

**RIIO|GD1**

# **Response to Initial Proposals**

---

## **Finance and Uncertainty**

National Grid  
Gas Distribution

September 2012

# Contents

- Overview - Finance .....3
- Overview - Uncertainty .....5
- Chapter 1 - Introduction.....7
- Chapter 2 - Asset lives and RAV .....7
- Chapter 3 - Allowed return.....8
- Chapter 4 - Financeability, transition and return on regulatory equity ..... 16
- Chapter 5 - Pensions..... 19
- Chapter 6 - Taxation..... 21
- Chapter 7 - Allowed revenues, annual iteration and financial handbook ..... 21
- Chapter 8 - Dealing with uncertainty..... 25
- Appendix 1 - Review of Relative Risk Analysis ..... 35
- Appendix 2 - Financeability ..... 42
- Appendix 3 - Cost of Debt ..... 49
- Appendix 4 - Oxera Report..... 59
- Appendix 5 – Fuel poor uncertainty mechanism proposal..... 59

## Finance and Uncertainty

### Overview - Finance

1. Our main concerns on the Financial proposals relate to the financeability assessment and the relative-risk assessment.
2. Ofgem have withheld their financeability calculations, this lack of transparency leaves us and other stakeholders unable to fully understand the proposals. In the March 2011 RIIO-GD1 Strategy Document, Ofgem presented the metrics which they would be reviewing and the target ranges for BBB and A ratings. There is no guidance for any other factors relevant to credit rating assessments under RIIO. The cost of debt index has also been set using BBB and A rated bond issues, it is therefore clear that targeting credit metrics in the middle of the BBB-A range is the core, (and arguably the only) test of financeability that is proposed. All of the RIIO networks submitted business plans which quantified resultant metrics. For Ofgem to now withhold the metrics leaves us unaware as to how the assessment has been conducted, what calculations and targets have been used and what the derived results were.
3. Ofgem have stated that it is customary to withhold their credit rating assessment from the networks. However when setting the GDPCR1 finance package, Ofgem did release a full set of resultant credit metrics to the GDNs.
4. We have sought clarification from Ofgem on the method used for calculating metrics, from the (partial) response we have received, we understand that Ofgem have used their view of efficient spend in calculating metrics, rather than the IP allowances, thereby unreasonably assuming that the GDNs can outperform allowances in the base case assessment. This is especially imprudent considering that we have previously provided evidence for a higher level of spend than is assumed in the Initial Proposals.
5. We have reconstructed what we believe to be Ofgem's workings and then corrected them to reflect the allowances (rather than Ofgem's view of out-performance), to make the calculations consistent with those used by the rating agencies, and to stress-test the metrics for uncertain parameters. The correct target for the assessment is for the GDNs to achieve credit metrics which are consistent with the rating assumed by the cost of debt index, this is the border of a BBB and A rating. If the RIIO proposals do not meet this target, then logically the cost of debt index should be adjusted to reflect the target adopted. Our assessment shows that the GDNs fail to meet this target in all years of RIIO-GD1, and are close to the BBB threshold, as summarised below:

Figure 1 - NG assessment of credit metrics resulting from the initial proposals

North West						
Rolling 3-Year Average	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
PMICR	1.35	1.29	1.31	1.32	1.34	1.34
FFO / Interest	2.52	2.46	2.48	2.57	2.72	2.88
FFO / Net Debt	9.01%	8.62%	8.69%	9.26%	10.14%	11.10%
Net Debt / RAV	62.89%	61.90%	61.10%	60.39%	59.70%	58.94%

East England						
Rolling 3-Year Average	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
PMICR	1.36	1.31	1.30	1.30	1.31	1.31
FFO / Interest	2.52	2.47	2.47	2.55	2.68	2.83
FFO / Net Debt	9.00%	8.68%	8.68%	9.15%	9.92%	10.83%
Net Debt / RAV	62.63%	61.69%	60.92%	60.21%	59.47%	58.65%

West Midlands						
Rolling 3-Year Average	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
PMICR	1.34	1.28	1.26	1.27	1.29	1.27
FFO / Interest	2.50	2.43	2.41	2.49	2.62	2.75
FFO / Net Debt	8.83%	8.41%	8.27%	8.74%	9.48%	10.29%
Net Debt / RAV	63.45%	62.89%	62.48%	62.05%	61.55%	60.92%

London						
Rolling 3-Year Average	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
PMICR	1.30	1.28	1.27	1.25	1.23	1.24
FFO / Interest	2.46	2.42	2.41	2.45	2.55	2.67
FFO / Net Debt	8.57%	8.33%	8.20%	8.46%	8.99%	9.71%
Net Debt / RAV	63.73%	63.14%	62.79%	62.46%	62.37%	62.28%

6. When we include the impact of our best estimate of spend under uncertainty mechanisms, these metrics are worsened and for the first part of RIIO are below the BBB range.

Figure 2 - Credit metrics after the impact of Uncertainty Mechanism spend

North West						
Rolling 3-Year Average	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
PMICR	1.24	1.21	1.27	1.36	1.41	1.43
FFO / Interest	2.41	2.37	2.41	2.56	2.72	2.88
FFO / Net Debt	8.31%	8.02%	8.26%	9.11%	10.05%	11.03%
Net Debt / RAV	63.95%	63.48%	63.11%	62.66%	62.19%	61.59%

East England						
Rolling 3-Year Average	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
PMICR	1.30	1.25	1.26	1.31	1.35	1.38
FFO / Interest	2.45	2.40	2.41	2.53	2.67	2.83
FFO / Net Debt	8.60%	8.26%	8.31%	8.96%	9.84%	10.79%
Net Debt / RAV	63.16%	62.57%	62.16%	61.71%	61.17%	60.47%

West Midlands						
Rolling 3-Year Average	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
PMICR	1.27	1.24	1.25	1.30	1.33	1.34
FFO / Interest	2.43	2.38	2.37	2.48	2.61	2.75
FFO / Net Debt	8.39%	8.05%	8.00%	8.64%	9.42%	10.29%
Net Debt / RAV	64.10%	63.84%	63.70%	63.46%	63.11%	62.56%

London						
Rolling 3-Year Average	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
PMICR	1.17	1.16	1.21	1.26	1.33	1.36
FFO / Interest	2.32	2.28	2.30	2.39	2.54	2.67
FFO / Net Debt	7.71%	7.42%	7.48%	8.02%	8.87%	9.69%
Net Debt / RAV	65.00%	65.17%	65.51%	65.69%	65.86%	65.88%

Key	
	Falls below the BBB threshold
	BBB
	A, based on NGs target – reduced to account for the regulatory environment

7. On this basis we cannot see how Ofgem can claim the Initial Proposals “*ensure that the GDNs maintain a comfortable investment grade rating*”. We address this further in our answer to Q4 below.
8. In our April plan we presented the results of detailed cash risk modelling, from which we conclude that the risks facing the GDNs under RIIO-GD1 are higher than under GDPCR1. This analysis has not been reviewed or commented on within the Initial Proposals. The relative risk assessment in the Initial Proposals is high level and excludes any quantitative modelling of cashflow risk. This has the result that relatively large differences in asset beta have been proposed across controls and across sectors without any detailed supporting evidence. Factors which, in our view, will have little or no impact (e.g. the new totex approach) appear to be given equal weighting to risks which will impact cash risk in a major way (e.g. the increase in incentive rate for the GDNs). We nevertheless review this high level analysis in this response, and, in combination with our work on relative risk to date, we conclude that the risk facing the GDNs in RIIO-GD1 is higher than GDPCR1 and DPCR5. The Initial Proposals relative risk analysis does not therefore change our view of the required cost of equity submitted in our April 2012 Business Plan.
9. Given our concerns over the cost assessment that has been carried out in the Initial Proposals, we do not think the RoRE ranges (showing a symmetric +/-10% out/underperformance against base allowances are credible). We have undertaken some analysis to illustrate how important it is that Ofgem are confident of their cost assessment such that this provides a fair opportunity for the network to deliver the outputs committed to. Our analysis shows that if Ofgem are incorrect in their benchmark and we were to spend at the levels set out in our plan for our London network, we would not earn a return sufficient to cover the cost of debt. This is even assuming we can absorb the workload disallowances that Ofgem have proposed in the Initial Proposals. This clearly illustrates the need to look at the finance package as a whole looking at the cost allowance offered to deliver outputs, the incentive reward available and the finance structure to ensure funding is deliverable. In addition, it supports our April Business Plan proposal to limit the IQI incentive rate to a lower range for our London network which is not addressed in the Initial Proposals.

## **Overview - Uncertainty**

### ***Streetworks***

10. We support the use of a lane rental revenue driver and have set out why we believe this is in consumer’s interests and should be established in the Final Proposals.
11. We have proposed a framework and criteria for how the ex-post assessment of costs from new streetworks schemes could be undertaken for Ofgem to review and include in the Final Proposals.

### ***Medium rise MOBs***

12. We support the medium rise MOBs revenue driver and we have provided additional information requested on our proposal and expect this can now be included in the Final Proposals in line with the proposed Licence drafting we have provided.

***Tier 2 repex***

13. We support the proposal to treat all Tier 2 expenditure above the mains risk threshold as a revenue driver with the inclusion of the associated gas services. We need further understanding and dialogue around how the unit costs will be set for the revenue driver.

***Enhanced physical site security***

14. We support the enhanced physical site security formulae and that the assessment should be based on the CPNI audit of costs. We have proposed a mechanism for how the costs should be agreed with reference to the independent Value For Money audits.

***Large load re-opener***

15. We support the large load re-opener mechanism and will work with Ofgem to define the large load definition in the Licence drafting.

***Asset Integrity mid period review***

16. We have proposed changes to the thresholds for the mid period review assessment for asset integrity.

## Chapter 1 - Introduction

No specific questions were raised in this chapter.

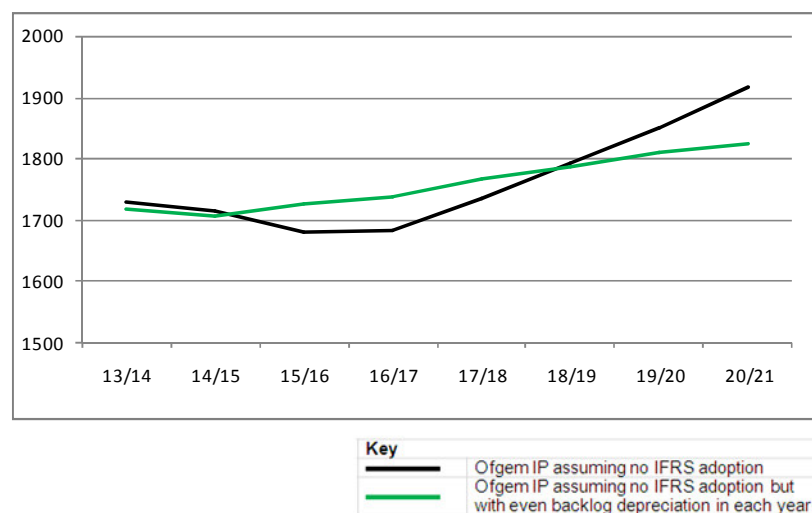
## Chapter 2 - Asset lives and RAV

**Question 1:** Do you agree with approach of using the profile for the release of backlog depreciation as a mechanism to smooth revenues and reduce their volatility through the RII0-GD1 period?

### Response

- 2.1. We agree with the concept of smoothing the real revenue profile. However, utilising backlog depreciation is not a flexible approach. For example, if the Introduction of IFRS accounting and the resultant change in tax treatment, is delayed beyond 2015/16, or is not implemented at all, the proposed backlog depreciation profile will be inappropriate. The figure below demonstrates that with no IFRS adoption, an even profile of backlog depreciation is far more appropriate for revenue smoothing. In addition, the Initial Proposals aim for a flat real profile before any uncertainty mechanism spend recovery or Totex Incentive Mechanism (TIM) adjustments are taken into account. The profile of these adjustments will also dictate whether the chosen fixed backlog depreciation profile is appropriate for smoothing revenues.

Figure 2.1 - Core Revenue (£m per annum)



- 2.2. We note that there is an ongoing consultation on charging volatility which is due to conclude imminently. One of the mechanisms being considered under that consultation is the relaxing of restrictions over the annual adjustment factor (Kt). This is clearly a more appropriate and flexible solution for smoothing revenues and customer charges. We

propose that backlog depreciation is profiled on a straight-line basis and revenue volatility is addressed within the charging volatility consultation.

## Chapter 3 - Allowed return

**Question 2:** Do you have any comments on our relative risk assessment?

### Response

- 3.1. Ofgem's risk assessment is essentially a qualitative and high-level comparison, which understates the risk of RIIO-GD1 in comparison to GDPCR1 and DPCR5. The assessment focuses on relative investment levels, efficiency incentive rates and compares some other risk areas between RIIO-GD1, GDPCR1, RIIO-T1 and DPCR5. While we agree with some areas of the assessment, we have the following concerns:
- The assessment excludes any quantitative modelling of cashflow risk. While theoretical models (such as CAPM) and regulatory precedent are important determinants of risk and required return, these should be complimented by reference to cashflow risk modelling and the impact on asset beta. We performed such modelling as part of our November and April plans, however Ofgem have confirmed that they have not performed a similar exercise in arriving at their Initial Proposals conclusions.
  - This shortfall is confirmed by Oxera's September 2012 report for the ENA (Appendix 4), which states that *"the evidence does not suggest that business risk has changed over time...in the absence of a clear framework for weighting conflicting evidence, it would be appropriate to either increase or, at a minimum, leave the asset betas unchanged from TPCR4 and GDPCR1."*<sup>1</sup> Oxera calculates the asset betas inherent within the Initial Proposals as follows:

Figure 3.1 - Asset betas inherent within the RIIO initial proposals

Asset Beta	SHETL / SPTL	NGET	NGGT	GDNs
RIIO	0.43	0.38	0.34	0.32
Prior control	0.40	0.40	0.40	0.38

- 3.2. The asset beta for the GDNs is assumed to reduce by 16% from the prior control and are 25% lower than for fast-tracked RIIO-T1, but it is not clear how this relates to the relative risk review.
- 3.3. Finally, the FTI report<sup>2</sup> which accompanied the Initial Proposals does include comments on the National Grid Transmission risk modelling approach, but does not comment on the

<sup>1</sup> RIIO-T1 and GD1 Initial Proposals Financial Issues Sept 19 2012 - page 7

<sup>2</sup> Cost of capital study for the RIIO-T1 and GD1 price controls



NGGD approach, and Ofgem / FTI have not requested access to our modelling. In effect our modelling has been ignored in the Initial Proposals conclusions.

- 3.4. With the exception of investment risk (capex vs. RAV) and efficiency incentive rate, the qualitative risk analysis has been performed at a very high level in the Initial Proposals<sup>3</sup>. We review the risk analysis in more detail in Appendix 1 of this section, together with our conclusions.
- 3.5. The investment risk analysis in the Initial Proposals looks at the relative scale of investment (Capex/RAV) and not so much at the funding mechanisms which determine the risk of each pound spent. When low-risk spend, such as revenue driver and Strategic Wider Works (SWW) spend is excluded, and GDPCR1 capex/RAV is based on allowances rather than spend (which includes uncertainty mechanism spend etc), a very different picture of relative risk can be seen. In addition, too much weight appears to be attached to Capex / RAV, Oxera's September 2012 report for the ENA states: *"Overall, even if the capex to RAV ratio is the most relevant metric of business risk, an analysis of the underlying data suggests that the material differences in the asset beta implied in the Initial Proposals are not fully supported by the evidence presented. Relatively small differences in capex to RAV ratios appear to be associated with relatively large differences in asset beta, particularly on the downside."*<sup>4</sup>
- 3.6. We present our analysis and conclusions around this in Appendix 1. Excluding SWW, and looking at GDPCR1 allowances rather than spend, the ratios are shown below:

Figure 3.2 - Adjusted capex / RAV ratios

%	SHETL	SPTL	NGET	NGGT	GDPCR1	NGGD
Capex/RAV	32	15	13	8	9	7
Exclude SWW	9	12	11	8	9	7
GDPCR1 based on allowances	9	12	11	8	8	7

- 3.7. The efficiency incentive rate review in the Initial Proposals compares the post-tax rate in RIIO-GD1 to the pre tax rate in GDPCR1. This is on the basis that *"as most GDNs did not pay tax in GDPCR1 this change does not have a material impact on the relative position."* However the tax paid in GDPCR1 is not relevant. If GDNs pay tax in RIIO-GD1 (as is forecast), the post-tax methodology will be affected more severely as a greater share of gains or losses are for the GDN's account. If no tax is paid in RIIO-GD1, then the level of tax losses carried forward will give a greater impact compared to the pre-tax approach - a post tax rate increases risk in all events. We have re-performed the analysis and demonstrate that the correct comparison is c.80% in RIIO-GD1 compared to c.60% in GDPCR1 and 45-51% in DPCR5.

The true pre-tax comparison is summarised below:

<sup>3</sup> Tables 3.3 and 3.4 within the Initial Proposals Finance section

<sup>4</sup> RIIO-T1 and GD1 Initial Proposals Financial Issues Sept 19 2012 - page 14

Figure 3.3 - Comparison of incentive rates, corrected for tax effects

DPCR5 = 45-51%	East	London	North West	West Midlands
Effective rate in GDPCR1	62.5%	58.8%	61.7%	62.3%
Effective rate in RIIO-GD1	80.3%	78.6%	80.8%	81.4%

- 3.8. Notional gearing has not been considered in the Initial Proposals analysis of relative risk. Increasing gearing will increase financial risk and volatility of cash flows to equity. The table below shows that a 7.55% equity return is required for the GDNs to deliver the same WACC as GDPCR1 (with a normalised cost of debt).

