.7)	107.5 (-3.1)	107.7 (-3.5)	111.0 (-8.5)
Reduction to totex for cost efficiency	7.9%	13.3%	7.8%	4.9%	4.6%	5.7%	5.7%	8.2%
Income reward/penalty (% of totex)	0.7%	-0.5%	0.8%	1.4%	1.5%	1.3%	1.2%	0.7%
Incentive rate	63%	62%	63%	64%	64%	64%	64%	63%

Overall cost allowances

4.28. Table 4.3 sets out cost allowances at the group level taking into account both our reductions for cost efficiency, as well as changes to outputs (as discussed in chapter 2). This shows that we are reducing cost allowances by around 8 per cent, at an industry level, relative to GDNs' second business plans.

Table 4.3: Controllable Cost allowances (£m, 2009-10 prices)

	GDN Plan (Apr 12)	IP	FP	% change: GDN Plan (Apr 12) to IP	% change: GDN Plan (Apr 12) to FP
Industry	**1,950**	**1,612**	**1,797**	**(17%)**	**(8%)**
NGGD EoE	281	242	265	(14%)	(6%)
NGGD Lon	277	206	245	(26%)	(12%)
NGGD NW	227	181	200	(20%)	(12%)
NGGD WM	173	146	157	(16%)	(9%)
NGN	229	199	210	(13%)	(8%)
SGN Sc	177	148	168	(16%)	(5%)
SGN So	346	308	343	(11%)	(1%)
WWU	242	182	210	(25%)	(13%)

Note, negative figures in red/ parentheses. The GDNs' plans and Ofgem allowances are for controllable costs excluding shrinkage costs, licence fees, business rates, NTS pension deficit charges, street works costs associated with the implementation of permitting by additional highways authorities, lane rentals and smart metering. Both GDNs plans and our allowances are gross of real price effects (RPEs). The GDNs' plan submissions are not adjusted for outputs and costs assigned to uncertainty mechanisms, eg smart meter costs.

5. Dealing with uncertainty

Chapter Summary

This chapter sets out our decision on dealing with uncertainty over RIIO-GD1.

5.1. We stated in our Strategy Document that under the new RIIO framework, we expect network companies to manage the uncertainty they face. The regulatory regime should not protect companies against all forms of uncertainty. The use of uncertainty mechanisms should be limited to instances in which they will deliver benefits for consumers (eg in terms of reduced risk premium) while also protecting the ability of networks to finance efficient delivery.

Our Initial Proposals

5.2. In IP, we identified a number of costs, and potential costs, which we considered could be more efficiently accommodated through an uncertainty mechanism as opposed to an ex ante allowance. The mechanisms proposed included a reopener mechanism for a number of predefined events and a mid-period review of outputs.

5.3. We also consulted on a number of uncertainty mechanisms proposed by GDNs in their business plans. This included a revenue trigger for funding lane rental costs (relating to recently implemented street works legislation) and a volume driver to fund replacement/repair work on medium rise multiple occupancy buildings (MOBs). We also consulted on proposals to introduce a reopener for connection of new large loads. Additionally, SGN proposed a reopener mechanism to request funding for a long term solution for Scottish Independent Undertakings (SIUs).[15]

5.4. To deal with uncertainty in investment appraisal, we proposed to allow investment only where the pay-off was within 24 years. This would take into account uncertainty over future network use, eg as characterised by DECC's Heat Strategy, as well as asset data quality. Using a shorter payback period results in more opex solutions than capex solutions, and allows less certain investment decisions to be deferred until the current uncertainty over future network use is fully or at least partially resolved.

[15] SIUs comprise around 7,700 households in remote areas of Scotland which are not connected to the main grid, and are supplied by either Liquefied Natural Gas (LNG) or Liquefied Petroleum Gas (LPG).

Respondents' views

5.5. To take account of uncertainty in investment appraisal, all GDNs now accept in principle our proposed approach with the exception of NGGD which prefers a 45-year approach for its London medium pressure mains strategy.

