ofgem Promoting choice and value
for all gas and electricity customers

RIIO ED1

Consultation on strategy for the next electricity distribution price controls - RIIO-ED1 - Financial issues

Consultation

Reference:	122/12	**Contact:**	Peter Trafford
Publication date:	27 September 2012	**Team:**	Regulatory Finance
Response deadline:	23 November 2012	**Tel:**	020 7901 0510
		Email:	RIIO.ED1@Ofgem.gov.uk

Overview:

The next electricity distribution price control, RIIO-ED1, will be the first to reflect the new RIIO model. RIIO is designed to drive real benefits for consumers; providing network companies with strong incentives to step up and meet the challenges of delivering a low carbon, sustainable energy sector at a lower cost than would have been the case under our previous approach. RIIO puts sustainability alongside consumers at the heart of what network companies do. It also provides a transparent and predictable framework, with appropriate rewards for delivery.

We are now consulting on the strategy for the RIIO-ED1 review. This supplementary annex to the main consultation documents sets out our proposed approach to financial issues. This document is aimed at those want an in-depth understanding of our proposals. Stakeholders wanting a more accessible overview should refer to the main consultation documents.

Associated documents

Strategy consultation for RIIO-ED1 - Overview
http://www.ofgem.gov.uk/Networks/ElecDist/PriceCntrls/riio-ed1/consultations/Documents1/RIIOED1SConOverview.pdf

Links to supplementary annexes

- Strategy consultation for RIIO-ED1 - Outputs, incentives and innovation
http://www.ofgem.gov.uk/Networks/ElecDist/PriceCntrls/riio-ed1/consultations/Documents1/RIIOED1SConOutputsIncentives.pdf
- Strategy consultation for RIIO-ED1 - Business plans and proportionate treatment
http://www.ofgem.gov.uk/Networks/ElecDist/PriceCntrls/riio-ed1/consultations/Documents1/RIIOED1SConBusinessPlans.pdf
- Strategy consultation for RIIO-ED1 - Uncertainty mechanisms
http://www.ofgem.gov.uk/Networks/ElecDist/PriceCntrls/riio-ed1/consultations/Documents1/RIIOED1SConUncertaintyMechanisms.pdf
- Strategy consultation for RIIO-ED1 - Financial issues
http://www.ofgem.gov.uk/Networks/ElecDist/PriceCntrls/riio-ed1/consultations/Documents1/RIIOED1SConFinancialIssues.pdf
- Strategy consultation for RIIO-ED1 - Impact assessment
http://www.ofgem.gov.uk/Networks/ElecDist/PriceCntrls/riio-ed1/consultations/Documents1/RIIOED1SConImpactAssessment.pdf
- Strategy consultation for RIIO-ED1 - Tools for cost assessment
http://www.ofgem.gov.uk/Networks/ElecDist/PriceCntrls/riio-ed1/consultations/Documents1/RIIOED1SConCostAssessment.pdf
- Strategy consultation for RIIO-ED1 – Reliability and safety
http://www.ofgem.gov.uk/Networks/ElecDist/PriceCntrls/riio-ed1/consultations/Documents1/RIIOED1SConReliabilitySafety.pdf
- RIIO-ED1 Glossary of terms
http://www.ofgem.gov.uk/Networks/ElecDist/PriceCntrls/riio-ed1/consultations/Documents1/RIIOED1SConGlossary.pdf

Links to other associated documents

- Handbook for implementing the RIIO model - Ofgem, October 2010
http://www.ofgem.gov.uk/Networks/rpix20/ConsultDocs/Documents1/RIIO%20handbook.pdf
- RIIO: A new way to regulate energy networks: Final decision
http://www.ofgem.gov.uk/Networks/rpix20/ConsultDocs/Documents1/Decision%20doc.pdf
- Decision letter on the regulatory asset lives for electricity distribution assets (49/11)
http://www.ofgem.gov.uk/Networks/Policy/Documents1/assetlivedecision.pdf
- Government Actuary's Department (GAD) Report - Review of network operator's pensions costs May 2012
http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=126&refer=Networks

Contents

1. Introduction **4**

2. Allowed return **6**
Overview 6
Notional gearing 7
Cost of debt 9
Cost of equity 14
Equity issuance costs 22

3. Assessing financeability **23**
Our approach to assessing financeability 23
Return on regulated equity (RoRE) 25

4. Regulatory asset value (RAV), asset lives and depreciation **27**
Introduction 27
RAV issues 28
Asset lives and depreciation 30
Transitional arrangements 31

5. Taxation **32**
Introduction 32
Modelling taxation on existing legislation or proposals 32
Business rates 35

6. Pensions **36**
Introduction 36
Timing 37
Deficit 39

7. Annual iteration process for base revenue **44**
Introduction to the annual iteration process 44
Adjustments to base revenues during RIIO price control periods 44
The Price Control Financial Instruments 45
The Annual Iteration Process for the PCFM 46