Figure 3.4 - RIIO-GD1 cost of equity required to maintain GDPCR1 WACC

	GDPCR1	RIIO-GD1	RIIO-GD1 (normalised)
Equity return	7.25%	6.7%	<b>7.55%</b>
Normalised Cost of Debt	3.03%	3.03%	3.03%
Gearing	62.5%	65%	65%
WACC	4.61%	4.31%	4.61%

- 3.9. Several other significant risks have not been addressed in the Initial Proposals analysis. With domestic gas usage forecast to decline under most forecasts, the GDNs face a higher risk of stranded assets than any of the other RIIO networks and higher risk than DPCR5. The GDNs also face a higher risk from cash flow duration (45-year asset life) than the DPCR5 networks (20-year asset life).
- 3.10. Lastly, any difference in risks between GDNs has not been assessed. The London network has the highest capex / RAV ratio, even after considering all of the cost disallowances which are proposed in the Initial Proposals (figure 6.1). The other activities which face the networks (planning, delivery, exogenous risks, emergency etc) are also higher risk for London as detailed in our April Business Plan. We conclude that the London network has a higher level of relative risk than any of the other GDNs.

**Question 3:** Do you agree with our proposed elements of the allowed return?

### Response

- 3.11 Our views on the cost of equity proposed are largely linked to our response to Q2 above, but taking the elements one at a time:

## **Gearing**

- 3.12 The Initial Proposals document cites financeability as the primary determinant of notional gearing, however, the credit metrics which Ofgem have used for this assessment have been withheld and this is a significant cause for concern as described in our answer to Q4 below. From analysis of the model and clarification responses provided by Ofgem, the calculations performed have several shortcomings which are also detailed under Q4 below. Our conclusion is that in combination with the proposed cost of equity and capitalisation ratios, the level of gearing proposed (65%) is too high to allow the GDNs to achieve credit metrics at a level consistent with the cost of debt index. The proposed package will therefore lead to actual debt costs which are above those allowed by the index and GDNs will face difficulties in efficiently financing the required workload. The proposed notional gearing should be recalculated to establish a level which allows credit metrics which are commensurate with a rating at the border of A and BBB.
- 3.13 Ofgem have stated the importance of ensuring that such circumstances do not arise:
- *“the Authority must also have regard to the need to secure that licence holders are able to finance the activities which are the subject of obligations on them. This means that efficient network companies should be able to secure financing in a timely way and at a reasonable cost in order to facilitate the delivery of their regulatory obligations. This is also in the interests of consumers”<sup>5</sup>*
- 3.14 Regulatory precedent is also cited as a key determinant of notional gearing, but the Initial Proposals simply states that the proposed 65% *“is also consistent with the range of determinations in our current price controls (60-65 per cent)”*. This ignores the transmission fast-track determination at 55% notional gearing. Further clarification from Ofgem reveals that the Initial Proposals review of precedent is performed in the context of the relative risk table<sup>6</sup>. However, this table is primarily used to justify the widely differing proposed costs of equity, it seems unreasonable to then rely heavily on the same summary for gearing determination, as Ofgem rightly states in the Initial Proposals, the primary driver for gearing should be financeability. We have reviewed the table in detail and present our findings in Appendix 1. We conclude that RIIO-GD1 presents a higher level of risk than GDPCR1 and DPCR5.
- 3.15 The Initial Proposals also suggests that 65% notional gearing is appropriate because *“this level is consistent with the gearing levels that we observe for the network companies that we regulate”*. However, NGG’s actual gearing levels have been consistently below 60%, the published figures for the last three financial year ends for NGG debt/RAV were 54%, 52% and 54% respectively.
- 3.16 In the Initial Proposals, RoRE is cited as a ‘sense-check’ for the correct level of gearing. However in the clarification response received, Ofgem have stated that *“We have set notional gearing to ensure that the RoRE range is broadly consistent across sectors”*, and this seems more in line with the weight given to RoRE within the Initial Proposals document as opposed to financeability. However, the ‘sense-check’ approach would be the correct way to consider the RoRE range. Companies will primarily consider finance

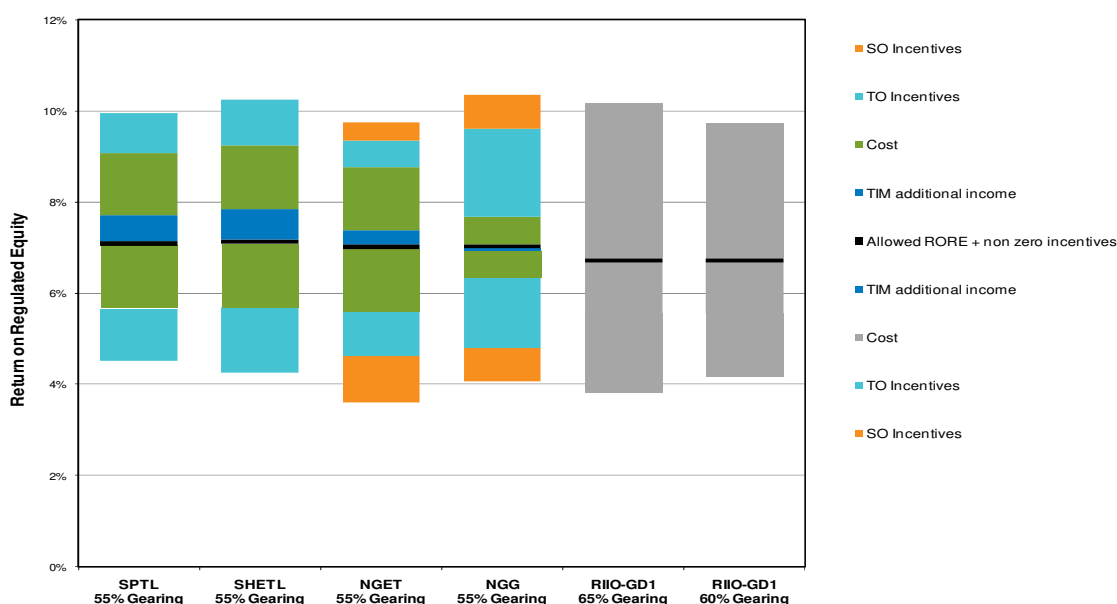
<sup>5</sup>RIIO: A New Way to Regulate Energy Networks, Final Decision. 4 Oct 2010

<sup>6</sup> table 3.3 within the IP Finance section

risk (i.e. financeability) when deciding the limit for gearing. Return to equity is the output of such decisions, not the key determinant.

- 3.17 In addition, the RoRE range is not a measure of cash risk, but a somewhat subjective estimate of maximum and minimum potential returns. This provides little evidence of the dispersion of returns or the likelihood of achieving any given level of return.
- 3.18 Further, we have continually asked for additional incentives to be added to the RIIO-GD1 proposals, almost all of which have been rejected. To some extent, therefore, the narrow RoRE range, is in part created by a lack of potential returns from incentives and is then used to justify a higher notional gearing.
- 3.19 We summarise below our corrected view of our GDN's RoRE range inherent within the Initial Proposals to use as a sense check for the gearing proposed. The RoRE calculation within the Initial Proposals incorrectly applies tax to totex performance, thereby incorrectly reducing the range presented relative to other sectors, we have corrected for this. The ranges for the Transmission companies reflect the 'base view' of spend and have all been calculated with gearing at 55%.
- 3.20 The RoRE range for our GDNs at 60% gearing is as consistent with the Transmission companies as the RoRE range at 65%. Notional gearing of 60% appears no less appropriate than 65% and is far more appropriate in light of the financeability assessment.

Figure 3.5 - Comparative RoRe ranges

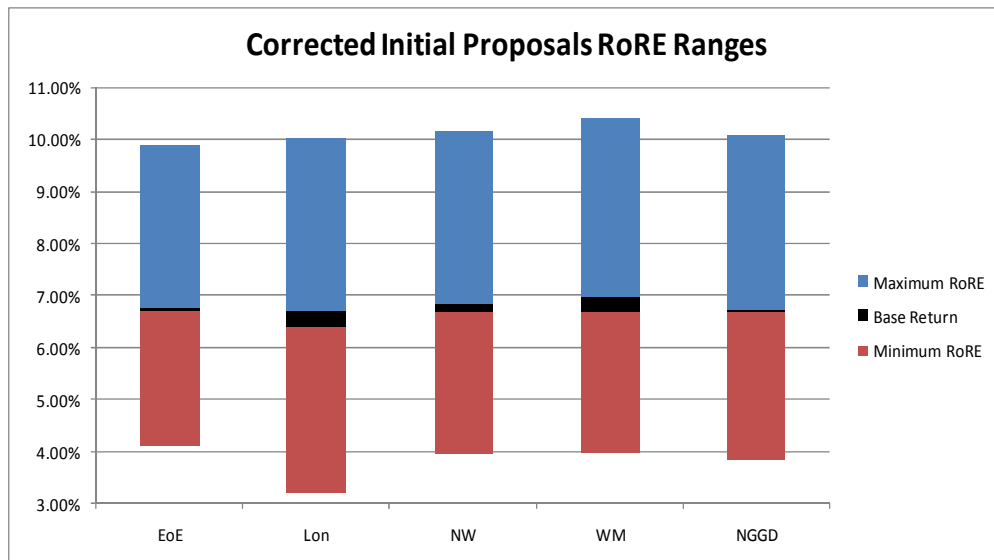


- 3.21 We conclude that the gearing levels proposed in our April Business Plan (60%, and 55% for London) are required in order to maintain efficient financing of the networks.

### **Individual network RoRE**

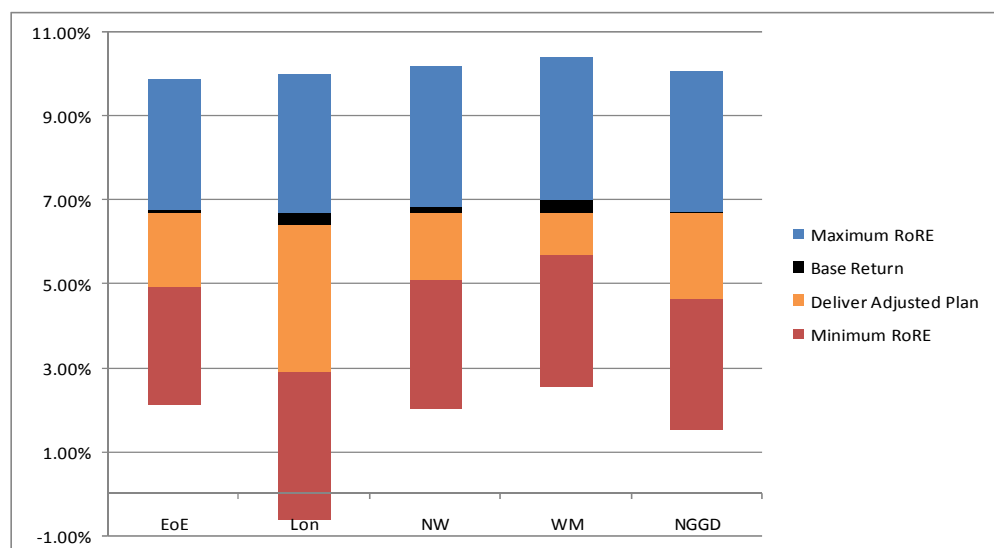
- 3.22 Prior to looking at cost of equity, it is also worth considering the corrected RoRE ranges of our individual networks. When we correct for the errors in the Initial Proposals ranges, the network RoRE position at 65% gearing is summarised by the chart below.

Figure 3.6 - Corrected Network RoRE ranges at 65% gearing



3.23 Given our concerns over the cost assessment that has been carried out in the Initial Proposals. We do not think the RoRE ranges (showing a symmetric +/-10% out/underperformance against base allowances) to be credible. The graph below shows potential range of returns including Ofgem’s indicative maximum return based on a 10% outperformance of the allowances (the blue bar), However, we also show the returns that would be made if we spent according to our business plan (the orange bar) and the sensitivity of a 10% overspend against our plan (the red bar). In all cases the plans and allowances have been adjusted for the Initial Proposals workload disallowances so do not include any risk from having to complete outputs that are not funded.

Figure 3.7 - Network RoRE ranges under different performance assumptions



3.24 From this analysis, it can be seen how important it is that Ofgem are confident their cost assessment provides a fair opportunity for the network to deliver the outputs committed to. Our analysis shows that if Ofgem are incorrect in their benchmark and we were to spend at the levels set out in our plan then all of our networks would deliver returns below 6%.

In our London network, we would not earn a return sufficient to cover the cost of debt. This is even assuming we can absorb the workload disallowances that Ofgem have proposed in the Initial Proposals. This clearly illustrates the need to ensure the cost allowances are robust and the importance of analysing and assessing network specific factors such as the different operating environment of London. This also emphasises the need to look at the finance package as a whole, looking at the cost allowance offered to deliver outputs, the incentive reward available and the finance structure to ensure funding is deliverable and illustrates why we proposed a lower IQI incentive rate range for our London network which is not addressed in the narrative of the Initial Proposals.

### **Cost of equity**

- 3.25 Ofgem's approach has been to look at CAPM analysis, taking into account relative risk analysis, and then to sense check this against alternative approaches and regulatory precedent. As we explain in our answer above, this ignores cash flow risk modelling which we see as a key tool in determining relative risk.
- 3.26 Ofgem contracted FTI Consulting (FTI) to support the review and FTI concluded that *"the range of 6.0-7.2% remains appropriate for the cost of equity. However, it highlights the need to continue to observe market trends ahead of Final Proposals, on account of the significant variability in current estimates of the CAPM components."*
- 3.27 However, both Ofgem's analysis of relative risk, and the FTI report, ignore notional gearing, in fact FTI state in their report that *"We have not been asked to consider notional gearing and financeability in this report"*. As we explain in our answer to Q2 above, it is not reasonable to divorce the proposed notional gearing and the correct cost of equity.
- 3.28 We include a review of Ofgem's relative risk analysis in more detail in Appendix 1, together with our conclusions.
- 3.29 The Energy Networks Association (ENA) asked Oxera to review the CAPM analysis and relative risk between the forms of control. This work concluded that:
- Assumed asset betas in the Initial Proposals for the non-fast tracked companies have decreased compared to prior controls in a disproportionate manner given the small difference in capex/RAV and increases in other risks.
  - Ofgem are right to focus on the longer-term estimates of CAPM components and this does not constrain Ofgem to a mechanical update of cost of equity should market conditions change prior to final proposals.
  - Ofgem's estimates for Equity Market Risk Premium and Risk Free Rate appear reasonable.
- 3.30 The report is included at Appendix 4.
- 3.31 From our review of relative risk, the cash flow risk modelling we have performed to date and the September 2012 Oxera analysis, we conclude that the risks facing the networks and required cost of equity are higher than for GDPCR1.

**Cost of debt**

- 3.32 We address our concerns with the cost of debt index in detail in Appendix 3, but we summarise them here.
- 3.33 The aim of cost of debt indexation is to reduce the risk of error in estimating the efficient cost of debt. This will only be achieved to the extent that the correct index is chosen and that GDNs have the ability to match that index.
- 3.34 In the Initial Proposals, Ofgem state, *“we have modelled GDN’s cash-flow risk associated with a falling cost of debt index and we do not consider that this presents a material source of risk”*. On clarification, it seems that Ofgem have modelled a scenario where the real cost of debt falls to 2% for all eight years of RIIO-GD1, combined with the NGG opening debt portfolio and expected timing of renewals. This showed a very small profit over the index. However, this analysis ignores the fact that:
- A full analysis would look at all likely scenarios and consider the expected performance overall.
  - The real risk is from a low but rising cost of debt, as renewals tend to be back-end loaded in the RIIO-GD1 period, or worse, a spike in the cost of debt at the point of renewal.
  - The small profit shown in Ofgem’s analysis would be removed by the transaction costs incurred.
  - The modelling assumes that GDNs can raise new debt at the real coupon rate, but this is questionable in light of recent bond issues and given that our financeability assessment (Q4 and Appendix 2) shows that the networks would be rated at BBB or below based on the finance package proposed.
- 3.35 In November 2011 and again in April 2012, we asked Oxera to conduct statistical modelling to estimate the likelihood that our Networks (with their opening debt portfolio and expected timing and volume of renewals) would match the proposed index. The conclusion was that the index was actually more risky, for the NG GDNs than a fixed allowance.
- 3.36 Oxera’s September 2012 report for the ENA concludes that *“for the GDNs in particular, moving from a fixed allowance to indexation of the allowed cost of debt is likely to increase, rather than reduce the risk of error in estimating the cost of debt. This is due to the very low RAV growth and relatively small asset bases, which mean that it would be inefficient to access capital markets as frequently as would be required to match the index”* (section 4.3).
- 3.37 FTI state that *“There is significant uncertainty over the way in which market conditions will continue to develop over the price control period. Ofgem may wish to assess the level of outperformance as part of a mid-period review.”* (FTI report Table 1.1).
- 3.38 We are also concerned that the inflation risk premium is not compensated by the index has not been addressed. Ofgem’s analysis that *“the 10 year break-even inflation figure we use matches the sum of the bank of England inflation target (two per cent) and the*

*difference between RPI and CPI inflation*” is actually a coincidence and does not prove that the premium is captured in the index, as we demonstrate in Appendix 3.

- 3.39 In summary, we do not see any conclusions in the Initial Proposals which would reverse the position in our April plan, i.e. that uncertainties in matching the index justifies some combination of an increase in the allowed return and/or an uncertainty mechanism to ensure that networks are compensated in the event that they cannot match the index.

***ONS consultation on changes to RPI***

- 3.40 We note the ONS consultation on possible changes to the RPI measure of inflation. These changes may be expected to introduce formula changes which would reduce the future reported rate of inflation and thereby reduce the rate at which the RAV and revenues increase. This has a profound impact on the regulated networks so we consider it necessary for the licence to include a re-opener provision such that the implications can be considered and addressed once they are fully understood.
- 3.41 These implications are likely to be material. Investors (both debt and equity) typically require a nominal return so any reduction in the underlying return provided through price protection will need to be compensated for through a higher real return. This would require an upward adjustment to be made to both the equity return and cost of debt allowance. There are also likely to be implications for the real price effects included in cost allowances. This may need to cover both the base allowances and also the real price effects embedded in uncertainty mechanisms.