5.6. GDNs were mostly supportive of the proposals we set out on uncertainty mechanisms. Suppliers raised some concerns on the impact our proposals would have on network charging volatility. In general, GDNs raised concerns that our proposed ex ante allowance for smart metering preparatory costs were too low. WWU and SGN also considered that our proposed uncertainty mechanism left them with too much risk.

5.7. More generally, GDNs considered that we should mitigate risk by setting an overall cap on exposure to costs subject to reopeners, ie if the sum of costs in all areas breach 3 per cent of revenues then it could request a reopener. In IP we proposed that each area be subject to a separate threshold.

5.8. In addition, NGGD continued to support its proposal for a driver mechanism for lane rental costs and MOBs as opposed to the reopener we proposed in IP; SGN provided further information to support its requirement for a reopener to fund the capital investment required for a long term solution for SIUs; and NGGD and Centrica raised the recent announcement of a consultation by the ONS on its proposed review of the calculation of the retail prices index (RPI).

Our decision

5.9. Table 5.1 sets out our decision on the uncertainty mechanisms for RIIO-GD1. We highlight the following points on the principal issues raised by respondents:

5.10. *Smart metering*: We have not proposed any change to the level of preparatory costs for smart metering. As at IP, we propose to allow GDNs to recover efficient costs through a reopener mechanism. In response to GDNs' concerns that they face too much risk, we have decided to allow GDNs greater flexibility as to when they can request a reopener to recover such costs. The request will no longer be subject to defined reopener windows.

5.11. *ONS consultation on changes to the calculation of RPI*: Following a review of responses to our further consultation on this issue, we are setting out a commitment in FP to consult in the event that the ONS announces a change to its RPI calculation, and to make any required changes to GDNs' revenues.[16] GDNs will need to demonstrate that the change in net revenues following the ONS review meets a materiality test of one per cent of revenues to avoid

[16]See:http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=329&refer=Networks/Trans/PriceControls/RIIO-T1/ConRes

making changes that are immaterial (and thus minimise regulatory costs). Our proposed approach is symmetric. If the outcome of the review results in network companies over-recovering expected costs, then we also intend to reset revenues to recover such windfalls subject to the materiality test.

5.12. *Cumulative cap*: We have decided to introduce a cumulative cap, which will allow GDNs to request a reopener where the cumulative effect of uncertain costs exceeds a specified value. We propose that GDNs will need to demonstrate that in aggregate qualifying uncertain costs meet a threshold of 3 per cent of totex, and all individual elements meet a triviality threshold of 0.5 per cent of totex to ensure that GDNs do not include trivial amounts within the application.

5.13. *Other issues*: We are not allowing driver mechanisms for NGGD in relation to lane rental costs and medium rise MOBs as we do not consider that we have robust unit cost data to construct the drivers. Instead, we will allow NGGD to recover such costs through reopener mechanisms. However, we propose to allow SGN a reopener to allow them to recover the efficient costs associated with the long-term supply solution for SIUs given the uncertainty over the cost of the solution.

Table 5.1: RIIO-GD1 uncertainty mechanisms

Mechanism	Area covered	Regularity of potential adjustment
Indexation	Inflation, cost of debt	Annual
Pass through	Licence fees, business rates, pension deficit costs, third party damage & water ingress, additional costs directed by the Authority, costs relating to gas theft, the price of gas (in relation to shrinkage), and NTS exit capacity charges	Annual
Reopener	Street works, enhanced physical site security, connection charging boundary, connection of new large loads; innovation roll-out	Twice: April 2016, 2019
Reopener	Smart metering	Flexible. Intention is to open once, and introduce revenue driver
Reopener	SIUs	Once: April 2016 (SGN only)
Revenue driver	Tier 2 mains replacement	Annual
Review	Xoserve funding, fuel poor network extension scheme, ONS review of RPI methodology	Once: flexible
Mid-period review	Changes in outputs, or introduction of new outputs including changes to the HSE iron mains programme, and asset integrity investment	Once: April 2017
Trigger	Tax legislation	At any time
Reset	Pension deficit repair	April 2015, and every three years there after
Disapplication	Enables price control parameters to be reset if GDN experiences financial distress	At any time

6. Financial issues

Chapter Summary

This chapter sets out our decision on financial proposals for the GDNs.