Appendices **50**

Appendix 1 - Consultation Response and Questions **51**

Appendix 2 – RAV methodology **54**

Appendix 3 – Taxation methodology **59**

Appendix 4 – Taxation trigger **64**

Appendix 5 – Tax clawback methodology **73**

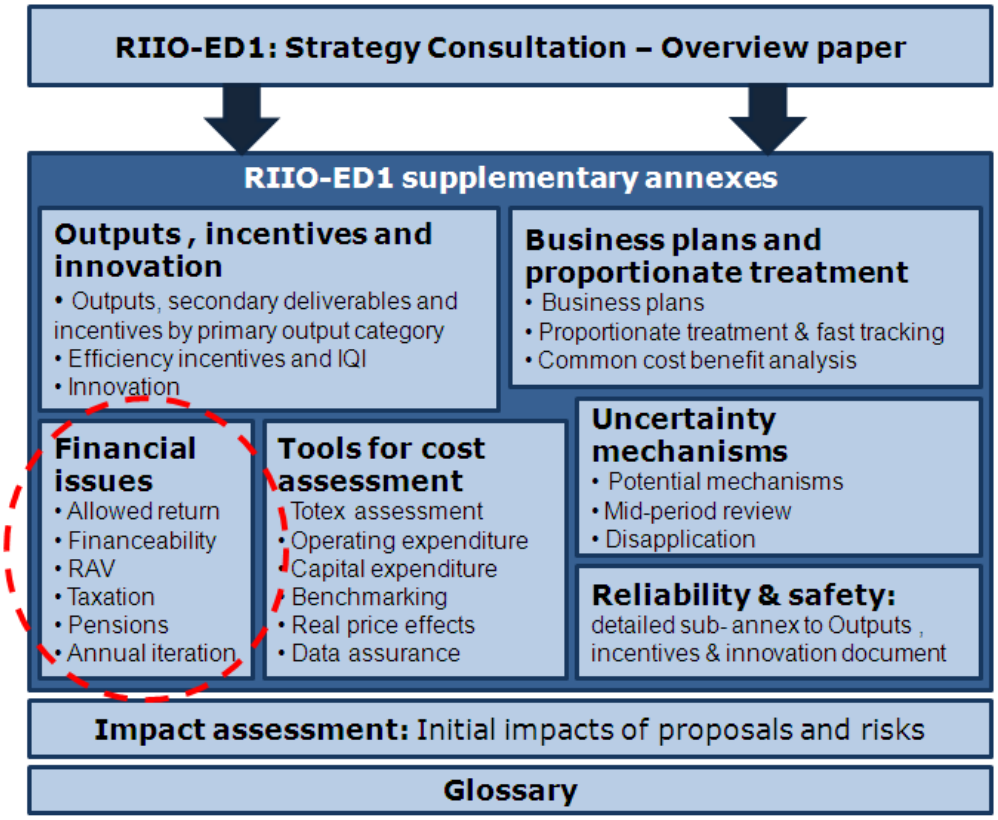
Appendix 6 – Pension methodology **77**

Appendix 7 – RIIO price control pension principles **84**

1. Introduction

1.1. The transmission and gas distribution price controls, RIIO-T1 and GD1, will be the first to reflect the new RIIO model; the electricity distribution price control, RIIO-ED1 will follow. We are now consulting on the strategy for the RIIO-ED1 price control review. This supplementary annex to the main consultation document sets out our proposals for RIIO-ED1 on those elements of the price control collectively referred to as financial issues. These financial issues are asset lives and associated depreciation; cost of capital; financeability; taxation; pensions; and Regulatory Asset Value (RAV). This document is aimed at those who want an in-depth understanding of our proposals. Stakeholders wanting a more accessible overview should refer to the RIIO-ED1 Overview document.

1.2. The figure below provides a map of the RIIO-ED1 documents published as part of the suite of strategy consultation documents.



Links to these documents can be found in the 'Associated documents' section of this document

Financial Issues

1.3. This is a detailed technical supporting paper that expands upon the issues set out in Chapter 9 of the 'Strategy consultation – Overview'. It is structured as follows:

- Chapter 2 explains our proposed approach to setting the allowed return and sets out our views on cost of debt indexation and initial ranges for the cost of equity.
- Chapter 3 shows how we propose to assess financeability and the main factors we will take into consideration.
- Chapter 4 sets out the issues that affect our determination of the Regulatory Asset Value (RAV) including our approach to capitalisation (ie additions to the RAV) for consultation while Appendix 2 provides our proposed full RAV methodology.
- Chapter 5 highlights the areas where we have decisions to take affecting the allowance we provide for taxation while Appendices 3, 4 and 5 provide details on our proposed tax methodology, tax clawback and tax trigger.
- Chapter 6 summarises the pension issues that we propose to take into consideration, while Appendix 6 provides details of our proposed pension methodology and Appendix 7 sets out our proposed pension principles and notes for guidance.
- Chapter 7 describes the annual iteration process which we propose will allow base revenues to be updated in light of the performance and output levels achieved by DNOs.

2. Allowed return

Chapter Summary

This chapter outlines our approach for setting the allowed return for RIIO-ED1. In particular, it sets out our proposed approach for setting notional gearing, our thoughts on the application of annually updating the cost of debt assumption in RIIO-ED1, and an initial range for the cost of equity.