## **Chapter 4 - Financeability, transition and return on regulatory equity**

**Question 4:** Do you agree with our approach to transition of the repex capitalisation rate from 50 per cent to 100 per cent in seven equal annual steps (“stepped approach”)?

**Response**

- 4.1 We agree with the stepped approach to repex capitalisation, however, we have significant concerns over the assessment of financeability in general, which we explain below.

***Repex transition***

- 4.2 In our April plan, we proposed that the transition to 100% repex capitalisation should be effected by charging 75% of repex to RAV in each year of RIIO-GD1 (75% repex approach). Our reasoning was that this provides a reasonable growth in earnings profile and this is a key issue for our investors. However, the resultant GDN credit metrics are marginally improved under the stepped approach compared to the 75% repex approach and on balance we conclude that this must be our priority over the RIIO-GD1 period. We therefore agree with the proposed ‘stepped approach’ to repex capitalisation.



### ***Financeability***

- 4.3 Firstly, we are very concerned about Ofgem's decision to delete the credit metric calculations and results from the price control model issued with the Initial Proposals. This reduces transparency and suggests that less weight is placed on financeability (e.g. in determining the correct level of gearing) than is suggested in the Initial Proposals document.
- 4.4 Such transparency within the RIIO process was previously recognised as important by Ofgem: *"Given the large amount of investment required in the sector going forward, we do not want to make it difficult for companies to raise the necessary finance. Indeed, our approach to financeability under the RIIO model is designed to help them. Providing greater transparency and predictability about the way we approach each element of financeability should provide comfort to investors and make the sector more attractive to both equity and debt investors."*<sup>7</sup>
- 4.5 This also means that we cannot know for sure how Ofgem have met their claim (per paragraph 4.7 of the Finance chapter) to *"ensure credit ratios that are consistent with a 'comfortable investment grade' rating (i.e. in the BBB-A range)".* 'A' ratings should indeed be included in the target for financeability as the Cost of Debt index will be set using an average of BBB and A rated bonds and so the finance package should allow credit metrics (once adjusted for the regulatory environment etc) which would provide ratings at the border of BBB and A.
- 4.6 In addition, we cannot see the full methodology that Ofgem have adopted in calculating credit metrics or the level of costs which they have used. We believe that there are errors in the Ofgem calculations, for example, we understand, from clarification responses, that Ofgem have incorrectly included only cash interest in certain metrics, while S&P have stated that they include both cash interest and accretions on index-linked debt.
- "Without this adjustment, we believe that those utilities that issue inflation-linked debt will report relatively lower cash interest costs, and correspondingly higher unadjusted FFO because a portion of their cash interest cost is deferred until maturity, and even then, is shown as debt repayment rather than interest. We therefore seek to reflect the full economic cost of inflation-linked debt in the period in which it is incurred by reducing FFO by the entire interest expense reported in the profit and loss statement, rather than only cash interest as reported in the cash flow statement."*<sup>8</sup>
- 4.7 We believe that Ofgem have used their assessment of efficient cash spend (prior to IQI uplift) in determining financeability. However, this is a level of costs which is below any of those forecast by the GDNs and therefore below the allowances proposed. This approach is unsound; allowances are set above the efficient benchmark to allow for statistical errors in the benchmarking process. Ofgem thus recognise the possibility of a statistical error when setting actual allowances, while ignoring the same possibility in the financeability assessment. The financeability assessment thereby assumes a level of out-performance against allowances. We have previously provided evidence in support of our level of costs, and have challenged Ofgem's assessment in the Initial Proposals response. In the

<sup>7</sup> RIIO: A New Way to Regulate Energy Networks, Final Decision. 4 Oct 2010

<sup>8</sup> New methodology for Inflation Linked debt Has No Immediate Effect on Ratings On UK Regulated Utilities – April 2009

light of this evidence it would be imprudent to assume that the networks can outperform the interpolated level of costs in assessing financeability.

4.8 Ofgem has also stated both in the Initial Proposals consultation document and through separate dialogue that the Licence model was shared with the major credit rating agencies to ensure a consistent approach in calculating credit ratios. No evidence of any assurances provided by the rating agencies was published in the Initial Proposals consultation document, and no such evidence has subsequently been produced by Ofgem in responding to our queries in this area. Such discussions can be of limited use if they are not transparent to investors and have not been consulted upon as the method for assessing financeability. We believe that details of dialogue and calculations shared with the three agencies and any assurances provided by them should be made available.

4.9 In a publication dated 25 July, S&P stated that:

*“Some operators are faced with what appears to us to be tough efficiency targets that could pressure their business risk profiles....An increase in business risk could translate into higher ratio guidance at the same rating level.”<sup>9</sup>*

The ratio guidance that they issue in that document is ‘Adjusted FFO to debt of more than 12%’ based on our calculations, we do not see how the proposed package meets this guidance.

4.10 Finally, the financeability assessment should be stress-tested for all uncertain inputs which could materially affect the outcome. In our view these include those inputs which Ofgem has selected (totex, index-linked debt and the outcome of the debt index) but also RPI, and the level of spend under uncertainty mechanisms. Ofgem maintain that RPI is, in effect, a pass-through item, as it is adjusted within income. However, it also affects notional interest costs to a greater degree than income, and for this reason higher levels of RPI will worsen credit metrics.

4.11 Our analysis in Appendix 2 shows (from clarification responses we have received) how we believe that Ofgem have performed their analysis, and that the results do not fulfil the requirement (even after adjustment for the stable regulatory regime) to provide ratings at the border of BBB and A (i.e. consistent with the cost of debt index). We further show our calculations once the above factors (use of benchmarked costs rather than allowances, understatement of RPI and interest charges, and incomplete stress-testing) have been addressed. This demonstrates that the finance package is significantly inadequate in meeting the financeability criteria.

---

<sup>9</sup> How Ofgem’s Latest RIIO Proposals Could Increase Credit Risk for National Grid and Gas Networks in England and Wales (25 July 2012).

## Chapter 5 - Pensions

**Question 5:** Do you agree that companies must demonstrate a robust approach as to how their de-risking strategies, especially if aggressive, are protecting future scheme funding and that they should clearly demonstrate the benefits that they expect to flow to consumers?

### **Response**

- 5.1 We would agree that in order for Ofgem to allow the funding of de-risking strategies, a clear consumer benefit case should be presented by the relevant network and we would expect that, in the current regulatory environment, networks are likely to require that funding certainty from Ofgem prior to embarking on innovative de-risking strategies.
- 5.2 We would expect that Ofgem would be supportive of any such strategies that were in consumers' interests, and Ofgem are well placed to determine the level of evidence they require in advance of providing such support. Consumer interests would be best served in this area through early liaison between Ofgem and the relevant networks prior to innovative de-risking strategies being employed, with Ofgem determining in advance whether such a de-risking strategy was efficient.
- 5.3 Needless to say it is imperative for the future success of de-risking strategies that once Ofgem have made such a determination, it then stands by that decision, rather than re-evaluating such strategies with the benefit of hindsight. Lack of such regulatory certainty is likely to incentivise networks to avoid adoption of innovative de-risking strategies.

**Question 6:** Do you agree that the costs of contingent assets may be allowed if considered to be in consumer's interests?

### **Response**

- 5.4 Ofgem state in paragraph 5.7 of the Initial Proposals - Finance Supporting document that 'The costs of contingent assets may be allowed if considered to be in consumers' interests.' We would concur with this statement and can see no reason why such costs would not be allowed. It appears to be essential that networks outline their proposals in regard to contingent assets to Ofgem in advance of agreement with scheme trustees, to ensure that Ofgem agree that the particular arrangements being proposed would be deemed efficient and would be funded.
- 5.5 Needless to say we would expect Ofgem to stand by such decisions once such arrangements have been put in place.

**Question 7:** Do you agree with the thresholds for pension scheme administration costs and Pension Protection Fund levies set out in table 5.1?

### Response

- 5.6 Admin and PPF costs are largely outside of networks' direct control and particularly in the case of PPF costs, could be subject to significant fluctuations should the Pensions Regulator decide to change its charging methodology. Consequently, a fair full true-up of these costs is essential to ensure that consumers fund only the relevant costs.
- 5.7 No rationale has been offered to support the proposed true-up thresholds and National Grid can see no reason to apply them, particularly since the actual costs will be available through the Regulatory Reporting Pack (RRP) process and true-up calculations would consequently require no significant effort to produce. Therefore, it doesn't seem reasonable to expose consumers to this unnecessary risk of over / under funding.
- 5.8 Additionally, the thresholds chosen are arbitrary and would create very different risks for each licensee. For example, licensees whose PPF allowances were £100k per annum the threshold for true-up in the Initial Proposals would be 1000% of the forecast cost. This would be both unnecessarily large and clearly present an asymmetric funding risk to those parties. Smaller licensees or those with low costs would be particularly punished by such a move. In the case of NGGD, where funding is spread across two Transmission and four Distribution price controls, allowances could differ from costs by up to £12m p.a. before any true up was made. The application of these thresholds would have the likely impact on our networks of exposing each network to the first £1m p.a. of PPF costs before any realistic prospect of true-up recovery. The creation of such a large asymmetric funding risk would clearly be hugely disproportionate to the current level of costs.
- 5.9 There would have to be an overwhelming need case to introduce such arbitrary and unfair thresholds, and we are unaware of any need case at all for their existence.
- 5.10 Full true-up (without thresholds):
- Ensures that customers are only exposed to the actual costs incurred by networks.
  - Provides for consistent treatment across networks regardless of size.
  - Avoids placing inefficient incentives on networks in allocating costs.
  - It is easy to implement.
  - Is demonstrably the most equitable treatment for both customers and shareholders.

## Chapter 6 - Taxation

**Question 8:** Do you agree with our amended treatment for modelling the cash flows of corporation tax payments?

### **Response**

6.1 We agree with treating tax as paid in the year of charge as Ofgem have proposed.

**Question 9:** Do you agree with amending the timing of the revenue adjustment for tax clawback to be annually in line with the annual iteration process?

### **Response**

6.2 We agree with amending the timing of the revenue adjustment for tax clawback to be annually in line with the annual iteration process.

**Question 10:** Do you agree with our treatment of expenditure for tax modelling?

### **Response**

6.3 We agree with the treatment of expenditure with one exception; we do not understand the proposal regarding connection contributions. In paragraph 6.5 of the Initial Proposals, Ofgem state that, *“it should be noted that in Special Condition E18 paragraph 4(b) contributions (i.e. connection charge receipts) are defined as excluded services. As such these should not be funded through base revenues so any change to the accounting treatment will be for companies to bear.”* However, the financial model issued with the Initial Proposals does include capital allowances for capex relating to connection contributions. We will be seeking further clarification on this issue.

## Chapter 7 - Allowed revenues, annual iteration and financial handbook

**Question 11:** Do you have any views on the calculations and layout in the financial model?

### **Response**

7.1 The financial model is generally well presented, easy to navigate and clear, and we particularly welcome the split into sector-specific models. We have engaged constructively with Ofgem through the ‘Finance Working Group’ in the lead up to Initial

Proposals and will continue to do so. We have made a number of comments on the financial model which we have sent to Ofgem in an issues log separate to this response. The comments therein are in the form of (i) adjustments we believe need to be made to the model (ii) areas where further clarification is required from Ofgem and (iii) general points on the financial model. Consequently, we have not included the detail of each and every adjustment that we believe needs to be made in the model in this response; however, we summarise below material issues where we have specific concerns.

### ***Lack of transparency in financeability assessment***

7.2 The financial model provided to us for the Initial Proposals is not transparent with regard to the methodology applied in calculating the credit and equity metrics used in the financeability assessment. These calculations were visible in previous versions of the model, and prior to the publication of the proposals; we (and other networks) have engaged with Ofgem and expressed concerns that the metrics in previous versions of the model were calculated incorrectly.

7.3 We set out our concerns more fully in our answer to Q4 above.

### ***Accounting errors in Financial Statements***

7.4 The financial statements in the model have been included so that Ofgem (and other users of the model) can calculate a number of credit and equity metrics for the purposes of the financeability assessment. We have observed that these financial statements are incorrect for any scenario where costs differ from allowances (from 2015/16 onwards) or if there is any delay in when allowances are triggered under an uncertainty mechanism (e.g. a re-opener). Any metrics calculated using these financial statements under such scenarios will therefore be incorrect and potentially misleading.

7.5 As part of the annual iteration, the model calculates revenues for all eight years, in each annual iteration, comparing actual costs to allowances. Where actual costs are unknown the model assumes costs equal allowances. Therefore, in calculating income for 2020/21, the model will compare actual costs to allowances for all years from 2013/14 to 2018/19, with the costs for the following two years assumed to equal allowances. We have discovered that although the model updates the revenue figure for the relevant annual iteration year i.e. the annual iteration for the year 2020/21 based on actual data received for the year 2018/19 which will update revenues for 2020/21 (due to the 2-year lag), revenues for the previous year i.e. 2019/20 are overwritten and revert back to base revenue allowances. Clearly the revenues for 2019/20 in this example should remain at the revised post MOD amounts and should not change when running the 20/21 annual iteration. Note that this error is apparent in each year from 2015/16 in both the regulatory and statutory statements. This error must, at least, have impacted the totex stress-testing for financeability.

7.6 The formulae in the financial statements of the model pull their inputs from live calculations. Therefore there is no process within the published model to capture the modelled financial statements for prior years (where costs do not equal allowances) as the user steps through and performs subsequent annual updates, causing incorrect values for revenue, debt balance, interest costs and tax to incorrect values.

- 7.7 A further issue arises with expenditure used in the regulatory financial statements. The costs and cashflows are taken from the base revenue calculation which does not represent the costs actually incurred where costs do not equal allowances due to the operation of the sharing factor in the totex incentive mechanism. As a general point, both the regulatory and statutory financial statements contain data which does not represent statutory accounting (e.g. regulatory depreciation, controllable opex) and therefore any financeability assessment which uses statutory data as a starting point cannot be accurately performed based on the financial statements in the model.
- 7.8 For the above reasons, any financeability assessment carried out including stress testing of the credit and equity metrics using data in the financial statements of the model could be misinformed. This issue has been identified subsequent to the setting of initial proposals and so it is reasonable to believe that Ofgem's financeability assessment was impacted by these accounting errors.

***Other comments and issues***

- 7.9 We have identified other issues and clarification areas which we have submitted separately in an issues log. In summary, we require further clarification behind the calculation of the capex roller and in particular, to understand why the impact of mandatory CNI spend during GDPCR1 has been excluded from the calculation despite assurance given by Ofgem that this category would be included. We have also observed sizable differences in non-controllable opex allowances versus our expectation based on our April RIIO-GD1 submission.

**Question 12:** Should the financial model also capture, for presentational purposes only, the revenue from all incentive schemes?

**Response**

- 7.10 The scope of the financial model is currently restricted to setting the initial base revenue allowances and then calculating the adjustments to that base revenue required by the annual iteration process. The model does not cover the whole of the regulated income and does not cover the majority of incentive schemes.
- 7.11 We can see the benefit of extending the model to cover these items as memorandum entries only such that the model presents the whole picture in one place but this is not the true purpose of the model and care would need to be taken to ensure that the model does not mislead stakeholders by appearing to be more than it really is. If the model is extended to incorporate other revenue terms we believe it would be appropriate to review the current revenue reporting rules to avoid a duplication of reporting and to reduce costs to consumers.
- 7.12 Regardless of Ofgem's decision in this regard it is vitally important that Ofgem clarify exactly what the data in the model represents.

**Question 13:** We have set out three options to deal with the issues relating to SIU and legacy pensions arrangements. Which option do you prefer?

### Response

- 7.13 It is not clear to National Grid that the current NTS pension deficit recharge arrangements are inconsistent with the Gas Act. Our understanding is that this concern stems from Section 7B5(b) of the Act which outlines a number of specific types of charges that are allowable under the Act. However, the Act also provides, in Section 7B(4) that licences can contain such conditions 'as appear to the Authority to be requisite or expedient having regard to the' general duties of the Authority (as set out in Sections 4AA, 4AB and 4A). The provisions in Section 7B(5) which provide for payments between licensees are expressly 'without prejudice' to this general rule, and it would therefore appear to be the case that section 7B does not prohibit licence conditions from providing for the payment of sums between gas transporters to the extent that they are 'requisite or expedient' with regard to the Authority's duties.
- 7.14 We would expect the payment of sums in relation to the NTS recharge to be regarded as requisite or expedient 'to secure that licence holders are able to finance the activities which are the subject of obligations imposed by or under' the Act (for the purposes of Section 4AA(2)(b) of the Act). The funding of pension deficits is an unavoidable and necessary cost which is part and parcel of a gas transportation business, (since it needs employees to run the business). Where they relate to legacy GDN employees, the recovery of these costs from the appropriate parties through the mechanism of the NTS recharge would seem to be requisite or expedient with regard to the Authority's duties in a number of ways, including:
- (i) Under the Authority's duty to have regard to the interests of consumers, as it avoids preferring the interests of certain consumers, (either of certain types or in certain regions) over those of other consumers, and:
  - (ii) Under the Authority's duty to have regard to best regulatory practice and for regulatory activities to be targeted only at cases where action is needed, as it avoids any discrimination or implicit cross-subsidies between customers or consumers in different parts of the country.
- 7.15 Furthermore Ofgem previously consulted on the NTS pensions recharge back in 2006/7, and reached the conclusion, as stated in the decision letter of 3rd April 2007, that the NTS recharge is needed in order to promote competition between relevant shippers, suppliers and DNOs, since the NTS recharge would 'facilitate the securing of effective competition by ensuring that costs are appropriately targeted to those that have caused them.' The NTS recharge can also be justified on this basis under the Act as 'requisite or expedient' with regard to the Authority's duties.
- 7.16 In the light of the above we would advocate continuing with the current NTS recharge arrangements, and further we would consider that a suspension of the NTS recharge, even if temporary, would seem more likely to contravene the Authority's duties than continuing with it. However, we would support the pursuit of an amendment to the Gas Act



by Ofgem in the relevant section in order to align it with the Electricity Act and to eliminate any perceived inconsistencies.