6.1. Ensuring that efficient companies are able to finance themselves (through both debt and equity) and are remunerated appropriately lies at the heart of the RIIO approach to financeability. This is also in the interests of consumers. We stated that our RIIO price controls will provide the companies with an allowed return on the RAV based on a real 'vanilla' weighted average cost of capital (WACC).[17] We tested the overall package for financeability and to ensure that it is sustainable. We also stated that we would use the return on regulated equity (RoRE) framework to ensure that our overall proposals offer a balance of risk and reward.

6.2. At IP (drawing on our Strategy Document), we stated that we intended to capitalise iron mains replacement expenditure (or repex) fully to ensure long-term sustainability and provide a fair allocation of costs between present and future consumers. We also recognised that this change in approach could have adverse cash-flow consequences and therefore considered that transitional arrangements were justified. In addition, we stated that we would apply front-loaded depreciation profiles to all assets as a measure to guard against increasing customer costs in the longer term, in case of declining network flows. We also set out the allowed return based on an assessment of the GDNs' cash-flow risk.

6.3. In this overview paper, we set out our decision in relation to the allowed return comprising cost of equity, cost of debt and notional gearing, financeability and transitional arrangements, and the expected RoRE range. In the Finance and Uncertainty Supporting Document, we provide further detail on the above, as well as setting out technical regulatory and accounting issues, such as setting the regulatory asset value (RAV), tax and pensions.

Allowed return

Summary of our Initial Proposals

6.4. At IP, we proposed an assumed cost of equity of 6.7 per cent (post-tax real) and a notional gearing of 65 per cent. Our proposed cost of equity was based on a comparative risk assessment relative to other networks. In particular, we noted that GDNs had a lower capex:RAV ratio than the Transmission

[17] The vanilla WACC consists of pre-tax cost of debt and post-tax cost of equity, weighted by a notional gearing (ie the relative share of debt) assumption.

Owners(TOs), which supported a lower allowed return. For the cost of debt, we proposed to annually update the cost of debt assumption based on a 10-year trailing average of iBoxx indices for sterling-denominated corporate bonds.

Summary of respondents' views

6.5. All GDNs have disputed the relative risk assessment that underpinned our IP. They argued that our risk analysis overstated the difference between them and the fast-tracked TOs because we did not take into account the following factors: longer duration of cash flows in gas distribution as a consequence of longer asset lives; the increased stranded asset risk because of the long-term uncertainty over gas distribution; and, the higher totex incentive rate. They also considered that we had overstated the impact of the higher capex:RAV ratio in transmission. More generally, they considered that the proposed cost of equity differential implied too large a difference in asset beta risk between GDNs and TOs. Finally, the GDNs considered that RIIO-GD1 has greater cash-flow risk relative to GDPCR1 because of the longer price control period and the increase in incentive rate on capex.

6.6. By contrast, one shipper supported our relative risk analysis, but considered that our estimates of the risk-free rate and equity risk premium were relatively high. The respondent supported a cost of equity assumption of 6.5 per cent.

6.7. GDNs raised concerns with regard to the cost of debt index. In particular, WWU continues to support the application of a cap and collar mechanism to the index. One shipper reiterated its support for the index as a consumer-protection mechanism.

Our decision

6.8. Overall, we propose to retain the key elements proposed at IP. That is, a cost of equity assumption of 6.7 per cent (post-tax real), notional gearing of 65 per cent, and a cost of debt assumption based on the index. For the cost of debt, we have updated the value for 2013-14 to 2.92 per cent, in accordance with our stated approach. This results in a vanilla WACC of 4.2 per cent, as presented in Table 6.1.