Question 1: Is our approach for setting the allowed return appropriate, particularly in the context of an eight-year price control?
Question 2: What considerations do we need to take into account when setting the notional gearing level?
Question 3: Is our proposed mechanism for annually updating the cost of debt assumption based on an index appropriate?
Question 4: Does our range for the cost of equity capture the DNOs' probable cost of equity in RIIO-ED1?
Question 5: Is the *ex ante* approach to the cost of raising notional equity appropriate for RIIO-ED1?

Overview

2.1. The cost of capital is the return expected by investors on their investment. Regulators have typically made an allowance for the efficient financing of the companies they regulate, which is set by calculating a return on the value of the capital employed in the business (the regulatory asset value (RAV)) that is at least equal to the notional company's estimated cost of capital. As part of the RIIO-ED1 price control we will consider the main factors affecting the cost of capital and the issues surrounding the required calculations.

2.2. We are committed to ensuring that efficient companies are able to finance their regulated activities through both debt and equity. Consistent with this, our RIIO decision paper[1] outlined four key principles regarding our approach for setting the allowed return as part of future price controls:

- We will continue to take a real 'vanilla' weighted average cost of capital (WACC)[2] based approach to setting the allowed return
- The cost of debt component of the WACC will be based on a long-term trailing average and updated during each year of the price control period
- The cost of equity component of the WACC will continue to be set by reference to the capital asset pricing model (CAPM), sense-checked by other approaches
- We will take a principles-based approach to the calculation of notional gearing, with the size of the notional equity wedge reflecting our

[1] Regulating energy networks for the future: RPI-X@20 decision document http://www.ofgem.gov.uk/Networks/rpix20/ConsultDocs/Documents1/Decision%20doc.pdf
[2] The "vanilla" WACC consists of pre-tax cost of debt and post-tax cost of equity, weighted by a notional gearing (ie the relative share of debt) assumption.

assessment of the company's risk exposure, and potentially varying within and between sectors where there is a material difference in risk.

2.3. Overall, under the RIIO principles, the allowed return that we set will reflect our assessment of cash flow risk of the DNOs.

2.4. While there may be certain issues that are sector-specific, we consider that our initial proposals for RIIO-T1 and GD1[3] provide a clear indication of how we propose to apply the RIIO principles, as they relate to the allowed return, in practice. With that in mind, the remainder of this chapter outlines our proposed approaches to setting notional gearing, the cost of debt and cost of equity in RIIO-ED1.

2.5. We do not consider it appropriate to include a range for notional gearing at this stage. We focus instead on setting out the approach we will use to determine appropriate notional gearing. Consequently, we do not include in this document any estimates for the WACC.

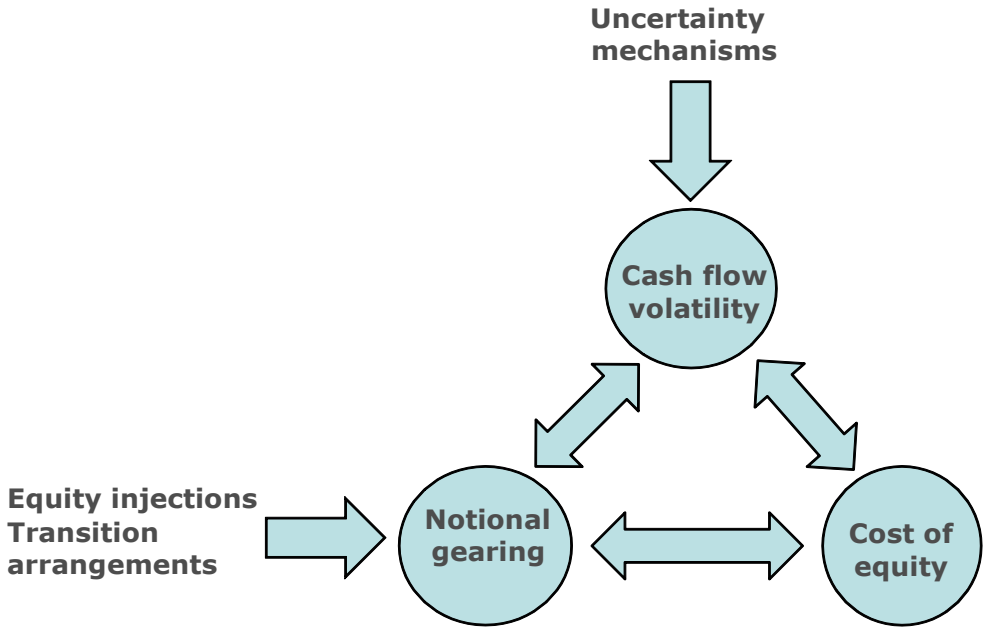
Notional gearing

2.6. Under the RIIO model, we will adopt a principles-based approach to notional gearing, with the size of the notional equity wedge reflecting the company's risk exposure and potentially varying within and between sectors. In the context of RIIO-ED1, we may set different notional gearing rates for individual companies, if we assess there to be a material difference in the cash flow risk they face.

2.7. It is too early to set out an appropriate range for notional gearing at this stage, as we have yet to receive the companies' business plans. Figure 2.1 sets out the issues that are at play when setting notional gearing - namely, cash flow volatility (as affected by investment levels, incentives and uncertainty mechanisms), the companies' business plans (including any proposed transitional arrangements and notional equity injections), and the cost of equity.