- 7.17 Consequently, we do not believe it is necessary to implement any of the three options identified at Paragraph 7.10 of the Initial Proposals. We would in any case be reluctant to support the options on their own merits for the reasons outlined below:
- Option 1 would have significant cash flow impacts on the Gas Transmission business which would need to be addressed elsewhere in the proposals. Additionally we would not support the suspension of revenue in this way as it adds unnecessary risk to the business, the costs of which would ultimately need to be financed by customers.
  - Option 2 is less concerning from a Gas Transmission cash flow perspective but in the Initial Proposals Ofgem suggest that it could result in charging volatility, which we agree would be undesirable from a customer perspective. We note, though, that it is not clear, from the year on year revenue changes in 2012/13 and 2014/15 shown in the July 2012 Initial Proposals Finance supporting documents for RIIO-T1 (Tables A3 and A4) and RIIO-GD1 (Tables A1 to A8), that volatility in allowed revenues would in fact be increased by Option 2.
  - Option 3 appears to advocate the establishment of an indefinite cross subsidy from Transmission to Distribution customers. While for most consumers the impact of this proposal would be minimal, we are unable to find any grounds for supporting it.
- 7.18 We believe it is in customers' interests to avoid adopting any of the suggested options by continuing with the current arrangements, but if, on the basis of definitive Legal Advice, Ofgem consider that the NTS recharge cannot continue in 2013/14 without an amendment to the Gas Act, Option 2 would appear to be the option with the least significant drawbacks.

## Chapter 8 - Dealing with uncertainty

**Question 14:** *Repex:* Do you agree with our proposed revenue driver for repex? Should the revenue driver apply to all above risk threshold tier 2 mains, or be limited to additional mains that breach the threshold during price control period, i.e. those where no funding was provided ex ante?

### **Response**

- 8.1 We support the proposal for a revenue driver for Tier 2 repex and the approach to apply the mechanism to all the above risk threshold mains. In addition, the mechanism must reflect mains replacement, service transfer and service replacement within the mechanism.
- 8.2 Our reasons in support of the revenue driver applying to all risk threshold Tier 2 mains are set out below:

- It removes the upfront requirement to identify specific mains that are currently above the threshold when it is known that the population of mains above the risk threshold will change through dynamic growth.
  - Any improvements in the risk calculation could be implemented without the need to review base allowances.
  - It simplifies any potential review of HSE iron mains replacement programme at the mid period review.
- 8.3 The proposal to include the above risk threshold Tier 2 mains, and associated services, in the revenue driver does not reduce the benefit to customers as networks will be required to remediate the risk from these pipes over the RIIO-GD1 period to meet the requirements of the HSE's new 3 Tier Iron Mains Replacement Programme.
- 8.4 The associated services, that will be replaced as part of the above risk threshold Tier 2 mains, must be included in the revenue driver and reflect the actual volume of service transfers and service replacement. This is consistent with how the GDPCR1 replacement mechanism works and ensures there is no volume risk for networks or customers.
- 8.5 Ofgem have expectations that networks will innovate in the removal of risk from our Tier 2 and 3 iron mains assets. In order to deliver upon this challenge and allow innovation it is important that the mechanism, and associated licence drafting, is flexible enough to allow new methods of reducing the risk below the threshold to be funded through the revenue driver. For example, we anticipate that there may be methods to reduce the risk below the threshold, however, will not remove the risk in its entirety. Where these methods are developed and accepted as part of the innovation challenge we would expect the revenue driver to apply to the risk reduction.

**Question 15: IRM:** Do you agree with our proposal to restrict the reopeners for the roll-out of innovation to the two standard reopener windows, i.e. 2015-16 and 2018-19?

### Response

- 8.6 We support the proposal for an uncertainty mechanism for the roll-out of innovation and that the reopeners will be in 2015-16 and 2018-19.
- 8.7 Whilst we support the reopener windows for the timing of adjustments to allowed revenues, we would suggest that the assessment of likely costs can be undertaken at anytime to ensure proven innovation can be deployed and provide benefits to customers as soon as possible. This will provide further benefits to customers in that they will be able to understand the level of adjustments required to allowed revenues and understand the benefits the innovation will bring in advance of the reopener windows.

**Question 16: Lane rental:** Do you consider a revenue trigger to be appropriate for allowing additional costs related to the implementation of lane rental schemes? In particular do you have any views on how the unit cost of such schemes should be set?

### Response

- 8.8 We support a revenue trigger for lane rental and believe this is in the interest of customers.
- 8.9 Through RIIO-GD1 we anticipate a number of lane rental schemes will be introduced and these schemes would apply to the most traffic heavy roads (Road Types classified as 1 to 3 and Traffic Sensitive). As with all previous Streetworks legislation changes, whilst we have been successful in delaying implementation of schemes by challenging the needs case once trials have been undertaken, the roll-out to other areas follows in fairly quick succession. Our engagement through NJUG suggests that a number of London authorities will follow the TfL scheme shortly after the scheme review in 2014.
- 8.10 The revenue trigger proposed sets the unit costs equal to the lane rental charge and Ofgem believe this is not a valid assumption. However, since our April 2012 Business Plan we have shared with Ofgem, how the mechanism had already built in efficiency by using an average number of days for our works when lane rental schemes will be biased to the higher traffic roads (Road Types 1 to 3) that have a higher ratio of number of days for our major works. We have therefore evolved the mechanism to set the days in the road weighted to the higher traffic roads and set an efficiency factor of 0.9 for our replacement activity.
- 8.11 In addition, Ofgem raised a concern with using the lane rental charge as the unit cost could encourage networks to avoid the charge by focussing mains replacement works in areas not covered by lane rental. We do not agree with this argument and believe this underestimates the challenges in London given that a significant element of our works are driven by safety (delivery of our mains risk reduction output commitments) and customer requirements and are unavoidable. This is demonstrated by our current GDPCR1 control in that unit costs are set for diameter bands rather than road types and diameter. However, we can demonstrate that a significant element of our works continue to be undertaken in higher cost road types due to safety and customer driven work types. Specifically, for London we can also demonstrate that London has a higher percentage road mix of Type 1 to 3 roads that the national average (our London network road mix is c.20% to 40% Type 1 to 3 where National Type 1 to 3 represents 10% of roads), which reduces the flexibility of avoiding roads that are most likely to have the highest intensity of streetworks legislation impacts, such as Lane Rental payments.

**Question 17: *Mid-period review:*** Do you agree with our proposed approach to addressing any changes to the HSE iron mains policy at the mid-period review, and our proposed reopener in relation to asset integrity? Do you agree with our proposed materiality threshold of 5 per cent in relation to assessing changes to costs?

## **Response**

### **HSE iron mains policy**

- 8.12 We agree with the proposals to review the impact of any changes to the HSE's iron mains policy at the mid period review. We support the materiality test being symmetric and greater than 5% of average annual base revenues against our business plan workloads given that our plan has been built to balance risk (including managing our contractor partnering relationships) and environmental benefits for customers today and into future price controls.

### **Asset Integrity**

- 8.13 We agree with the proposed reopener in relation to asset integrity, however, we believe there should be consideration for the materiality threshold to be set at 1% of average annual base revenues on the basis:
- The scale of costs in this category are significantly lower than for the HSEs iron mains replacement policy, therefore 1% of allowed revenues would be c.20% of our Asset Health business plan costs, which is material for this cost category; and
  - The driver for a change in our output commitment is not a mandatory safety requirement, however, where there are clear benefits for Stakeholders to deliver enhancements in Asset Health and criticality over the remaining period of RIIO-GD1 we would aim to start these prior to the end of RIIO-GD1 rather than carrying them into future price controls.

**Question 18: *Smart meters:*** Do you agree with our proposed approach to dealing with uncertain smart metering costs?

## **Response**

- 8.14 We agree that costs associated with smart metering should be through an uncertainty mechanism. However, we believe further clarity should be developed prior to the Final Proposals on how the efficiency test will be undertaken, such as the evidence required to ensure networks have worked with suppliers to limit the need for GDN support.

- 8.15 Network companies are already working collaboratively between the GDNs and DNOs through the Energy Network Association to agree our input in assisting with the metering roll-out programme and therefore have a single industry position on networks involvement. If Ofgem agree the responsibilities between Supplier and network companies then we would suggest the efficiency test would be based on delivering the agreed responsibilities efficiently. An example of this would be the presence of Permali meter boxes in a number of properties in our West Midlands network, where it would be appropriate for Ofgem to agree who should fund these costs before the roll-out and the costs have been incurred.
- 8.16 On this basis, we believe that once these responsibilities have been agreed with Ofgem the appropriate mechanisms can be put in place to ensure the recovery of costs.

**Question 19: MOB:** Do you consider a volume driver to be appropriate for increasing revenues as a result of work conducted on assets related to medium rise multiple occupancy buildings (MOBs)? Please provide evidence of the unit cost assumptions that should be used?

### Response

- 8.17 We support the introduction of a volume driver for medium rise multiple occupancy buildings (MOBs) as this avoids including a high level of costs within our Business Plan that may or may not materialise which in turn ensures protection for both customers and networks from significant changes in workloads.
- 8.18 Within GDPCR1 we have replaced 14,660 supply points at a cost of £21.5m and we believe that this information, which is provided annually as part of our Regulatory Reporting Packs (RRP), is sufficient and material (over 1% of core revenues) in order to adequately determine a unit cost for the application of a volume driver.
- 8.19 The above GDPCR1 workload has been driven by reactive safety works and will continue into RIIO-GD1. Without a volume driver Ofgem will need to include costs in our base allowances to fund works over the price control or until the mid period review. Allowances have been included for all other networks for medium rise MOBs, therefore we do not agree that this issue can be deferred until the mid period review without disadvantaging our customers over other networks customers.
- 8.20 To support the proposed volume driver we have provided legal drafting via the Licence drafting consultation.

**Question 20:** *Connecting large loads:* Do you consider that there should be reopener in relation to connecting large loads?

**Response**

- 8.21 We support the introduction of a large load connection uncertainty mechanism. We will work with Ofgem and other networks to ensure there is clarity on how the uncertainty mechanism will apply and to ensure the mechanism covers the efficient reinforcement and capacity products that could be driven by the connection of customers specific load requirements.
- 8.22 A large load connection is likely to affect NTS capacity bookings, therefore we need to discuss with Ofgem how this interacts and changes the peak demand baselines. Our assumption is that the peak demand baseline agreed at the commencement of the price control would be increase by the efficient amount of peak demand bookings required in order to deliver the connected load.

**Question 21:** *Xoserve:* Do you agree with our proposals in relation to uncertainty with respect to Xoserve's costs?

**Response**

- 8.23 We support the proposal in relation to the uncertainty regarding the Xoserve review.
- 8.24 We support the continuation of the current ex-ante arrangements for Xoserve as proposed in the Initial Proposals and that this approach will be maintained until a new forward looking forecast allowance can be established reflecting the commencement date and funding arrangements across the industry.

**Question 22:** *Scottish independent undertakings (SIUs):* Do you agree with our proposals not to introduce an uncertainty mechanism in relation to supply to SIUs?

**Response**

- 8.25 We have no comments on this uncertainty.

**Question 23:** Do you have any other comments in relation to our approach to uncertainty mechanisms?

### **Response**

8.26 Given Ofgem workload changes proposed to networks plans, we have additional comments on uncertainty mechanisms for enhanced physical site security and connection charging boundary. In addition, due to the policy change on fuel poor to move the review from 2014 to a point at any time in the RIIO-GD1 period we have an alternative fuel poor revenue driver that would assist in managing fuel poor volumes and we shared this with Ofgem prior to the Initial Proposals.

### **Enhanced physical site security**

- 8.27 We support the need for the enhanced physical site security mechanism and note that Ofgem have removed costs from our base allowances to be assessed as part of the uncertainty mechanism.
- 8.28 As costs associated with enhanced physical site security have been moved to the uncertainty mechanism we believe there is a clear need to agree a framework for the assessment of costs.
- 8.29 Works are driven by the requirements of the Centre for the Protection of National Infrastructure and there are defined Value For Money audits (VFM1 and VFM2) to assess the cost impacts for works undertaken. VFM1 provides an initial assessment prior to the works (based on detailed design works and stipulated requirements) and the VFM2 applies post works completion to true-up additions or changes required by CPNI during the investment to ensure the spend represents Value For Money. We believe the outcome of these Value For Money audits are a suitable independent assessment of efficiency and would avoid regulatory burden in assessment of costs.
- 8.30 We agree with the proposed reopener windows and, for clarity, we believe sites that have achieved VFM1 sign off at a reopener window should be used as part of the Relevant Cost for assessment as the likely cost to exceed 1 per cent of average annual base revenues along with costs assessed for any sites which have passed VFM2.
- 8.31 At a subsequent reopener window the outcome of VFM2 audit for sites funded at VFM1 status would be used to true up actual costs incurred.
- 8.32 Using this principle NGGD has two sites that have achieved VFM1 status during GDPCR1 prior to August 2012. It would be appropriate to include funding for these sites at the start of the RIIO-GD1 price control period and true up at the first reopener in April 2016 when the sites will have received VFM2 status. The value per network would be as follows:

***Connection charging boundary***

- 8.33 We support the need for an uncertainty mechanism in this area. The re-opener mechanism proposed should allow a baseline to be set for both capital and operational costs associated with connection of distributed gas sources. We would support the development of an ongoing revenue driver once these costs have been established in the first re-opener window.
- 8.34 The commercial and regulatory framework for connections, such as biomethane entry connections, has moved on substantially from our November 2011 Business Plan. It is likely that costs for these sites will be limited to the ongoing maintenance of offtake equipment in a similar way to NGGD maintenance of other offtakes on our network. This element is likely to fit with the revenue driver approach and we would suggest, where robust costs can be established for offtakes that would suit a revenue driver approach, it would be sensible to introduce a revenue driver regardless of whether networks have exceeded 1% of allowed revenues on a network-by-network basis.

***Fuel poor network extension scheme***

- 8.35 We have raised concern regarding a review of the fuel poor scheme that can be undertaken at anytime during the price control in response to Initial Proposals Supporting Document - Outputs, Incentives and Innovation Chapter 4, Question 1 and highlight the issue below.
- 8.36 To achieve the benefits of gas for fuel poor customers requires funding from many other parties such as housing trusts and local authorities to funding in house heating. Some of our schemes delivered to-date have taken up to two years from initial concept to connection. We believe an open ended review of the scheme could significantly discourage other funding as gas transporters will not be able to guarantee contribution to the connections through our fuel poor allowances with the possibility of funding being removed.
- 8.37 It should be recognised that this indecision over the scheme could have implications in delivering this output commitment. We have seen evidence of similar uncertainty such as the government decision to propose changes to allowances for Solar power electricity connections, which has had a knock on effect to the market. We would recommend that the review is either removed from the proposals or undertaken by a set point in time early in the RIIO-GD1 period to minimise the impact of any uncertainty.
- 8.38 In light of the above, we have developed an alternative fuel poor uncertainty approach and provided this in Appendix 5 of this response.



***Streetworks Uncertainty***

- 8.39 In our April Business Plan, we proposed the introduction of a clear up front framework to assess the impact of streetworks driven specifically from permit schemes. Ofgem have not discussed this within the Initial Proposals. We intend to discuss with Ofgem implementing our proposal so that, as and when new permit schemes are implemented across England, we will be able to give clear indications to customers on the impact permit scheme costs will have to allowed revenues at the defined reopener windows.
- 8.40 Given that there is a substantial body of evidence on the additional costs incurred in operating permit schemes from the GDPCR1 Income Adjusting Events, we see no reason why an upfront framework to the assessment of costs cannot be agreed prior to RIIO-GD1.

## **Appendices – Finance and Uncertainty**

- 1. Review of relative risk
- 2. Financeability
- 3. Cost of debt
- 4. Oxera report
- 5. Fuel poor uncertainty mechanism proposal

## Appendix 1 - Review of Relative Risk Analysis

### Introduction

- A.1 The Initial Proposals document compares the relative risk of RIIO-GD1 to GDPCR1, RIIO-T1 and DPCR5 by looking at the key factors impacting cash-flow risk for each of those controls. This is performed in more detail for scale of investment (capex/RAV), incentive rate and length of control and at a very high level for other risk factors. The relative risk across the controls is summarised in table 3.3 of the Initial Proposals. We review all of the risk factors below and reproduce our own view of the concluding table.

### Scale of investment

- A.2 Ofgem rightly point out in the Initial Proposals (para 3.13) that, *“The structure of the RIIO price controls, particularly for transmission, allows for additional investment to be funded if a sufficient needs case is identified during the price control period. As such these allowances would typically expose the company to less risk”*. However, Ofgem’s analysis in table 3.1 plots capex/RAV including all investment, while volume driver capex and Strategic Wider Works (SWW) are separately identified, they are still included. Such spend should not be included in the review as, for SWW, allowances for this work will be awarded closer to the point of execution and also it is not clear if the work will be performed by the company in question, or at all. Similarly volume driver capex is low risk as costs should be fully reimbursed if the work is performed efficiently.
- A.3 In addition, the capex/RAV for GDPCR1 (9%) appears to have been calculated based on actual levels of spend which will include over / under-performance, uncertainty mechanism spend etc. The relevant comparison would be to the level of spend assumed in the allowances at the outset of GDPCR1, when we calculate capex / RAV on this basis, the correct figure for our networks for GDPCR1 is 8%. Ignoring SWW, and correcting the GDPCR1 spend, the analysis is as follows:

Figure A1.1 – Adjusted Capex / RAV range

%	SHETL	SPTL	NGET	NGGT	GDPCR1	NGGD
Capex/RAV	32	15	13	8	9	7
Exclude SWW	9	12	11	8	9	7
GDPCR1 based on allowances	9	12	11	8	8	7

- A.4 While the GDNs do have a lower capex/RAV than in GDPCR1 and in comparison to the other controls, the differences are minor.