6.9. We do not agree with the GDNs' views on our relative risk assessment, which we consider supports an assumption of the cost of equity of 6.7 per cent (real post tax). As part of both the RPI-X@20 review and the RIIO-T1 and GD1 price control review we commissioned two separate reports on the relationship between equity risk and duration of cash-flows. Drawing on these reports, we concluded that the difference between adding 50 percent of repex to the RAV and adding 100 percent (with transition over eight years) has no material impact on risk. We considered the stranding risk as part of our asset life review, and we consider that we have mitigated any risk by introducing a front end loaded deprecation profile. We also note that the efficiency incentive rate

for GDNs is in line with the current incentive rate. We also consider the incentive rate in the context of overall gearing and our RORE analysis as opposed to an equity risk issue.

6.10. In relation to the length of the price control, our IP concluded that longer price controls should not increase risk. Indeed, we note that a longer price control results in lower regulatory risk associated with less frequent resetting of allowances at the price review.

6.11. Our decision on gearing is supported by our financeability assessment (as explained below), consistent with an expected upside return on regulated equity (RoRE) of double-digit returns (again, see below), as well as network companies' actual gearing decisions.

6.12. Finally, we do not propose to change our approach to cost of debt. We consider the empirical evidence on companies' debt coupons relate to the index value allows for recovery of efficient debt costs. We have updated the starting value for FP to 2.92 per cent (from 3.03 per cent at IP) in line with our stated approach.

Table 6.1: RIIO-GD1 vanilla WACC

	RIIO-GD1
Cost of equity (post-tax real)	6.7%
Cost of debt (pre-tax real)	iBoxx 10-year simple trailing average index (2.92% for 2013-14)*
Notional gearing	65%
Implied vanilla WACC*	4.2%

* The value of the cost of debt index may vary during the price control period. Any changes would be reflected in the WACC.

Financeability and transitional arrangements

Summary of Initial Proposals

6.13. At IP, we assessed the GDNs' credit ratios against the target ratios that the major rating agencies consider are consistent for a 'comfortable investment grade' rating. We considered that IP was consistent with the GDNs being financeable, and that the overall package was internally consistent (ie GDNs would be able to issue debt at ratings consistent with the index we use for the cost of debt).

6.14. We also considered the requirement for transitional arrangements in the context of our financeability analysis. We considered that the optimal arrangements involve a stepped transition for repex capitalisation, from 50

per cent capitalisation in 2013-14 to 100 per cent in 2020-21, in seven equal incremental steps.

Summary of respondents' views

6.15. The GDNs considered that the implied credit ratios are weak and leave little or no room to manage any cost shocks. They argue that the credit ratios are only consistent with a BBB rating, whereas our approach to the cost of debt is based on bonds rated in the BBB and A categories.

6.16. The GDNs (particularly NGGD) argued that our IP did not consider the financeability impact of expenditure under uncertainty mechanisms.

6.17. In contrast, one shipper undertook its own financeability analysis of our IP and considered that the proposed package provided the GDNs with headroom, with room to lower the cost of equity to 6.5 per cent or alternatively reduce the transition on repex capitalisation.

Our decision

6.18. We have updated our financeability assessment to reflect changes to our totex allowances. We have also expanded our financeability analysis and have stress-tested it by taking into account costs related to uncertainty mechanisms. Incorporating uncertain costs into our analysis tends to have a negative impact on credit ratios in the first two years, but a relatively limited impact over the eight-year period.

6.19. Our financeability analysis demonstrates that all GDNs should be able to obtain a comfortable investment grade credit rating, based on the notional capital structure.

6.20. We disagree with the GDNs' argument that the implied credit ratings are inconsistent with the allowed debt costs. One of the potential reasons for our differing conclusions is that our financeability assessment is not predicated on individual credit ratios. In particular, we note that the low business risk of the GDNs as monopolistic network owners, and the stable and transparent regulatory environment support a higher rating than implied by credit ratios alone.