[3] RIIO-T1: Initial Proposals for National Grid Electricity Transmission plc and National Grid Gas plc – Finance Supporting document (Reference number: 104/12)
http://www.ofgem.gov.uk/Networks/Trans/PriceControls/RIIO-T1/ConRes/Documents1/RIIO%20T1I%20NGGT%20and%20NGET%20Finance.pdf
RIIO-GD1: Initial Proposals – Finance and uncertainty (Reference number: 103/12)
http://www.ofgem.gov.uk/Networks/GasDistr/RIIO-GD1/ConRes/Documents1/GD1%20Finance%20initial%20proposals%20270712.pdf

Figure 2.1: Illustration of the methodology for setting notional gearing



2.8. There is no simple rule by which differences in cash flow risk can be converted into different levels of notional gearing. Ultimately, there is a need to balance different pieces of evidence. In addition to considering cash flow risk, when determining the appropriate notional gearing level we will also take into account:

- Financeability – both in terms of the gearing ratios that the major credit rating agencies consider are consistent with ratings in the BBB to A range, and in terms of the impact on other credit ratios
- Regulatory precedent – this consideration takes account of the fact that stakeholders value consistent regulatory determinations
- DNOs' actual gearing – this provides an indication of the proportion of debt that DNOs have been able to carry while maintaining investment grade credit ratings.

The RIIO principles state that companies should be able to achieve an upside return on (notional) equity in the low double-digits, and be exposed to a downside return at or below the cost of debt. Since we calculate RoRE at the notional level, increasing notional gearing widens the RoRE range and *vice versa*. Hence, we will also consider the return on regulatory equity (RoRE) range.

2.9. We reiterate that the notional gearing value for the allowed return calculations cannot be finalised until we have the DNOs' business plans and until we calibrate the incentives, so that we can estimate the DNOs' risk exposure. We will also need to take into account the scale of the investment programmes envisaged for RIIO-ED1 and any implications these might have for cash flow risk. However, it would be possible to provide an overall range for notional

gearing based on the information we already have and the expected incentive schemes. We invite views as to whether providing this level of guidance in the strategy decision would be helpful ahead of the business plan submissions.

Cost of debt

2.10. Under the RIIO model, we have been clear that we will base the cost of debt component of the allowed return on a long-term trailing average of the yield on sterling-denominated bonds. We will adjust the revenue allowance mechanistically each year[4] to reflect movement in the index. Setting the cost of debt component of the allowed return in such a way should provide comfort to the DNOs and their investors that efficiently incurred new debt – even at levels higher than the cost of debt assumption at the time – will be fully funded in the future. For consumers, this approach provides assurance that they will only pay for efficient debt costs, and that no "headroom" would be built into the price control package.

2.11. As part of RIIO-T1 and GD1, we have consulted in detail with the network companies, investors and consumer representatives to develop an appropriate approach to the annual update of the cost of debt assumption. We intend to build on the ongoing work in RIIO-T1 and GD1 when developing the approach to the cost of debt for RIIO-ED1. The main arguments and counter-arguments have been discussed in our RIIO-T1 and GD1 strategy consultation[5] and strategy decision[6] papers. In this document we summarise the position we have adopted in the Initial Proposals for RIIO-T1 and GD1, and address some issues that have been raised by the DNOs.

2.12. For RIIO-ED1, our current intention, on which we seek views, is to:

- set the cost of debt assumption in the allowed return based on a 10-year simple trailing average index (with provision for companies to justify alternative weighting to the trailing average in exceptional circumstances)
- update this allowance annually during the price control period
- use an average of the iBoxx GBP Non-Financials indices of 10+ years maturity, with credit ratings of 'broad A' and 'broad BBB'
- deflate the indices by 10-year breakeven inflation data published by the Bank of England
- not make adjustments in the index for debt issuance fees, liquidity management fees, new issue premium or the inflation risk premium.

[4] This will take place via the annual iteration process, as described in chapter 7.
[5] Consultation on strategy for the next transmission and gas distribution price controls - RIIO-T1 and GD1 Financial issues (Reference number: 159/10)
http://www.ofgem.gov.uk/Networks/Trans/PriceControls/RIIO-T1/ConRes/Documents1/T1%20and%20GD1%20finance.pdf
[6] Decision on strategy for the next transmission and gas distribution price controls - RIIO-T1 and GD1 Financial issues (Reference number: 46/11)
http://www.ofgem.gov.uk/Networks/Trans/PriceControls/RIIO-T1/ConRes/Documents1/T1decisionfinance.pdf