### Incentive rate

- A.5 The Initial Proposals (para 3.19) states *“we are proposing to set the incentive rate in RIIO-GD1 on a post tax basis, but as most GDNs did not pay tax in GDPCR1 this change does not have a material impact on the relative position”*. However, the tax paid in GDPCR1 is not relevant, if GDNs pay tax in RIIO-GD1 (as is forecast), the post-tax methodology will

increase risk as a greater share of gains or losses are for the GDN's account. If no tax is paid in RIIO-GD1, then the level of losses carried forward will give a greater impact compared to the pre-tax approach. So a post tax rate increases risk in all events.

- A.6 We perform the relative analysis below correctly comparing the pre-tax rates in all cases and using a corporation tax rate of 22%:

Figure A2.1 – Comparison of incentive rates adjusted for tax effects

DPCR5= 45-51%	East	London	North West	West Midlands
Effective rate in GDPCR1	62.5%	58.8%	61.7%	62.3%
Effective rate in RIIO-GD1	80.3%	78.6%	80.8%	81.4%

- A.7 As would be expected the sharing factors have increased dramatically with GDNs now taking c.80% of pre-tax overspend and underspend. The sharing factors are also significantly higher than those in DPCR5.
- A.8 In addition the c80% sharing rates above apply to all spend including the more risky capex / repex categories. Capex and repex were subject to only 36% incentive rate in GDPCR1. Most of the potential exogenous risks facing NGGD from 2013/14 are capex / repex, and there will be more than twice as much risk from sharing factors on these items. So the risk-weighted rate (focusing more on repex and capex) has increased by more than the table above suggests. This represents a very significant increase in cash volatility and risk.

### Length of price control

- A.9 The FTI report included with the Initial Proposals document concludes that *“The risk has increased due to the forecasting risk of expenditures that are further away and the potential for forecasting errors to persist over a longer period. This will be partially offset by the introduction of annual updating of revenue allowances for uncertainty mechanisms and efficiency incentives. There will be a net increase in risk because the efficiency incentives do not fully protect network companies from the effect of any misestimates of costs”*<sup>10</sup>
- A.10 However, Ofgem appear to overlook this and state *“we consider that the move to eight-year price controls period has a neutral impact on cash flow risk”*. This appears to be on the basis that uncertainty mechanisms and a more regular annual updating for variance against allowances will offset the forecasting risk. However, uncertainty mechanisms and the annual updating of revenue adjustments appear as a separate line on the risk-matrix, and so would be double counted if also offset against the increased length of control. Also the annual updating will only partially offset the risk of the longer control period (as concluded by FTI).

<sup>10</sup> Cost of capital study for the RIIO-T1 and GD1 price controls 24 July 2012, paragraph 6.72 (1)

- A.11 In addition, Oxera review the impact of a longer price control in their September 2012 report for the ENA (Appendix 4). They conclude that:

*“A longer price control exposes energy networks to increased variance of costs relative to allowances, which increases risk. This implication would seem consistent with the intention of RIIO to provide stronger efficiency incentives.*

- *Uncertainty mechanisms are unlikely to be sufficient to mitigate fully the exposure to:*
  - *Increased variance of costs relative to allowances. In fact, eliminating the increase in*
  - *Risk could be inconsistent with the intention of RIIO to strengthen incentives.*
- *A longer price control reduces regulatory risk insofar as it provides greater certainty*
  - *Around the level of the allowance for the regulated return. However, the framework*
  - *Linking regulatory risk and the cost of capital is not well-defined compared to the link between exposure to cost over- or under-spends and the cost of capital. Therefore, it is difficult to demonstrate that any reduction in risk from having fewer price controls will offset the increase in risk due to increased dispersion of outcomes around the regulated allowance.”*

- A.12 We therefore remain convinced that the longer control period does represent a significant increase in risk for RIIO-GD1 vs. GDPCR1 and DPCR5.

### **Complexity of investment**

- A.13 We agree with Ofgem’s statement that *“Repex is the main driver of investment”*, however we do not agree that the *“RIIO-GD1 plan is broadly a continuation of the GDPCR1 investment”*. The new RIIO approach to repex (risk-focused and heavily augmented by cost-benefit analysis) will, by design, change the selection and complexity of repex work. The new approach will remove some of the benefits of large-scale tier two and three projects, a piecemeal approach will make projects more complex and less suited to existing working practices.

### **Repex policy**

- A.14 In GDPCR1, under the HSE enforcement notice, all iron mains within 30m of a building are being replaced. This provided a very simple and low risk process for selection of iron mains required to be replaced. The RIIO approach requires a more advanced selection approach dependent on pipe diameter, risk-removed and cost benefit analysis. This increases the complexity of repex planning compared to GDPCR1.

### **Totex approach**

- A.15 Under RIIO, available choices between spending on capex or repex (replace) vs. spend on opex (repair) will no longer be economically affected by regulatory treatment. However, the GDNs always had the obligation to spend in the most efficient manner possible and so the regulatory environment was never a key determinant in such decisions. In addition, the scope for choices between capex (replace) and opex (repair / maintain) is narrow in

the context of total budgets, as most replacement decisions are driven by statutory requirements or obsolescence. We conclude that this is not a determinant of relative risk.

### **Focus on outputs**

- A.16 A shift to an outputs focused approach will tend to increase risk. The fact that additional output requirements are now imposed, and that these must be met, utilising the fixed allowances provided will impose additional risk on the GDNs.

### **Uncertainty mechanisms**

- A.17 We agree with Ofgem's assessment that there are more uncertainty mechanisms in operation during RIIO-GD1. This will reduce risk vs. GDPCR1.

### **Incentives**

- A.18 We agree with Ofgem's assessment that additional incentives and the removal of caps / limits from incentives will tend to increase risk during RIIO-GD1 compared to GDPCR1.

### **Pension costs**

- A.19 We agree with Ofgem's assessment, the incremental deficit and ongoing pension costs are now subject to the totex incentive rate and so risk is increased.

### **Cost of debt approach**

- A.20 We commissioned Oxera to model scenarios for the cost of debt index based on our April 2012 Business Plan for our networks. The results of this scenario were that, for all four networks, debt indexation leads to a higher cost of debt risk compared to a fixed allowance. This was due to the very low amounts of new debt expected to be raised during RIIO-GD1 given low refinancing and relatively low RAV growth profiles forecast for the networks. The report concluded that at least 30 basis points should be added to the cost of debt to reflect the historic margin.

### **Timing of Revenue adjustments**

- A.21 We agree that more regular adjustments for efficiency incentive and uncertainty mechanisms should reduce cash-flow risk. However, we note from the FTI report that this risk reduction is not as great as the additional risk caused by the longer control period.

### **Stranding risk**

- A.22 Electricity consumption is set to increase under almost all scenarios, meanwhile domestic gas consumption seems ever more likely to decrease in the mid to long term future. RIIO-GD1 faces more risk of stranded RAB than any of the other controls and more risk than GDPCR1.

### **Notional gearing**

- A.23 Ofgem's risk analysis does not include notional gearing. While gearing does not affect pre-financing cashflows, it will impact on risk to equity, as higher gearing will increase the

volatility of potential equity returns. We have therefore included notional gearing as impacting on equity risk within the risk table.

#### **Ex ante nature of investment**

- A.24 The Ofgem risk table looks at the scale of investment but not at the nature of the funding for that investment. Ex-ante allowances are more risky than revenue drivers and other mechanisms which determine the level of funding immediately prior to the time of the investment. In this risk category we see the GDNs as having higher risk than electricity transmission as a far greater percentage of the forecast spend takes place under ex-ante allowances.

#### **Duration of cash flows**

- A.25 The sooner a company is reimbursed for costs and returns, the lower the risk of non-reimbursement. NGGT has the longest cash flow duration for investment (45-years). The GDNs also face a 45-year recovery period, but this is mitigated to a large extent by front-loaded depreciation. However, the GDNs still face more risk in this respect than DPCR5 (in which existing assets have a 20-year asset life).

#### **Conclusion**

- A.26 We conclude that the relative-risk assessment is a high-level qualitative check on the work which we performed as part of our April plan in assessing the level of risk and resultant cost of equity for RIIO-GD1. However, when we review in detail the constituent elements of the relative risk assessment, we conclude that the risk facing the GDNs within RIIO-GD1 is higher than under GDPCR1 and DPCR5. This does not therefore alter our position on relative risk or cost of equity, justified by the theoretical analysis, regulatory precedent and cash-flow risk modelling, put forward in our April Business Plan.

<b>Table 3.3 Ofgem's Summary of relative risk assessment for RIIO-GD1 The GDNs' risk relative to:</b>				
	<b>Electricity transmission</b>	<b>NGGT</b>	<b>GDPCR1</b>	<b>DPCR5</b>
<b>Scale of investment</b>	See detail above. <b>Lower</b>	See detail above. <b>Similar</b>	See detail above. <b>Lower</b>	See detail above. <b>Lower</b>
<b>Complexity of investment</b>	GDNs' investment plan consists of predominantly small and medium projects. <b>Lower</b>	GDNs' investment plan consists of predominantly small and medium projects. <b>Lower</b>	Repex is the main driver of investment, so RIIO-GD1 plan is broadly a continuation of the GDPCR1 investment. <b>Similar</b>	Technical issues broadly comparable. <b>Similar</b>
<b>Repex policy</b>	Not applicable.	Not applicable.	Risk-based approach more consistent with GDNs' asset management approach. <b>Lower</b>	Not applicable.
<b>Incentive rate</b>	TOs' incentive rate ranges from 48-50%. <b>Higher</b>	NGGT's incentive rate is 44%. <b>Higher</b>	See detail above. <b>Higher</b>	DNOs' incentive rate ranges from 45-51%. <b>Higher</b>
<b>Totex approach</b>	Same approach used. <b>Similar</b>	Same approach used. <b>Similar</b>	Under totex approach, expenditure choice not driven by regulatory treatment. <b>Lower</b>	Same approach used, but broader definition of totex. <b>Lower</b>
<b>Focus on outputs</b>	Same approach used. <b>Similar</b>	Same approach used. <b>Similar</b>	Delivery options not driven by regulatory treatment. <b>Lower</b>	Same approach used. <b>Similar</b>
<b>Uncertainty mechanisms</b>	Not directly comparable	Not directly comparable	Additional mechanisms introduced in RIIO-GD1. <b>Lower</b>	Not directly comparable
<b>Incentives</b>	Overall strength of incentives comparable. <b>Similar</b>	Overall strength of incentives comparable. <b>Similar</b>	Additional incentives introduced in RIIO-GD1. <b>Higher</b>	Fewer incentive in DPCR5, but wider RoRE range. <b>Lower</b>
<b>Pension costs</b>	Same approach used. <b>Similar</b>	Same approach used. <b>Similar</b>	Incremental deficit subject to totex incentive rate. <b>Higher</b>	Same approach used. <b>Similar</b>
<b>Cost of debt approach</b>	Same approach used. <b>Similar</b>	Same approach used. <b>Similar</b>	Annual update provides better match to notional company cost. <b>Lower</b>	Annual update provides better match to notional company cost. <b>Lower</b>
<b>Length of price control</b>	Eight-year price controls. <b>Similar</b>	Eight-year price controls. <b>Similar</b>	See detail above. <b>Similar</b>	See detail above. <b>Similar</b>
<b>Timing of revenue adjustments</b>	Same approach used. <b>Similar</b>	Same approach used. <b>Similar</b>	Changes reflected in allowances more quickly via annual iteration process. <b>Lower</b>	Changes reflected in allowances more quickly via annual iteration process. <b>Lower</b>
<b>Overall</b>	<b>Lower</b>	<b>Slightly lower</b>	<b>Lower</b>	<b>Similar or slightly lower</b>

Figure A1.3 (above) -  
Ofgem's summary of relative risk assessment for NGGD as per Initial Proposals



Figure A1.4 - Revised summary of relative risk assessment for NGGD

<b>Table 3.3 Summary of relative risk assessment for RIIO-GD1 The GDNs' risk relative to:</b>				
	<b>Electricity transmission</b>	<b>NGGT</b>	<b>GDPCR1</b>	<b>DPCR5</b>
<b>Scale of investment</b>	Similar to SHETL but lower than others. <b>Lower but London is higher than other GDNs</b>	See detail above. <b>Lower But London is Similar</b>	See detail above. <b>Lower But London only slightly lower.</b>	See detail above. <b>Lower</b>
<b>Complexity of investment</b>	GDNs' investment plan consists of predominantly small and medium projects. <b>Lower, but London is Similar</b>	GDNs' investment plan consists of predominantly small and medium projects. <b>Lower but London is Similar</b>	Repex is the main driver of investment, new selection approach increases piece-meal approach. <b>Higher</b>	Technical issues broadly comparable. <b>Similar</b>
<b>Ex-ante nature of investment</b>	See Above <b>Higher than fast-track, similar to NGET</b>	See Above <b>Similar</b>	See Above <b>Higher</b>	See Above <b>Similar</b>
<b>Repex policy</b>	Not applicable.	Not applicable.	See above <b>Higher</b>	Not applicable.
<b>Incentive rate</b>	TOs' incentive rate ranges from 48-50%. <b>Significantly Higher</b>	NGGT's incentive rate is 44%. <b>Significantly Higher</b>	See detail above. <b>Significantly Higher</b>	DNOs' incentive rate ranges from 45-51%. <b>Significantly Higher</b>
<b>Focus on outputs</b>	Same approach used. <b>Similar</b>	Same approach used. <b>Similar</b>	Compulsory delivery regardless of cost, no caps. <b>Higher</b>	Same approach used. <b>Similar</b>
<b>Uncertainty mechanisms</b>	Not directly comparable	Not directly comparable	Additional mechanisms introduced in RIIO-GD1. <b>Lower</b>	Not directly comparable
<b>Incentives</b>	Overall strength of incentives comparable. <b>Similar</b>	Overall strength of incentives comparable. <b>Similar</b>	Additional incentives introduced in RIIO-GD1. <b>Higher</b>	See Above. <b>Lower</b>
<b>Pension costs</b>	Same approach used. <b>Similar</b>	NGGT at more risk on regulated proportion of deficit <b>Lower</b>	Incremental deficit subject to totex incentive rate. <b>Higher</b>	Same approach used. <b>Similar</b>
<b>Length of price control</b>	Eight-year price controls. <b>Similar</b>	Eight-year price controls. <b>Similar</b>	See detail above. <b>Higher</b>	See detail above. DPCR5 is 5 years <b>Higher</b>
<b>Timing of revenue adjustments</b>	Same approach used. <b>Similar</b>	Same approach used. <b>Similar</b>	Changes reflected in allowances more quickly via annual iteration process. <b>Lower</b>	Changes reflected in allowances more quickly via annual iteration process. <b>Lower</b>
<b>Duration of cash flow</b>	20 years transition to 45 over 8/16 years <b>Lower</b>	45 years <b>Lower</b>	45 years plus front-loaded depreciation <b>Similar</b>	20 years <b>Higher</b>
<b>Stranding risk</b>	See above <b>Higher</b>	See above <b>Higher</b>	See above <b>Higher</b>	See above <b>Higher</b>
<b>System operator risk</b>	<b>Lower</b>	<b>Lower</b>	Not applicable.	Not applicable.
<b>Overall- Asset risk</b>	<b>Lower</b>	<b>Lower</b>	<b>Higher</b>	<b>Higher</b>
<b>Cost of debt approach</b>	Same approach used. <b>Similar</b>	Same approach used. <b>Similar</b>	Oxera modelling proves that risk is increased for NGGD. <b>Higher</b>	Oxera modelling proves that risk is increased for NGGD <b>Higher</b>
<b>Notional Gearing</b>	<b>Higher</b>	<b>Higher</b>	<b>Higher</b>	<b>Similar</b>
<b>Overall – Equity Risk</b>	<b>Lower</b>	<b>Lower</b>	<b>Higher</b>	<b>Higher</b>

Blue typeface indicates amendments vs. Ofgem assessment for non-London GDNs, Red typeface indicates amendments vs. Ofgem assessment for London GDN

## Appendix 2 - Financeability

- A.27 The RIIO-GD1 financeability assessment is key in ensuring that Networks have the ability to efficiently fund investment in the networks to a level which ensures consumers receive the services they expect. Ofgem acknowledges this in the October 2010 RIIO Final Decision Document:
- A.28 *“The Authority must also have regard to the need to secure that licence holders are able to finance the activities which are the subject of obligations on them. This means that efficient network companies should be able to secure financing in a timely way and at a reasonable cost in order to facilitate the delivery of their regulatory obligations. This is also in the interests of consumers.”*
- A.29 We explain in our answer above that our concerns about Ofgem’s deletion of the credit metric calculations used to assess financeability. Nevertheless, we have sought clarification from Ofgem on the methodology they have adopted to calculate the key metrics, and we have reproduced the Initial Proposals metrics results which we believe they have assessed. We set out below our analysis of those metrics, and the corrections and stress-testing which are necessary in order to assess the financeability of the Initial Proposals.

### **Adjustments to reflect the rating agency methodology**

- A.30 We have corrected for two errors in the way that metrics are calculated.
- A.31 Firstly, Ofgem have excluded that part of the interest cost which relates to inflation accretions on index linked debt for the FFO/Interest and FFO/debt metrics. Standard and Poor’s (S&P) have stated that they include all interest (both cash interest and accretions) within their calculation of FFO-based metrics:
- “Without this adjustment, we believe that those utilities that issue inflation-linked debt will report relatively lower cash interest costs, and correspondingly higher unadjusted FFO because a portion of their cash interest cost is deferred until maturity, and even then, is shown as debt repayment rather than interest. We therefore seek to reflect the full economic cost of inflation-linked debt in the period in which it is incurred by reducing FFO by the entire interest expense reported in the profit and loss statement, rather than only cash interest as reported in the cash flow statement.”<sup>11</sup>*
- A.32 We therefore add interest relating to inflation accretions back into the interest costs in our FFO-based metrics.
- A.33 Secondly, Ofgem have prepared two sets of financial statements, one using regulatory costs and one using a hybrid of regulatory and statutory accounting costs. Ofgem have focused on the regulatory view when calculating credit metrics. While this moves closer to the rating-agencies methodology in some respects, e.g. it correctly deducts ‘fast money’ from the PMICR calculation. We do not think that this entirely reflects the method adopted by the agencies as they would only make the adjustment to reflect repex fast money and other material differences between ‘fast money’ and operating costs. We have made the

<sup>11</sup> New methodology for Inflation Linked debt Has No Immediate Effect on Ratings On UK Regulated Utilities – April 2009

relevant adjustments to achieve calculations which we believe are in line with the agencies.