6.21. Finally, our transitional arrangements were broadly supported by respondents and we have retained our approach of achieving full capitalisation of repex through an equal annual step change consistent with IP. However, we have separated the capitalisation rate for repex from other totex so that actual repex will be subject to the transitional repex capitalisation rate. Other totex will be subject to a fixed capitalisation rate of between 23 and 35 per cent depending on the GDN.

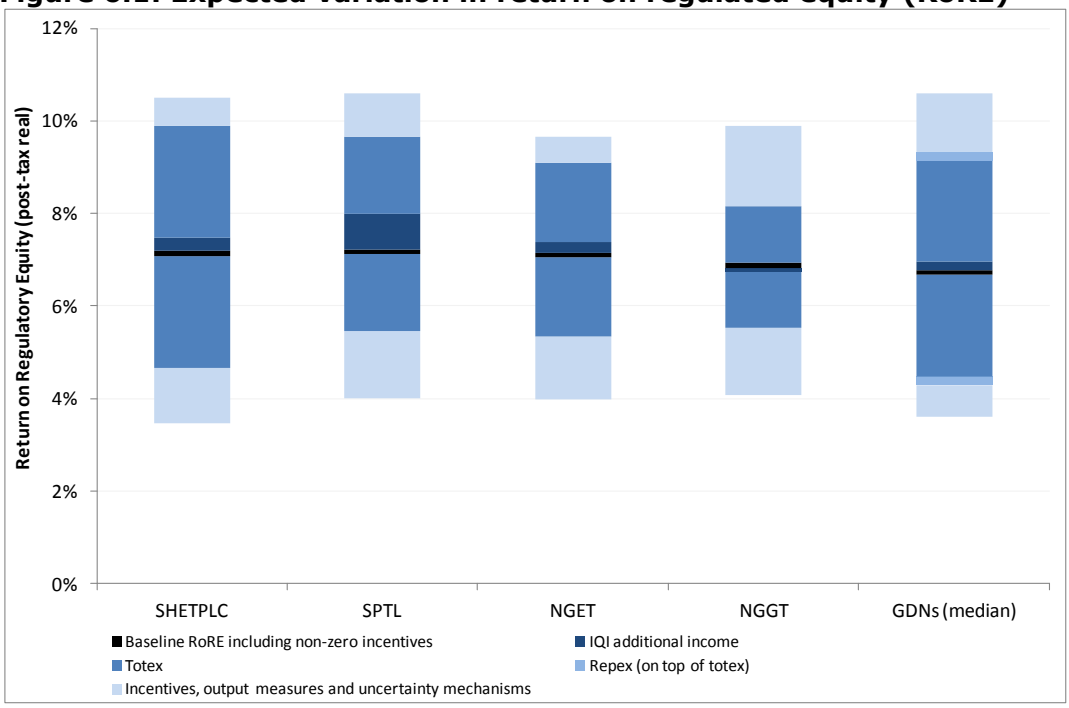
Return on regulatory equity (RoRE)

6.22. At IP, we used the RoRE analysis to ensure that we are consistent with the RIIO principle that well performing GDNs can earn post-tax real double-digit returns on (notional) equity, and GDNs who perform poorly would be exposed to returns at or below the cost of debt.

6.23. We have updated our RoRE analysis for FP. We note that the increase in allowed expenditure (and specifically in relation to tier 2 and 3 repex where we consider there is greater scope to outperform), as well as improvements in GDNs' efficiency scores and thus income/reward penalty has increased the variation in expected returns. Figure 6.1 shows that the median GDN (and indeed all GDNs) is able to achieve double digit returns on a post-tax real basis.

6.24. We also note that the overall RoRE range is similar across sectors, and thus acts as a sense-check that our differential notional gearing and equity assumptions adequately capture the differences in cash-flow volatility between the sectors.