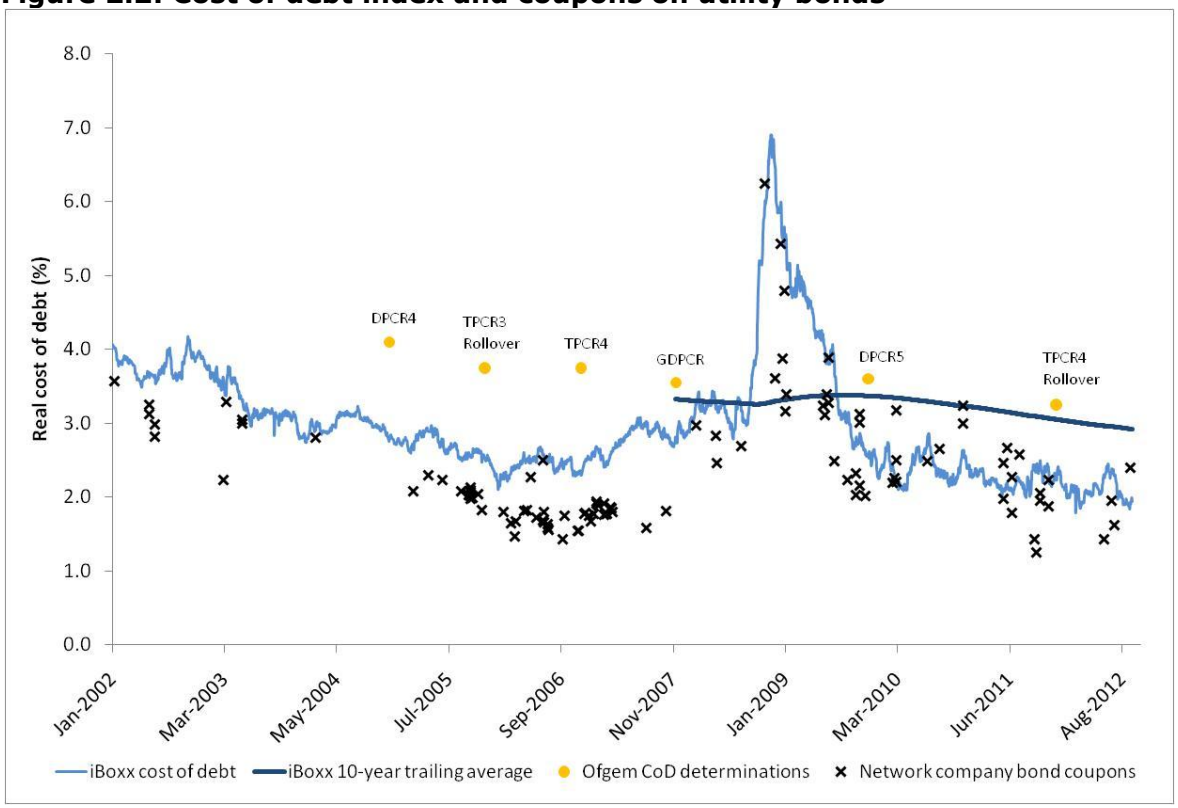
2.13. In the remainder of this section we discuss a number of issues that have been raised with regard to the application of an annually updated cost of debt assumption in the allowed return. These are: costs not directly covered in the index (such as issuance costs and liquidity management fees), embedded debt costs, the inflation risk premium, the potential impact of regulations such as Basel III and Solvency II, and the possibility that annually updating the cost of debt assumption would increase the procyclicality of DNOs' returns.

Costs not directly covered in the index

2.14. Over the history of the iBoxx index, network companies have been able to issue debt at coupons that are on average 52 bps below the market cost of debt on the day (as illustrated in Figure 2.2). This is because of the 'halo effect' that the network companies appear to enjoy, which may be the result of:

- A guaranteed revenue stream
- Asset value underpinned by the RAV
- No/low competitive pressure
- No volume risk on revenues
- A well-established, well-understood regulatory regime.

Figure 2.2: Cost of debt index and coupons on utility bonds



Source: Markit iBoxx, Bloomberg, Bank of England

2.15. We consider that the level of outperformance relative to the index is sufficient to cover any auxiliary costs the DNOs might incur when issuing new debt. We, therefore, propose to maintain an implicit allowance for the cost of issuing debt in the form of this observed outperformance.

2.16. The DNOs have argued that their bonds issued during 2010 and 2011 have not outperformed the iBoxx index to the same extent as in the past and, at times, have been issued at a premium to the index. This, it has been argued, suggests that past outperformance of the index was a temporary phenomenon, rather than a reflection of network companies' inherent low risk. In order to ensure that efficiently-incurred debt is fully funded, including any additional costs not captured in the index (ie issuance and liquidity fees), they have argued that an uplift should be applied to the index.

2.17. As discussed above, we consider that there are characteristics of the DNOs and the regulatory regime within which they operate that appear to have allowed them to raise debt more cheaply than other companies of similar credit ratings (ie to outperform the cost of debt index). We consider that these characteristics are innate to regulated network companies.

2.18. We do note, however, that bonds issued by network companies since the start of 2010 have outperformed the iBoxx index by 12 bps, compared to 52 bps over the history of the iBoxx index. This narrowing of the level of outperformance may be a temporary issue and a function of the financial crisis, rather than any structural change in the risk profile of the network companies. We intend to keep this matter under review, but at present there does not seem to be sufficient evidence to deviate from the approach suggested above.

Embedded debt costs

2.19. The DNOs have argued that current low interest rates (and the prospect that they remain low) could result in efficiently-incurred past debt not being fully funded as the value of the cost of debt index may decline faster than their average cost of debt falls.