### **Adjustments to the assumed costs**

A.34 We also make two adjustments to the level of costs:

- From clarification sought, we understand that Ofgem have calculated credit metrics assuming that the level of spend is equivalent to Ofgem's assessment of efficient spend. However this is a level of costs which is below any of those forecast by the GDNs and therefore below the allowances proposed. This approach is unsound; allowances are set above the efficient benchmark to allow for statistical errors in the benchmarking process. There appears no reason for recognising the possibility of a statistical error when setting actual allowances, while ignoring the same possibility in the financeability assessment. The financeability assessment thereby assumes a level of out-performance against allowances.
- The Initial Proposals assessment uses RPI commensurate with levels in the Price Control financial Model. We stated in our April Plan that we believe this is a low forecast of RPI, as independent forecasts (detailed in our April plan) suggest that the average level of RPI for the RIIO-GD1 period will be at least 3%. Ofgem maintain that RPI is, in effect, a pass-through item, as it is adjusted within income, however it affects notional interest costs to a greater degree<sup>12</sup> than income, and for this reason higher levels of RPI will worsen credit metrics. We have adjusted the RPI assumption to equal our base case forecast of 3%.

### **Sensitivity analysis**

A.35 The Initial Proposals states that Ofgem's financeability assessment has been stress-tested for potential ranges of totex performance, index linked debt volumes and for the outcome of the cost of debt index. We have not seen the results of this analysis but agree that these are valuable sensitivities to test. However, we also conclude that scenario analysis is required for RPI levels and the expected spend under uncertainty mechanisms. Both of these items have a high impact on credit metrics and are either outside or partially outside of the control of the GDNs. We include our analysis below.

### **Conclusions**

A.36 As we have stated in both our November and April plan, we consider that the A/BBB border is the correct target for a financeable outcome. This is the level which would achieve a rating consistent with the cost of debt index. We have adjusted the published targets to take account of the strength of the regulatory environment, adjusting the FFO/Interest target from 3.5 to 3.0. We have not included any incentive income in our analysis (reflecting a central outcome) but we have included the IQI fixed income proposed in the Initial Proposals.

A.37 From the charts below it is clear that our estimate of Ofgem's assessment would leave the networks in a low BBB position for the early years of RIIO-GD1 only reaching the BBB/A

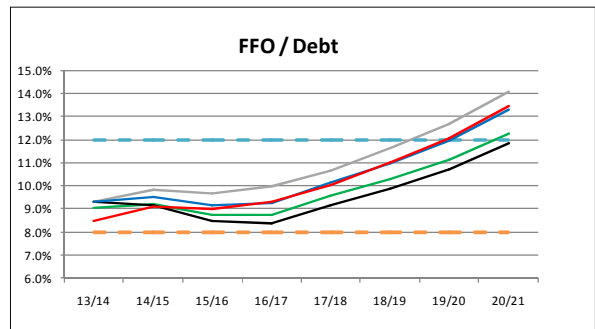
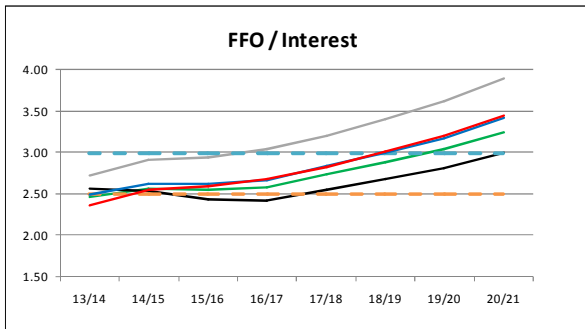
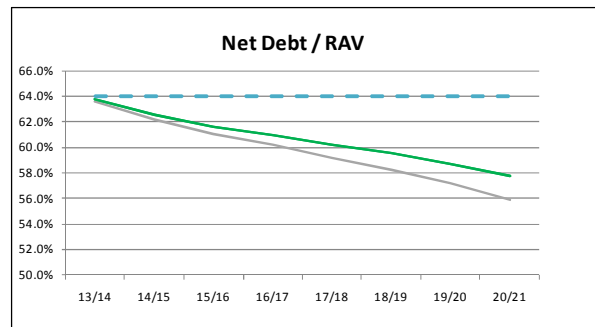
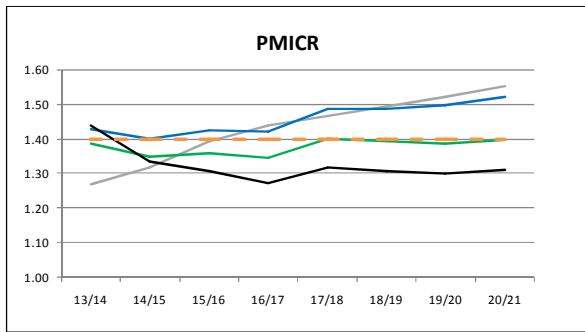
<sup>12</sup> E.g. a 1% movement in RPI will affect revenues by less than 1%, but could increase interest from, say c6% to c7% (a percentage increase of c17%)

border in the middle or later years of the control. We do not consider this to be a financeable outcome.

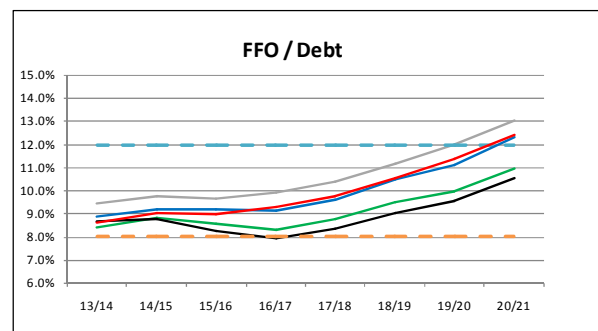
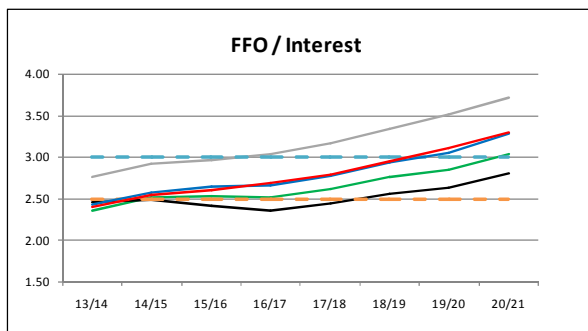
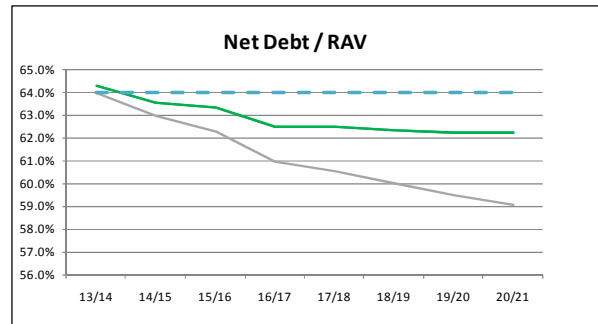
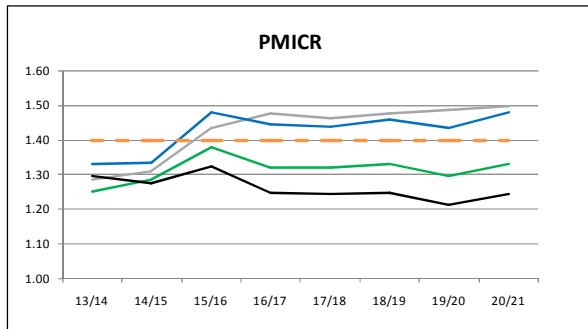
- A.38 More importantly, this situation deteriorates when we make the adjustments for calculation errors, cost estimates and stress testing detailed above. Our base case outcome is reflected by the black lines in the charts below, these show that the overall rating outcome would be at BBB-, or even below for the early years and does not reach the BBB/A target for the entire eight years of RIIO-GD1. We conclude that the finance package, in combination with the proposed IQI is significantly inadequate in meeting the financeability criteria, and is inconsistent with the proposed cost of debt index.
- A.39 We have performed scenario testing on RPI, because this is difficult to forecast and has a material impact on the metrics. We have also reflected the impact of a reasonable expectation of uncertainty mechanism spend for the same reason. We could also have reflected an expectation of totex under and over performance. Given that we challenge the disallowances in the Initial Proposals, this would have more down-side than upside risk, however for the purposes of this analysis, we assume that it is possible to deliver our outputs within the spend allowed. Our stress testing shows that, while RPI clearly has the ability to materially improve or reduce the metrics, the expected uncertainty mechanism spend will tend to worsen metrics in the early years of RIIO-GD1, and improve metrics in the later years. This is clearly concerning as it demonstrates that uncertainty mechanisms will exacerbate the, already dangerously low, ratings in the early years of the base case.
- A.40 In addition, it should be noted that the Debt/RAV position reduces throughout the RIIO-GD1 period and is below 65% for all of the GDNs. This effectively means that the financeability assessment is aided by the fact that shareholder cash is being retained and is holding the notional gearing levels below that being financed through the allowed WACC. This in turn suggests that the financing package is not appropriate for the level of allowances proposed.
- A.41 In summary, we conclude that the proposed finance package does not achieve a financeable position and we propose the adoption of the package which we put forward in our April 2012 Business Plan.

Figures A2. 1 - Adjustments to correct our estimate of the Initial Proposals credit metrics.

**East of England**

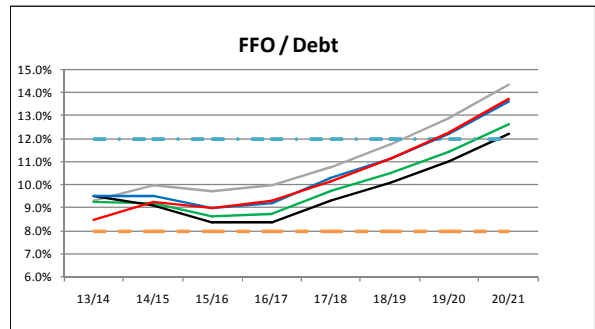
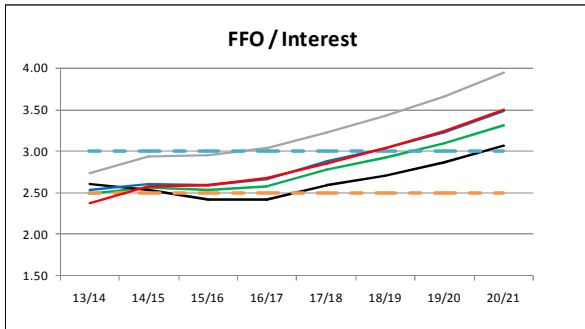
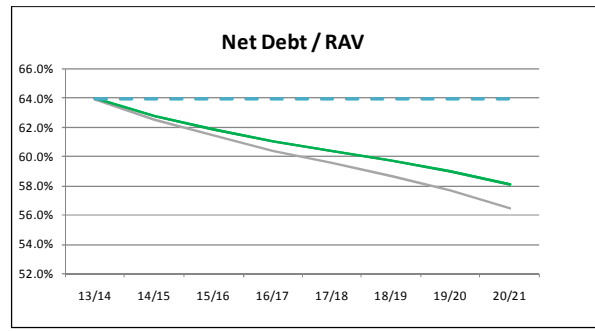
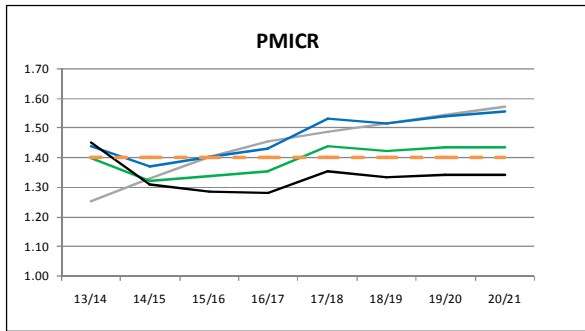


**London**

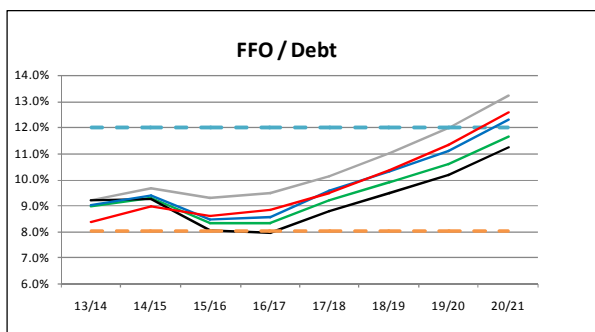
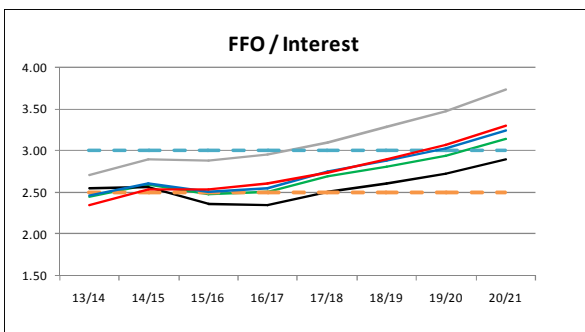
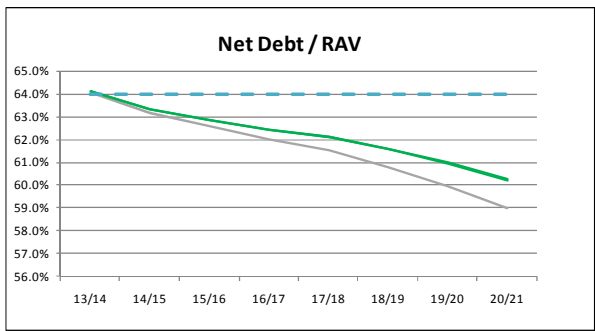
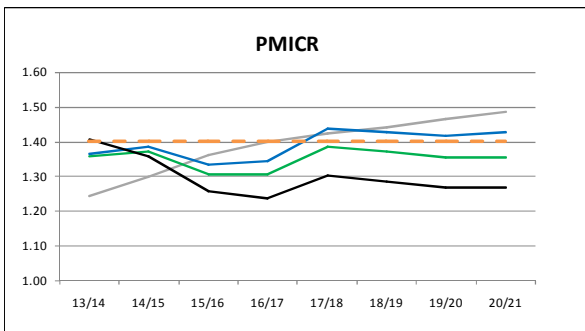


Key			
	Initial proposals – our estimate of Ofgem’s view		RPI adjusted to NG forecast (3%)
	Include interest on inflation accretions (FFO metrics only)		Target (BBB/A Border)
	Adjust for regulatory treatment not reflected by agencies		BBB floor
	Costs set to allowances – no outperformance assumed		

**North West**



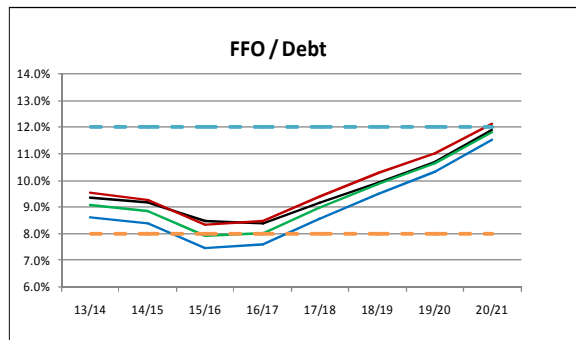
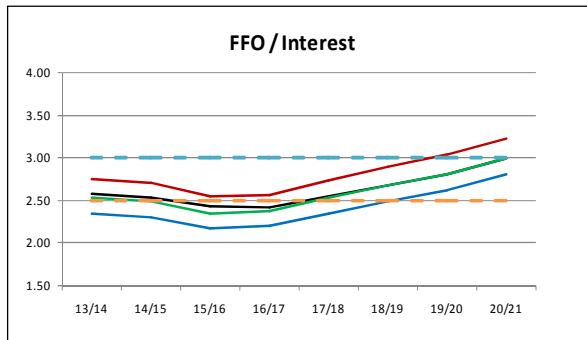
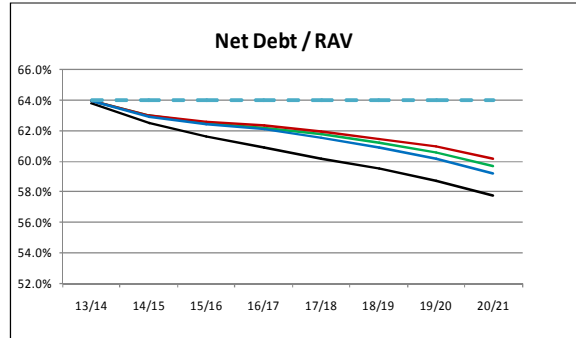
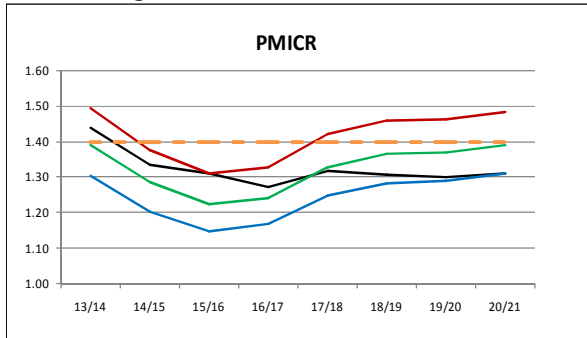
**West Midlands**