Figure 6.1: Expected variation in return on regulated equity (RoRE)



7. Next steps

Chapter Summary

The purpose of this chapter is to set out the next steps for RIIO-GD1.

7.1. Our Final Proposals will come into effect through changes to the gas distribution licences on 1 April 2013, which will incorporate supporting financial instruments: a Price Control Financial Handbook and Price Control Financial Model. In addition we will be publishing a set of Regulatory Instructions and Guidance (RIGs) for RIIO-GD1. The RIGs will provide the framework under which we will monitor and assess the performance of the GDNs against their price control obligations.

7.2. We intend to publish our Statutory Licence Consultation for GDNs on 21 December 2012. The consultation will close on 22 January 2013.

7.3. Following the implementation of the Third Package Regulations[18] the procedure for making licence modifications was amended. Under the revised procedure, proposed licence modifications no longer require licensee consent, but can only come into effect at least 56 days after we have published our decision to make those licence modifications.

7.4. We propose to publish our decision on licence modifications in late January 2013 following the close of the 28 day Statutory Consultation. This is to enable the licence modifications to come into effect from 1 April 2013, ie from the start of the RIIO-GD1 period.

[18] The Electricity and Gas (Internal Markets) Regulations 2011.

Appendix 1 - Supporting information

1.1. Table A1.1 sets out the allowed revenue profiles for each of the GDNs in RIIO-GD1, and the change relative to GDPR1.

1.2. At an industry level, we expect the overall allowed revenues to be around 5 per cent higher by the end of the period.

Table A1.1 – Allowed revenues

Allowed Revenue for year ending 31 March (09/10 prices - £m)	2013	2014	2015	2016	2017	2018	2019	2020	2021
Industry	**2,953**	**3,161**	**3,079**	**3,117**	**3,091**	**3,099**	**3,100**	**3,083**	**3,092**
Yr on Yr Change		7.0%	-2.6%	1.2%	-0.8%	0.3%	0.0%	-0.5%	0.3%
Cumulative Change		7.0%	4.3%	5.6%	4.7%	5.0%	5.0%	4.4%	4.7%
NGGD (total)	**1,468**	**1,580**	**1,532**	**1,560**	**1,527**	**1,526**	**1,522**	**1,514**	**1,512**
Yr on Yr Change		7.7%	-3.1%	1.8%	-2.1%	-0.1%	-0.2%	-0.5%	-0.1%
Cumulative Change		7.7%	4.4%	6.3%	4.0%	4.0%	3.7%	3.2%	3.0%
East	491	537	518	521	512	510	509	506	508
Yr on Yr Change		9.3%	-3.5%	0.6%	-1.8%	-0.2%	-0.2%	-0.6%	0.2%
Cumulative Change		9.3%	5.4%	6.1%	4.2%	3.9%	3.7%	3.1%	3.4%
London	336	366	359	381	371	367	366	360	360
Yr on Yr Change		8.9%	-1.8%	6.2%	-2.5%	-1.3%	-0.3%	-1.5%	-0.1%
Cumulative Change		8.9%	6.9%	13.5%	10.7%	9.2%	8.9%	7.3%	7.2%
North West	359	394	377	379	373	375	373	373	372
Yr on Yr Change		9.7%	-4.3%	0.8%	-1.6%	0.5%	-0.4%	-0.1%	-0.2%
Cumulative Change		9.7%	5.0%	5.8%	4.1%	4.5%	4.1%	4.0%	3.8%
West Midlands	282	284	279	279	271	274	274	274	272
Yr on Yr Change		0.7%	-2.0%	0.0%	-2.8%	1.2%	0.1%	0.1%	-0.8%
Cumulative Change		0.7%	-1.3%	-1.3%	-4.0%	-2.9%	-2.8%	-2.7%	-3.5%
NGN	**338**	**341**	**339**	**349**	**340**	**331**	**334**	**336**	**341**
Yr on Yr Change		0.7%	-0.5%	3.0%	-2.5%	-2.8%	0.8%	0.8%	1.4%
Cumulative Change		0.7%	0.1%	3.1%	0.6%	-2.2%	-1.4%	-0.6%	0.8%
SGN (total)	**820**	**892**	**864**	**869**	**884**	**891**	**896**	**885**	**894**
Yr on Yr Change		8.8%	-3.1%	0.6%	1.7%	0.8%	0.6%	-1.2%	0.9%
Cumulative Change		8.8%	5.5%	6.1%	7.8%	8.7%	9.3%	8.0%	9.1%
Scotland	235	268	261	255	268	271	273	269	273
Yr on Yr Change		14.1%	-2.6%	-2.3%	5.0%	1.3%	0.8%	-1.6%	1.7%
Cumulative Change		14.1%	11.1%	8.5%	13.9%	15.4%	16.3%	14.4%	16.4%
Southern	585	624	604	614	616	620	623	617	620
Yr on Yr Change		6.7%	-3.2%	1.8%	0.3%	0.6%	0.5%	-1.0%	0.6%
Cumulative Change		6.7%	3.2%	5.1%	5.4%	6.0%	6.5%	5.5%	6.1%
WWU	**328**	**349**	**344**	**339**	**340**	**352**	**348**	**347**	**345**
Yr on Yr Change		6.4%	-1.3%	-1.5%	0.3%	3.3%	-1.1%	-0.2%	-0.6%
Cumulative Change		6.4%	5.0%	3.5%	3.8%	7.3%	6.1%	6.0%	5.3%