2.20. In its report for RIIO-T1 and GD1,[7] FTI Consulting noted that the potential for embedded and new debt costs to diverge is an issue that comes up regularly in price control reviews. In that regard, any risk that the DNOs may be exposed to is not a function of our proposal to update the cost of debt assumption annually based on an index.

2.21. The extent to which the indexed allowance would reflect a DNO's actual cost of debt would depend on a number of factors, including:

[7] Cost of capital study for the RIIO-T1 and GD1 price controls – Report by FTI Consulting http://www.ofgem.gov.uk/Networks/Trans/PriceControls/RIIO-T1/ConRes/Documents1/RIIO%20T1%20Cost%20of%20capital%20study%20for%20RIIO%20T1%20and%20GD1.pdf

- the timing and frequency of debt issued by the company
- how efficiently the debt was incurred (ie the coupon on the bonds)
- the duration of the company's debt (while the index completely 'refreshes' itself every ten years, the DNOs typically raise debt with around 20 years tenor)
- the credit rating of the company (a company rated in the A category would typically issue debt more cheaply than a company rated in the BBB category).

2.22. For RIIO-T1 and GD1, our assessment found that the 10-year simple trailing average provided adequate coverage for network companies under a range of scenarios. Therefore, we did not propose to make any adjustment for embedded debt costs. However, we will consider new information or issues that the DNOs may raise.

Inflation risk premium

2.23. The DNOs have argued that the 'breakeven inflation' figures we intend to use to deflate the iBoxx index contain an inflation risk premium and, therefore, overstate expected inflation. As a result, the estimated cost of debt would be lower than it should be.

2.24. Although there is no question that an inflation risk premium exists, for the purposes of setting an indexed cost of debt allowance what matters is whether this premium is material.

2.25. In order to determine whether our proposed approach is appropriate we need to assess the extent to which breakeven inflation figures reflect the expected inflation that may be priced into the bonds in the iBoxx indices. Our starting assumption is that bonds are priced with reference to expected inflation in terms of the Retail Price Index (RPI). We also consider it appropriate to assume that long-term expected inflation (ie those that would be priced into bonds of 10+ years maturity, as in the iBoxx indices) is anchored by the Bank of England's inflation target. This target is currently set at 2 per cent on the Consumer Price Index (CPI). We, therefore, consider that one way in which investors may form their long-term inflation expectations is by 'translating' the Bank of England's inflation target from CPI terms to RPI. When doing so, we consider it likely that investors would use information since the last structural break in long-term expected inflation, which appears to be the adoption of an explicit inflation target in May 1997[8].

[8] The Bank of England began explicit inflation targeting in May 1997. The target was initially set in terms of the Retail Price Index Excluding Mortgage Interest Payments (RPIX). Since 2004, however, the target was 2 per cent on the CPI. Our analysis shows that the adoption of an explicit inflation target in May 1997 represented a structural break, with long-term expected inflation falling by around one percentage point almost instantaneously. The change of target from RPIX to CPI does not appear to have changed long-term expected inflation. It is unclear at this stage whether the global financial crisis has resulted in a structural break in long-term expected inflation.

2.26. Since the Bank of England began pursuing an explicit inflation target in May 1997, breakeven inflation (ie the difference between the yield on conventional gilts and the yield on index-linked gilts) has been on average 2.8 per cent at 10-year maturity. Over the same time period, the difference between RPI inflation and CPI inflation averaged 0.8 percentage points. Hence, the Bank of England's 2.0 per cent inflation target for CPI would imply long-term expected inflation of 2.8 per cent on RPI – matching the measure by which we deflate our index.

2.27. The above suggests that the inflation risk premium is countered by other factors of a similar magnitude, such as a liquidity premium on index-linked gilts. It is reasonable to expect that a small liquidity premium is paid on index-linked gilts relative to conventional gilts, since the latter represent a significantly larger market, and the former are often held rather than being traded.

2.28. We conclude that our proposed approach does not result in a downwardly biased estimate of the real cost of debt. Therefore, we do not propose to make any changes to the index.

Potential impact of Basel III and Solvency II[9]

2.29. Some DNOs have argued that Basel III regulations will increase the cost of liquidity facilities and that Solvency II requirements would reduce insurance companies' demand for long-dated utility bonds and, therefore, increase the cost of debt. They have argued that these costs would not be captured in the iBoxx index.

2.30. We note that the outcome and timing of application of Basel III and Solvency II are still uncertain. Any impact these regulations might have is not a function of the decision to update the cost of debt estimate annually based on the iBoxx index. Indeed, if the market cost of debt rises as a result these regulations, it will be captured in the index. In its report for RIIO-T1 and GD1, FTI Consulting noted that network companies should also be able to access funds from sources that are not affected by these regulations, such as dedicated liquidity facilities.

Procyclicality of returns

2.31. The DNOs have argued that, since interest rates tend to rise in accordance with general economic growth, our introduction of an annually updated cost of debt assumption would result in their revenues rising in tandem with better overall economic performance. This means that DNOs' returns would become more procyclical, raising their equity beta and, therefore, the cost of equity.

[9] Basel III and Solvency II are proposed sets of regulations on the capital requirements of banks and insurers, respectively. While they are not under Ofgem's control, they are expected to come into effect during RIIO-ED1 and may have an impact on the DNOs' financial activities.