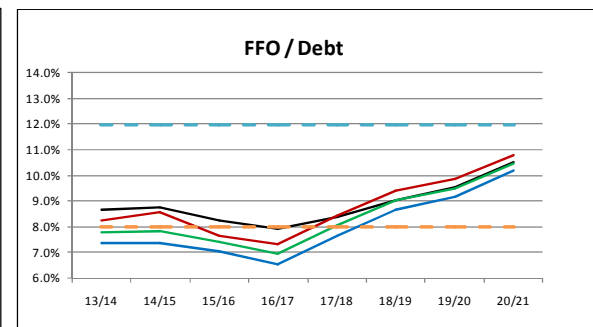
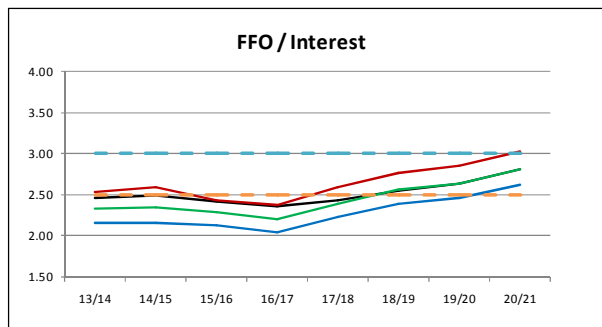
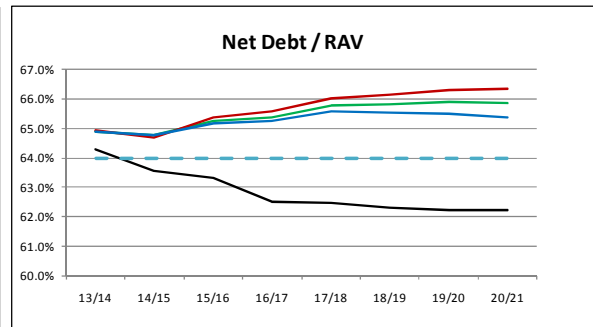
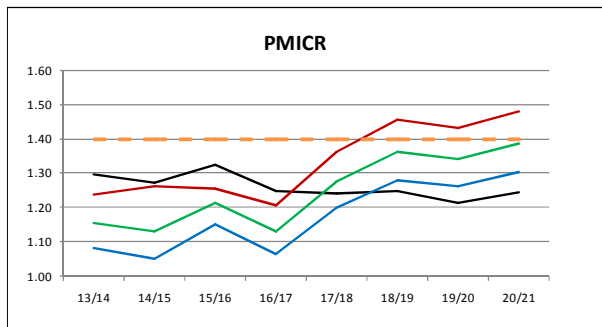
Key			
	Initial proposals – our estimate of Ofgem’s view		RPI adjusted to NG forecast (3%)
	Include interest on inflation accretions (FFO metrics only)		Target (BBB/A Border)
	Adjust for regulatory treatment not reflected by agencies		BBB floor
	Costs set to allowances – no outperformance assumed		

Figures A2.2 - Stress-testing of the adjusted credit metrics.

**East of England**



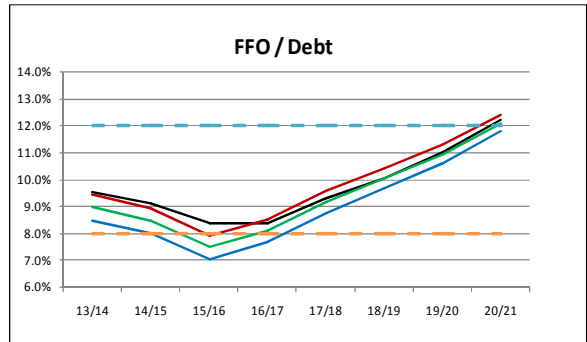
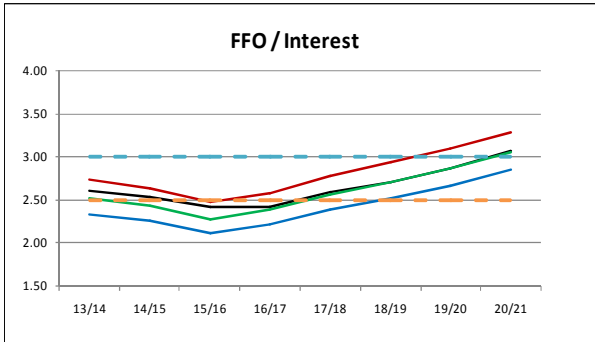
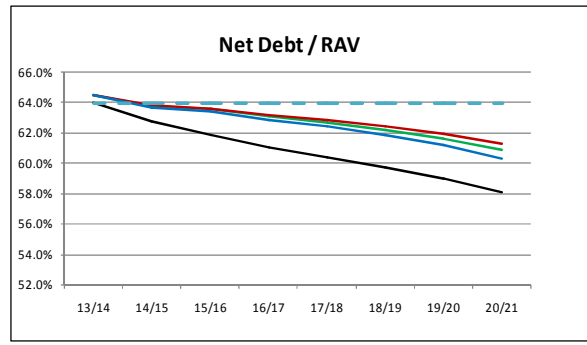
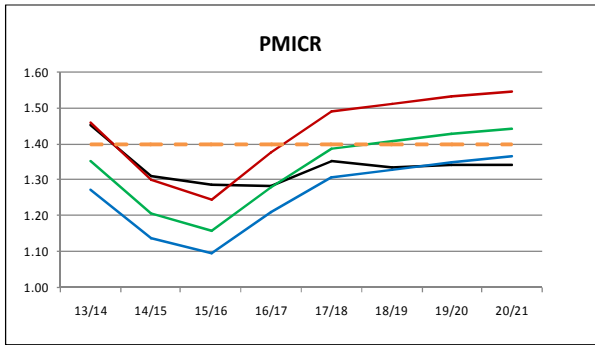
**London**



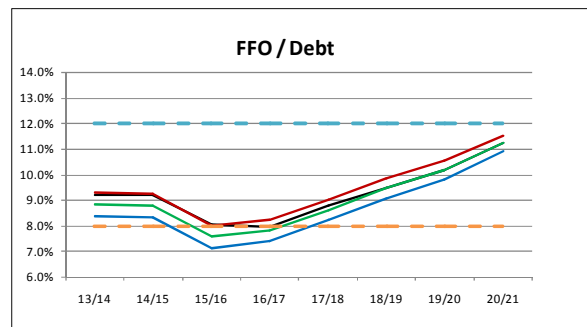
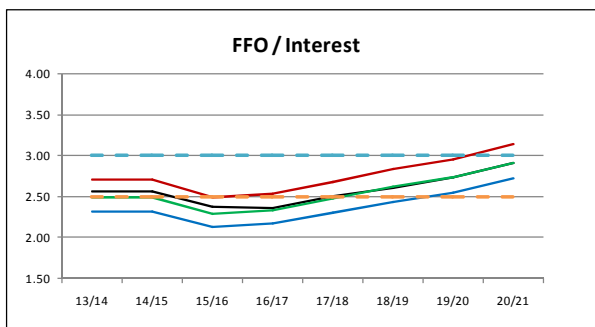
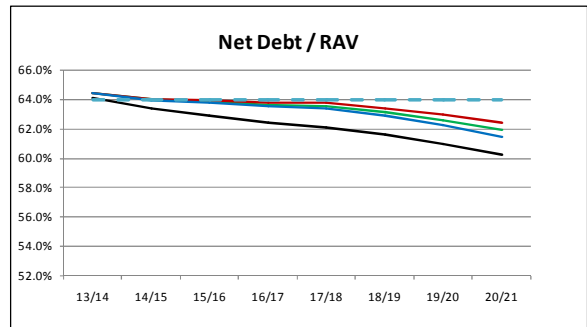
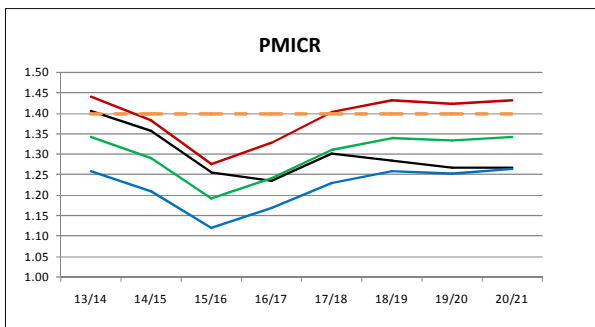
**Key**

	Initial proposals – NG's view
	Initial proposal plus central view of Uncertainty Mechanisms (UMs)
	Including UMs and RPI at 3.5%
	Including UMs and RPI at 2.5%

**North West**



**West Midlands**



Key	
	Initial proposals – NG's view
	Initial proposal plus central view of Uncertainty Mechanisms (UMs)
	Including UMs and RPI at 3.5%
	Including UMs and RPI at 2.5%



## Appendix 3 - Cost of Debt

### Unfunded risk

- A.42 In our November 2011 and April 2012 Business Plans, we showed that although the introduction of the cost of debt index is designed to reduce networks' exposure to changes in the cost of debt and the risk that the allowed cost of debt will be too low (the "cost of debt matching risk") in the case of our distribution networks, this risk is higher than under a fixed allowance.
- A.43 In previous price controls (including TPCR4), this risk was not allowed for in setting the cost of equity but by Ofgem adding c.30 bps "headroom" to the estimated cost of debt (informed or based on a trailing index average)<sup>13</sup>. Clearly, with at least the same matching risk, the headroom will still be required, but under RIIO this headroom has been removed from the cost of debt altogether.
- A.44 Consequently, in our Business Plan National Grid proposed that a corresponding allowance should be added to the cost of equity, to compensate the networks for the "cost of debt matching risk" that was not otherwise being provided for.
- A.45 In the Initial Proposals, Ofgem does not directly address this approach, but instead merely notes that the risk is reduced (but not removed) by the debt indexation mechanism and treats the cost of debt matching risk as one of the risks which is considered in Tables 3.3 and 3.4 in comparing the risks under GDPCR1 to the risk under RIIO-GD1. The work performed by Oxera concludes that business risk is not reduced, as shown in the Tables, and the removal of the previous allowance for risk through the cost of debt headroom has been overlooked. As a result, the assessment by Ofgem is incomplete.
- A.46 In the FTI Consulting report, the issue is considered more explicitly at Paragraph 8.17 and 8.21 to 8.33. FTI confirm (at Paragraph 8.27) that indexation does not remove all the risk (albeit they fail to recognise that in some circumstances, particularly where the amount of new debt that needs to be raised is low, the risk is actually increased under the index approach).
- A.47 Paragraph 8.28 of the FTI report then suggests that the premise that *"the headroom allowed in previous price controls represented a return for the risk borne by equity holders"* may be wrong, on the grounds that *"Ofgem's decision in the consultation process for the 2013/21 Price Controls was not intended to remove all risk faced by the network companies. Therefore, it is not clear to us [FTI] that this is the correct interpretation of the margin applied."* The argument here seems to be that because some of the risk remains under RIIO-GD1, the headroom in previous price controls cannot have been a compensation for the risk that the cost for debt allowance proved to be too low, which would suppress the equity returns that could be achieved. However, this conclusion lacks logic and is clearly wrong, but in any case the RIIO Strategy Decision was to adopt an

---

<sup>13</sup> At Paragraph 8.9 of the FTI Consulting report, FTI say that Ofgem have informed them that although headroom against the Bloomberg index was 30 basis points, against the iBoxx index historical headroom would only be 20 bps. This is not correct, and in almost all previous controls the headroom against the iBoxx index would have been at least as great as against the Bloomberg index: the iBoxx index was only introduced in 1998, and an average of the iBoxx index from 1998 onwards is actually below a corresponding average of the Bloomberg index until 2003, and only starts to rise slightly above it from 2009 onwards.

approach under which the network companies can propose a financial package in their business plans (including cost of equity, gearing, and uncertainty mechanisms as appropriate and justified), and does not preclude including an allowance in the cost of equity for the residual cost of debt matching risk.

- A.48 Supportive of this latter view, Paragraph 8.29 in the FTI report continues *“According to Ofgem, the headroom allowed above the trailing average index value in previous determinations represented an allowance for changes in the cost of debt after the time of the determination. That is an allowance for the chance that the value of the trailing average index (that was used at the time the price control was set) was not a representative estimate of the cost of debt over the price control period.”* Clearly, this explanation from Ofgem actually confirms the networks’ interpretation of the headroom in previous controls, and thus supports the case that, to the extent that the risk is not eliminated, an allowance needs to be made under RIIO-GD1 for this risk.
- A.49 As noted above, differences between the actual cost of debt and the cost of debt allowance feed through to the equity returns that can be achieved, and so the approach of adding a corresponding margin to the cost of equity to allow for the residual risk, as in our April 2012 Business Plan, is completely appropriate.
- A.50 Finally, at Paragraph 8.33, FTI suggest that (i) provision of headroom and (ii) use of an indexation mechanism are both ways of providing protection against a rising cost of debt, and that *“providing two forms of protection against the same risk would effectively transfer risk from shareholders of network companies to consumers.”* It is on this basis that FTI consider that providing an allowance for headroom in the RIIO-GD1 controls (whether in the cost of debt or the cost of equity) may be duplicative of the protection that an indexed allowance provides against rising interest rates. It is self evident that the logic here is again flawed: such duplication would apply if all risk was removed by the indexation approach (or if the headroom was big enough that, together with the partial protection of indexation, all risk was eliminated), but as the headroom that we have proposed under RIIO-GD1 corresponds the risk that will still remain even after the indexation mechanism has been introduced, there can be no such duplication.
- A.51 In conclusion, therefore, it can be seen that neither the Initial Proposals document nor the supporting FTI Consulting report provides any valid reason why an allowance for the remaining cost of debt matching risk should not be included in the allowed cost of equity, as we proposed our RIIO-GD1 Business Plan.

### **Concerns with the proposed approach**

- A.52 At Paragraphs 3.37 to 3.43 of the Initial Proposals Finance supporting document Ofgem confirm their intention to apply the proposed cost of debt index. Ofgem now propose to make a slight adjustment to the way in which the index is calculated (described in Appendix 2 of the Finance supporting document), and we support this change as it appears to be a small change which is technically and logically correct.
- A.53 This section also sets out Ofgem’s reasons for not making any adjustments to allow for additional debt costs not covered by the index, as well as addressing certain other issues and concerns with the index that have been raised by the network companies.

- A.54 In dismissing these arguments Ofgem have overlooked some important considerations, even where these have been supported by their own consultants, FTI Consulting, and in some cases Ofgem have misunderstood issues and concerns raised by the networks, or have made errors in their analysis, such that they are not properly considered in the discussion.

### **Embedded Debt Costs**

- A.55 At Paragraphs 3.37 to 3.43 of the Initial Proposals Finance supporting document, Ofgem consider the potential divergence between the cost of embedded and new debt costs, and between the proposed cost of debt allowance (the 10 year trailing average of the index) and a network's actual cost of debt.
- A.56 We agree with Ofgem's conclusion at Paragraph 3.43 that no adjustment should be made for embedded costs: this would represent a break with regulatory precedent which should be avoided, and would be inconsistent with the overall basis of price controls under RIIO-GD1, which is to set a price control on a 'notional network' basis.
- A.57 Further, we agree that the potential for actual debt costs, even if efficiently incurred, to exceed the allowance calculated from the trailing average of the index does need to be recognised and taken into account in assessing financeability.
- A.58 However, for consistency with the overall approach to setting the RIIO price controls, as well as with past precedent, this assessment should consider potential variances in debt costs for the notional network (e.g. using assumptions that are consistent with those adopted in setting the WACC), rather than starting from actual network interest costs as described at Paragraph 3.43. (If a network's actual debt costs were higher on an actual rather than notional basis, Ofgem would be unlikely to allow these higher costs in setting allowed revenues: it would therefore be asymmetric 'cherrypicking', in assessing financeability, to include the benefit of lower actual interest costs that have, with the benefit of hindsight, resulted from past financing decisions.)

### **Transaction and other non-Interest Debt Costs**

- A.59 The proposed cost of debt index does not explicitly fund certain unavoidable transaction and other non-interest costs associated with raising debt, including debt issuance fees, new issue premia, bank facility fees, credit rating agency fees, commitment fees, and the costs of carrying cash. Ofgem does not deny that these costs exist, but has claimed that networks are able to outperform the proposed cost of debt index by 30 bps or more, and this margin will be sufficient to fund these additional costs.
- A.60 Ofgem's assumption that networks will be able to outperform the index is based on a comparison of a graph of the spot values of the cost of debt index (average of BBB and A) with the coupon rates on utility bond issues from January 1998 onwards. However, this comparison is subject to certain factors which reduce its relevance: for example, the yield on new issuances exceeds the coupon rate by up to 0.125% (as coupon rates on new issuances are rounded down to the next 1/8 %); where debt is issued at group or plc level this is not relevant to the cost of debt of a licensee (i.e. the notional company); and even for debt issuance by NWOs the gearing of the network companies will often have been

lower than the proposed notional gearing under RIIO such that the comparison to the index is not relevant.