Appendix 2 - Impact assessment

1.1. In July, alongside Initial Proposals, we published an impact assessment (IA). We received comments on the IA from one respondent which we outline and respond to below. Overall, based on the package of proposals being put forward, we still consider that the benefits and impacts outlined in the IA are applicable.

1.2. The response to our IA noted the following concerns:

- in some areas our assessment of required outputs and efficient cost allowances did not take due account of a GDN's statutory obligations
- the material disallowances in outputs would negatively impact future consumers who will have to bear higher costs
- the level of risk and reward in IP was not linked to the principles developed for the RIIO model
- we did not adequately take account of the stakeholder feedback that had fed into the well justified business plans submitted

1.3. We consider that our Final Proposals appropriately balances risk and reward and provides an efficient GDN with a package that will allow it to deliver outputs and services for consumers while maintaining value for money. The price control settlement includes cost allowances which reflect our view of efficient costs of delivering the required outputs and services and associated incentive mechanisms to reward or penalise GDNs' performance. In arriving at these Final Proposals we have taken into account stakeholders' views, both those presented in the GDNs' business plans and our own stakeholder engagement, to achieve the best outcome for both current and future consumers. The detailed reasoning behind our decision on specific policy areas can be found in the relevant sections of Final Proposals.

1.4. The respondent also considered that our representation of the impact on consumers' gas bills was inadequate as it did not represent the impact on a per network basis which would show a greater degree of variation. We acknowledge that our headline representation is based on a national average and therefore will not show the differences in impact across the networks. We still consider that our representation provides consumers useful insight of the potential changes in their gas bills due to investment in the gas distribution network. However, we set out the GDN specific revenue change (and therefore expected bill impact) in Appendix 1 of this document.

Appendix 3 - Feedback Questionnaire

1.1. We consider that consultation is at the heart of good policy development. We are keen to consider any comments or complaints about the manner in which this consultation has been conducted. In any case we would be keen to get your answers to the following questions:

1. Do you have any comments about the overall process, which was adopted for this consultation?
2. Do you have any comments about the overall tone and content of the report?
3. Was the report easy to read and understand, could it have been better written?
4. To what extent did the report's conclusions provide a balanced view?
5. To what extent did the report make reasoned recommendations for improvement?
6. Please add any further comments?

1.2. Please send your comments to:

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