2.32. We consider that there are two counter-arguments to the above:

- First, as FTI Consulting explains in its report for RIIO-T1 and GD1, the relationship between corporate debt costs and economic growth is not as clear-cut as suggested by the DNOs, and neither is the relationship between share prices and economic growth
- Second, the cost of debt makes up around ten per cent of DNOs' allowed revenue in DPCR5 – their enterprise value is still underpinned by guaranteed revenue, cost recovery, little volume risk and the RAV – all of which will continue to make them a strong countercyclical hedge.

We, therefore, do not propose to make any changes.

Cost of equity

Approach

2.33. We are committed to ensuring that efficient companies are able to finance their regulated activities through both debt and equity. Under the RIIO model we will continue to estimate the cost of equity using CAPM, and sense-check our estimate against other approaches as appropriate.

2.34. As discussed above, we will set the notional gearing and the cost of equity for RIIO-ED1 to be consistent with our assessment of the DNOs' cash flow risk. At this stage, we provide only an initial range for the cost of equity, based our view of the current risk profile. Our view of the appropriate cost of equity for RIIO-ED1 may change following the assessment of the DNOs' business plans or any significant market developments.

2.35. The cost of equity can either be assessed by determining the risk-free rate, an equity risk premium for the market and an equity beta (which represents the systematic risk variability of a company relative to the market as a whole), or by an aggregate return on equity. At this stage, we derive a CAPM-based (ie looking at each of the components of the cost of equity) range for the cost of equity. However, we note that ultimately it is the overall cost of equity that matters. For this purpose, we will consider additional evidence as it becomes available over time (including, for example, from corporate transactions involving network businesses).

Duration of cash flows

2.36. Our proposal to move away from accelerated depreciation for DNOs would result in investment being remunerated, through the depreciation charge, over a longer period that previously. In our RPI-X@20 decision document we recognised that there are arguments that, when taken in isolation, lengthening the time over which capital is remunerated could increase the riskiness of cash flows and, therefore, the cost of capital.

2.37. Oxera, advising the Energy Networks Association, argued that there is a positive relationship between the duration of cash flows and the cost of capital. Oxera[10] argued that we should, therefore, increase the allowed return by setting a higher equity beta and a lower notional gearing level. On the other hand, our advisers CEPA[11] argued that the longer duration of cash flows does not have a material impact on the cost of capital. We subsequently asked Europe Economics[12] to examine empirical evidence.

2.38. Europe Economics looked at cases where the duration of cash flows has been changed by regulatory intervention, and tested whether this resulted in an observed change in the equity beta. Europe Economics considered the introduction of accelerated depreciation in DPCR3 – in a sense the inverse of what we will do in RIIO-ED1 – and noted that the equity beta for companies that owned distribution networks at the time did not decline, as would be expected had Oxera's argument held true.

2.39. Europe Economics also considered four occasions when HM Treasury changed the capital allowance for oil companies (in 2002, 2004, 2006 and 2009) and noted that observed equity betas did not react to the changes.

2.40. Overall, Europe Economics concluded that its analysis shows no sign that equity betas respond to step changes that are intended to have material implications for the duration of cash flows. Further, Europe Economics' report states that, *"We do not regard it appropriate for a regulator to entertain a large departure from corporate finance theory without having a clear alternative theoretical structure offer in its place, and a clear evidential rationale for preferring the latter framework"*.

2.41. Further to this, we note that, if there is an impact on the cost of capital from the duration of cash flows, it is significantly mitigated by only applying 45-year asset lives to new assets. It could be further mitigated by the application of any transitional arrangements on asset lives.

2.42. Overall, we do not consider the duration of cash flows to be a material factor in setting the appropriate cost of equity for RIIO-ED1.

[10] See, for example, What is the cost of equity for RIIO-T1 and RIIO-GD1? – a report by Oxera prepared for the Energy Networks Association
http://www.ofgem.gov.uk/Networks/Trans/PriceControls/RIIO-T1/ConRes/Documents1/Energy_Networks_Association_-_Oxera_report.pdf
[11] See, for example, Providing financeability in a future regulatory framework – paper by CEPA on behalf of Ofgem
http://www.ofgem.gov.uk/Networks/rpix20/ConsultReports/Documents1/Final%20CEPA%20RPI-X@20%20Financeability%20Report%20May%202010.pdf
[12] The Weighted Average Cost of Capital for Ofgem's Future Price Control – Report by Europe Economics on behalf of Ofgem
http://www.ofgem.gov.uk/Networks/Trans/PriceControls/RIIO-T1/ConRes/Documents1/Europe%20Economics%20Final%20Report%20-%20011210.pdf

Initial range for the cost of equity

2.43. As discussed earlier in the chapter, investors view the DNOs as being of relatively low risk. This is because of their predictable revenue stream, asset values that are anchored to the RAV, and the stable and transparent regulatory regime in which they operate. The result is that DNOs have been able to access funds at a lower cost than the market average and to attain a comfortable investment grade credit rating while having relatively high gearing.

2.44. RIIO introduces a new approach to setting the components of the allowed return, which means that direct comparison to past decisions by Ofgem (or other regulators) is not always appropriate. However, regulatory precedent does influence, to some extent, expectations about future regulatory decisions. With that in mind, Figure 2.3 summarises recent regulatory determinations on the cost of equity.