- A.61 Further, where the majority of actual issuances have been at 'A' rating rather than 'BBB', it would be expected that the graph would apparently show an ability to outperform a proposed average index which is calculated from separate A and BBB indices. However, as Ofgem are not designing the RIIO-GD1 to enable the "notional" networks (for which the price control is designed and set) to achieve a comfortable A rating, this apparent outperformance is meaningless as it does not apply to the circumstances of the notional networks under the proposed price control.
- A.62 Even more fundamentally, such a historic comparison of past debt new issuances does not imply that networks will be able to issue debt more cheaply than the index in the future. This is because of the change in the regulatory regime. In the past, networks have shown strong operational performance, and the continuation of such outperformance has been assumed by rating agencies and investors, leading to stronger projected credit metrics and a lower cost of debt than would otherwise have been the case. However, under RIIO the regulatory framework has now been fundamentally reset, for example with increased exposure to delivery of outputs, a new approach to cost of debt and a lower WACC, introduction of the totex approach, and a change to repex capitalisation policy. As a result, neither the agencies nor investors will consider past performance to be a guide to the future, eliminating (or at least reducing) any past ability to issue debt more cheaply than the index.
- A.63 At Paragraph 3.45 of the Initial Proposals supporting document, Ofgem point to certain factors that are innate to network companies which should enable them to raise debt more cheaply than other companies of similar credit ratings. This discussion is misplaced, as it fails to recognise that these characteristics are already taken into account in setting the network companies credit ratings, and so enable the companies to achieve the same credit ratings as companies in other sectors at far higher gearing (for example). Moreover, although these factors may still be present under RIIO, because they continue unchanged they cannot offset the fundamental change noted in the preceding paragraph.
- A.64 In addition, as Oxera have noted in their new report<sup>14</sup>, utility bonds are forming an increasing and very significant share of the overall composition of both the A and BBB iBoxx indices (now forming 60% of the A index and 48% of the BBB index). Consequently any historic ability of networks to outperform the proposed index would inherently be progressively reducing even in the absence of the other factors that have already been described.
- A.65 FTI Consulting note in their report that the apparent outperformance of the cost of debt index by network companies appears to have reduced significantly in 2010 and 2011. They identify market considerations which might have led to this change, and whilst noting that it is uncertain whether these effects will persist, these are merely additional to the effect of the fundamental change in regulatory regime under RIIO, and consequences for investors and agencies outperformance assumptions, which was noted above. Indeed, the

---

<sup>14</sup> "RIIO-T1 and GD1 Initial proposals - Financial Issues", Oxera, September 2012

reduced outperformance of the debt index in 2010 and 2011 may well be associated with the development and announcement of the new RIIO framework.

- A.66 Ofgem recognise this reduced margin between network company bonds and the iBoxx index in 2010 and 2011 at Paragraph 3.46, and suggest that this matter should be kept under review until Final Proposals although *“at present there does not seem to be sufficient evidence to change our approach”*.
- A.67 The FTI Consulting report suggested that because of the uncertainty surrounding the ability in the future of the networks to outperform the cost of debt index - which Ofgem rely on to fund the transaction costs of issuing debt - Ofgem should review the issue at the mid-period review. However, we recognise that this mid-period review is not intended to redesign the price control or adjust the financial package, and so in our April Business Plan (Section J1, Annex5), National Grid proposed a new uncertainty mechanism instead.
- A.68 Under our proposed mechanism, if the differential between the index and utility issues is below 30 bps, the cost of debt index should be increased to restore the differential. In the Initial Proposals for RIIO-T1, Ofgem suggest that this mechanism sought to address the risk of *“efficiently incurred past debt not being fully funded as the value of the cost of debt index declines faster than the companies average cost of debt falls”*, and so dismiss this proposed uncertainty mechanism on the grounds that the *“potential for embedded and new debt costs to diverge is an issue that crops up in every price control review”*.
- A.69 However, this misunderstands the proposed mechanism and the issue it addresses, and so does not address the point. It mistakes the issue addressed through the proposed mechanism - the need to fund transaction and other debt costs should there prove to be reduced margin between utility debt issuances and the index on a spot value basis<sup>15</sup> - with the risks associated with lagging effect in the 10 year trailing average index, which is an issue that needs to be taken into account in assessing financeability.
- A.70 The additional uncertainty mechanism that we have proposed should be therefore be adopted in Final Proposals, given that (i) Ofgem’s financing duty requires Ofgem to fund efficient and unavoidable network costs, (ii) Ofgem rely on a margin of at least 30 bps between utility issues and the index to fund the otherwise unfunded costs of issuing debt, (iii) the reduced margin seen in 2010 and 2011 as noted by FTI Consulting, and (iv) the fact that Ofgem misunderstood the proposed mechanism and so have not provided any reason why it should not be introduced.

### **Inflation Risk Premium**

- A.71 As Ofgem note at Paragraphs 3.47 of the Initial Proposals Finance supporting document, network companies have argued that the *“breakeven inflation”* figures that will be used to deflate the iBoxx index contain an inflation risk premium, and as a result the allowed cost of debt (on a real basis) will be lower than it should be.

---

<sup>15</sup> Given that utility issues do not take place on a continual basis or every day, we would suggest that the potential outperformance of the cost of debt index by utilities could be assessed either (i) by comparing the iBoxx non-financials index with the corresponding iBoxx utilities index, where an adjustment would be made if the differential falls below 30 bps, or (iii) if in each calendar year the average headroom of all utility issues in the year was less than 30 bps, the daily values of the index across that year should increased to restore this 30 bps differential.

- A.72 In the following paragraph 3.48, Ofgem take comfort from *“the fact that, when averaged since the Bank of England began targeting inflation (May 1997), the 10 year break-even inflation figure we [Ofgem] use matches the sum of the Bank’s inflation target (two per cent) and the difference between RPI and CPI inflation. The network companies have not refuted this point of our argument.”* As a result, in the Initial Proposals Ofgem do not propose to make any changes to the index to account for the Inflation Risk Premium.
- A.73 It may be the case that this specific point has not been refuted by the networks, but this merely reflects the fact that the observation that Ofgem rely on is merely coincidence. This irrelevance of the observation is confirmed by FTI Consulting, in their report at Paragraph 11.20, which notes that (i) averaging over slightly different time periods than the specific timeframe Ofgem chose to rely on would give significantly different results, and (ii) market expectations of RPI are in any case likely to differ from the CPI target plus the average difference between CPI and RPI.
- A.74 Moreover, Ofgem are wrong to imply that the Bank of England has had an inflation target of 2% since May 1997. From May 1997 to December 2003, the target was 2.5%, using the RPIX measure of inflation<sup>16</sup>, and during this period RPI was on average less than 0.1% above RPIX (and CPI was on average 1.1% below RPIX). It is the case that from January 2004 the Bank of England’s inflation target has been 2% CPI, but during this time RPI has exceeded CPI by just 0.6% on average.
- A.75 Thus, during both timeframes (May 1997 to 2003 and 2004 onwards) the Bank’s inflation target plus the average difference between the relevant measure (RPIX or CPI) and RPI is around or just under 2.6%, which is c.30bps below the average 10 year break-even inflation over the whole period (May 1997 onwards). Therefore, applying Ofgem’s own logic and approach, the data would support an average inflation risk premium of around 30bps which should be taken into account in calculating the cost of debt allowance (real) from the iBoxx index.
- A.76 Ofgem have previously accepted that an Inflation Risk Premium exists but have merely questioned whether it is material. Given the result above, more attention should be given to the positive arguments that have been made by the networks to support the existence of a material Inflation Risk Premium (which should not be disregarded), rather than any failure to refute Ofgem’s (incorrect) observation about the relative levels of breakeven inflation and the Bank of England’s inflation target.
- A.77 Moreover, the FTI Consulting report provides further evidence to support the existence of an Inflation Risk Premium and that an allowance should be made for this.
- A.78 At Paragraph 11.10 (and 11.1) FTI explain that Ofgem’s justification for not adjusting for the inflation risk premium is that this is “sufficiently offset” by a *“liquidity risk premium”*.
- However, in their conclusions at Paragraph 11.23, FTI find that whilst *“there is enough evidence to presume the existence of an inflation risk premium”* they merely suggest there is *“possible existence of a liquidity risk premium”*. This does not support the view that the offsetting effect that Ofgem have suggested can, in fact be relied upon, as noted by FTI at Paragraph 11.21: *“Consequently, we do not consider that one can*

---

<sup>16</sup> “The New Inflation Target”, speech by the Governor of the Bank of England, January 2004

*conclude definitively .... that the inflation risk premium is entirely offset by a liquidity premium.” and at Paragraph 11.23 “The net effect of the two premia is unclear. Although it seems likely that the inflation risk premium is larger than the liquidity premium.”* Of course, even if the exact size of the effect is unclear, that is no justification for Ofgem to fail to make any allowance for it: rather, a fair estimate of the effect should be made and taken into account.

- It is possible that quantitative easing may have given rise to a liquidity premium, but even if this is the case it would be expected to be a temporary effect and as such should not be given any significant weight in setting the cost of debt mechanism for RIIO-GD1 (and beyond).
- Further on examination, any evidence for a liquidity premium in the UK is seen to be weak. FTI note (at Paragraph 11.14) that relatively few estimates exist for the liquidity risk premium for UK index-linked gilts, but suggest (at Paragraph 11.13) that if bid-ask spreads are wider for ILGs than conventional bonds that would provide some evidence for the existence of a premium. This is reported to be the case in some of the papers that FTI have reviewed, but these papers have often looked at other markets (particularly the US) or, even in some recent papers, have drawn on data from some time ago (e.g. the 1990s). It is, in fact, recognised in the papers that any liquidity premium is likely to be much lower in the UK than in the US, because ILGs form a larger fraction of total government debt in the UK, and because these instruments have a longer track record in the UK, both of which would tend to increase their liquidity.
- Moreover, on looking at actual bid-ask spreads as suggested by FTI, the data does not support a material Liquidity Premium for Index-Linked Gilts in the UK. Although these spreads are higher than on conventional gilts, they are only around 1.5 to 2 bps on 10 year index-linked gilts (and have been around this level for some time). Given this, in the context of an Inflation Risk Premium of around 30 bps, no material offsetting of the Inflation Risk Premium by the Liquidity Premium can reasonably be claimed.

A.79 In conclusion, the available evidence points to the existence of a material Inflation Risk Premium, which is not offset to any significant extent by a Liquidity Risk Premium, such that the break-even inflation values include a net “Inflation-Liquidity” Risk Premium of around 30bps on average. This is supported by (i) the evidence provided by the networks, (ii) by Ofgem’s own logic and approach based on the Bank of England inflation target (once the errors made by Ofgem have been corrected), and (iii) the assessment of Ofgem’s consultants. This average 30bps should therefore be subtracted from the break-even inflation figure used to convert the iBoxx index from nominal to real, in calculating the cost of debt allowance under RIIO-GD1.

### **Potential Impact of Basel III and Solvency II**

A.80 At Paragraph 3.49 and 3.50 Ofgem consider whether the Basel III and Solvency II regulations will increase network companies’ debt (interest) and liquidity costs.

A.81 In relation to Solvency II, the discussion does not address the key point we have previously made, which is a differential effect on bonds which, in the future, are likely to be issued by other companies in the iBoxx index and those which will be issued by network companies, which will tend to be of longer tenor (consistent with the long lives of energy

network assets). This differential effect is the result of reduced demand for longer term debt which may be expected following introduction of the Solvency II rules.

- A.82 The FTI Consulting report provides support for this differential impact at Paragraph 9.14 to 9.16, based on public statements by ratings agencies. Whilst the FTI report then notes that the timing of the regulations is unclear and there are mitigating impacts, it does conclude that *“A risk that does remain is that there will simply not be sufficient demand for the longer-dated debt typically issued by infrastructure companies to fund their asset investments. It seems likely that there will be some reduced demand from insurers due to the increased capital charges envisioned but the impact of the reduced demand is not clear.”*
- A.83 FTI further conclude that at the mid-price control review the extent to which companies have been affected by Solvency II should be reviewed, although we understand that the mid-period review is not intended to review financial parameters or the overall financial package. Instead, therefore, a reasonable estimate of the effect should be factored into Final Proposals, given that as we have previously noted a difficulty in estimating the scale of the impact is no justification for ignoring it altogether and making no corresponding cost allowances at all.
- A.84 Furthermore, the FTI report shows that the impact on BBB debt is likely to be materially greater than on A-rated. Given our significant concerns regarding the financeability assessment that has been carried out by Ofgem as input to the Initial Proposals, and the fact that credit metrics for the notional network resulting from the Initial Proposals only appear to be at BBB level at best, for consistency with this assessment it is this more significant impact on BBB debt that should be taken into account in making an allowance for the future impact of Solvency II.
- A.85 Turning to consider Basel III, the Initial Proposals at Paragraph 3.49 does not argue that the cost of liquidity facilities will not increase, although Paragraph 3.50 does refer to the observation in the FTI report that *“network companies should be able to access funds from sources that are not affected by these regulations, such as dedicated liquidity facilities.”*
- A.86 It may be the case that there are other sources of liquidity facilities, but the relevant points are (i) that these alternatives are more expensive than the arrangements that networks currently use and (ii) we are unaware of any liquidity facilities which would not be affected by Basel III, and thus networks’ will not be able to avoid an increase in costs following Basel III. Specifically, FTI suggest that network companies could use:
- General purpose credit facilities
  - Raising additional debt on the capital markets
- A.87 Of these, the former option is an example of bank credit facilities and as such it will be affected by Basel III.
- A.88 The latter option would lead to a very significant increase in network companies overall borrowing costs through an increase in the “cost of carry” to maintain liquidity. This is because both to satisfy credit rating agencies and to satisfy the companies’ auditors, the



networks need to have in place sufficient finance (or back-up facilities) to be able to meet all funding requirements for the next 12 months at least. (In practice, the need may be even greater, for example at financial year end the requirement is effectively for the next 13-14 months.) If, as FTI suggest, it will be cheaper in the future to raise additional debt to satisfy this requirement than to use back-up facilities, Ofgem need, in effect to fund not just the RAV at any point in time but the expected RAV at least 12 months hence. On this basis borrowing requirements will be higher throughout RIIO-GD1 than Ofgem have assumed in Initial Proposals, and allowed revenues need to be increased to fund the corresponding increase in overall borrowing costs.

- A.89 Alternatively, if Ofgem prefer to fund back-up facilities (rather than interest on a much higher level of debt), the increased costs of these following the introduction of Basel III needs to be funded through allowed revenues. With the increase in these costs under Basel III, they cannot be assumed to be covered by a margin between utility new issues and the (spot rather than trailing average) cost of debt index, which as noted above has been much lower than previously since 2010.

### **Procyclicality of Returns**

- A.90 Paragraphs 3.51 and 3.52 of the Initial Proposals Finance supporting document considers the argument that the move to the cost of debt index approach will make network companies (equity) returns more procyclical (and thus tend to increase equity beta) than if the previous fixed cost of debt allowance had been retained.
- A.91 As an initial comment, we note that although this issue has been considered in the Initial Proposals in the cost of debt section, it is actually an issue that relates to the cost of equity.
- A.92 Turning to the substance of the issue, Paragraph 3.52 claims two counter arguments:
- The relationships are not as clear cut as has been claimed by network companies
  - Networks' EV is underpinned by other factors (including the RAV) which would continue to make them a counter-cyclical hedge.
- A.93 Both these factors are, at most, partially mitigating factors, so increased procyclicality of returns as a result of the introduction of the cost of debt index is not denied.
- A.94 Moreover, FTI Consulting in fact conclude (at Paragraph 8.38 of their report) that "*cost of debt indexation may have a procyclical effect on returns and so increase the beta of the network companies*", although they consider the effect may be reduced by various factors they discuss and so may not have a material effect. In this regard, however, FTI overlooked that the current fixed cost of debt allowance is of itself counter-cyclical, so even if the new positively procyclical effect is mitigated there is still a material change from counter- to pro-cyclical from previous price controls as a result of the new approach to cost of debt.

### **Conclusions on Cost of Debt Allowance and Mechanism**

- A.95 In the Initial Proposals Ofgem has failed to recognise that for the distribution networks under RIIO-GD1, the proposed indexation mechanism does not reduce cost of debt risk.

In previous controls, networks were compensated for this risk through the provision of “headroom” in the allowed cost of debt. Since the risk is not removed through the new mechanism but no headroom is now being provided, the unrewarded risks to equity have actually increased and so a corresponding increase now needs to be made to the allowed cost of equity.

- A.96 National Grid and other networks have identified a number of other concerns with the proposed cost of debt index allowance:
- The resulting allowance is too low because the “break-even” inflation values used to deflate the nominal iBoxx index contains an Inflation Risk Premium
  - Any future outperformance of the cost of debt index by network companies is likely to be insufficient to fund transaction costs, new issue premia, carry costs, and other debt-related costs.
  - In part, this is because the apparent outperformance (as indicated by Figure 3.9 in the March 2011 RIIO Strategy Decision finance document) has been much lower since the start of 2010 than previously.
  - At the same time, Basel III and Solvency II are likely to increase the level of transaction and other costs
- A.97 In the Initial Proposals, Ofgem has failed to make any provision for break-even inflation or these other costs. Ofgem also misunderstood the Uncertainty Mechanism which National Grid had proposed in relation to debt index outperformance. However, there is new further evidence, including that in the FTI Consulting report, which supports the case that they need to be taken into account in setting allowances for RIIO-GD1.
- A.98 In the main text above:
- We have shown that Ofgem’s basis for ignoring the inflation risk premium is ill-founded.
  - Not only has the apparent outperformance of the cost of debt index by networks been lower since the start of 2010 than previously, but there are also other reasons, as explained in the main text, why any past ability of networks to outperform this index cannot be expected to continue in the future under RIIO. As a result there are transaction, liquidity and other debt-related costs (e.g. carry costs) which will not be funded through the proposed index-based allowance.
- A.99 In each case, FTI’s report provides support for this view, and FTI propose that Ofgem should review the evidence again at the mid-period review to see whether allowance should be made for the costs faced by the networks.
- A.100 We recognise that the mid-period review is not intended to review the financial package, and so to start to contemplate such a review at this stage would both create asymmetric risk for the networks and would reduce regulatory certainty. However, given the evidence that in both areas the networks will face costs that are not funded through the proposed index mechanism as it currently stands, the Final Proposals allowances cannot ignore both of these factors:

- to allow for the Inflation Risk Premium, the break-even inflation should be reduced by 30bps before these break-even inflation values are used to convert the iBoxx index values from nominal to real;
- In recognition of the otherwise unfunded debt costs, Ofgem should introduce an uncertainty mechanism under which, for those periods in which the apparent outperformance between utility issues and the iBoxx index falls below 30 bps, the corresponding daily values of the iBoxx index should be increased to restore the differential.

## [Appendix 4 - Oxera Report](#)



Appendix - Oxera  
Response to Initial Pr

## [Appendix 5 - Fuel poor uncertainty mechanism proposal](#)

A.101 Copy of alternative approach to Fuel poor uncertainty shared with Ofgem prior to IP.



Revenue Drive for  
Fuel Poor Connection