Figure 2.3: Regulatory precedents on the cost of equity

Determination		Year	Risk-free Rate	Equity Risk Premium	Equity beta	Cost of Equity
Ofgem:						
RIIO-GD1 *(initial proposals)*		2012	2.0%	5.25%	0.9	6.7%
RIIO-T1 Gas *(initial proposals)*		2012	2.0%	5.25%	0.91	6.8%
RIIO-T1 Electricity *(initial proposals)*		2012	2.0%	5.25%	0.95	7.0%
DPCR5		2009	2.0%	5.25%	0.9	6.7%
GDPCR		2007	2.5%	4.75%	1.0	7.25%
TPCR4		2006	2.5%	4.5%	1.0	7.0%
Other UK regulators:						
Ofcom BT Openreach		2011	1.4%	5.0%	0.91	6.0%
Competition Commission Bristol Water		2010	2.0%	5.0%	0.92	6.6%
CAA NATS		2010	1.75%	5.25%	1.35	8.8%
Ofwat PR09		2009	2.0%	5.4%	0.94	7.1%
CAA Stansted	Low	2009	2.0%	3.0%	1.0	5.0%
	High		2.0%	5.0%	1.24	8.2%
ORR CP4	Low	2008	-	-	-	6.5%
	High		-	-	-	7.0%
CAA Heathrow	Low	2007	2.5%	2.5%	0.9	4.75%
	High		2.5%	4.5%	1.15	7.7%

Sources: Regulators' decision documents

Risk-free rate

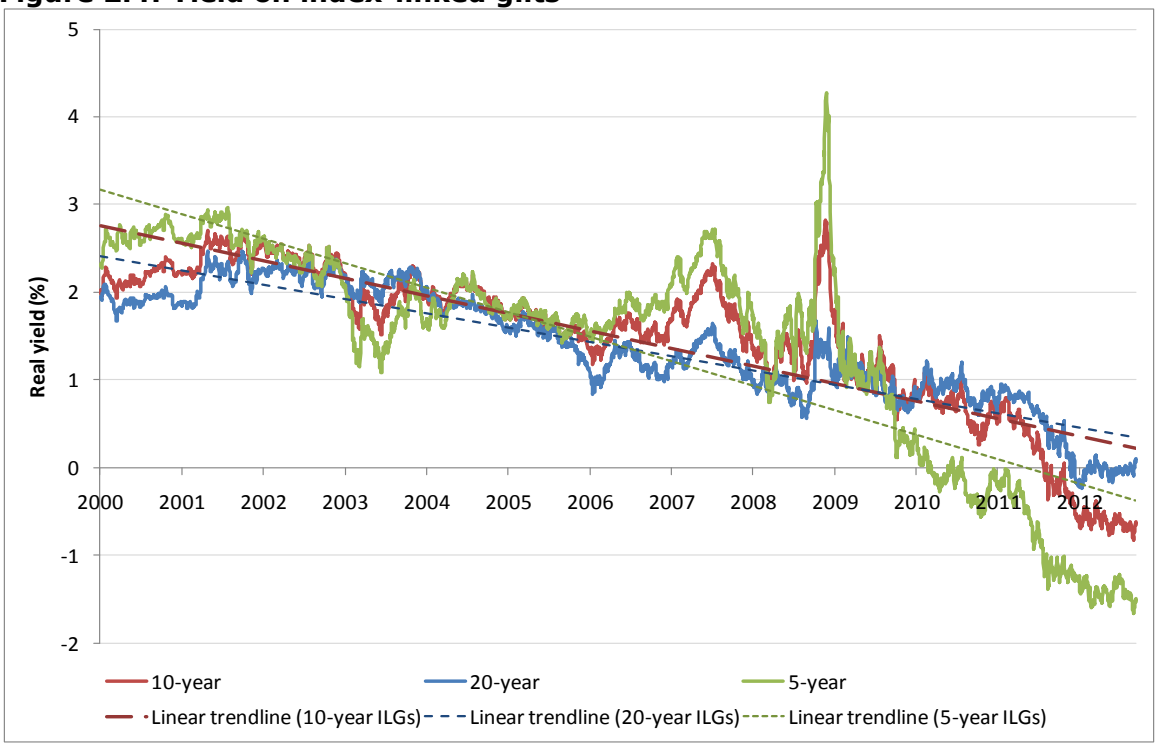
2.45. The risk-free rate is the rate of return that an investor would expect to earn on a theoretically riskless asset. Typically, government issued securities are considered the best available indicator of the risk-free rate due to the low likelihood of the government defaulting on its obligations.[13]

[13] However, this risk appears to have increased with the global financial crisis and euro-zone sovereign debt crisis.

2.46. Our preferred approach is to estimate a range for the risk-free rate from UK index-linked gilts (ILGs) and sense-check the range against conventional gilts and regulatory precedent.

2.47. Figure 2.4 plots the yield on ILGs of 5, 10 and 20-year maturities. A clear downward trend is observed over the last 10 years or so, which was temporarily disrupted by a spike in yields around the time of the collapse of Lehman Brothers in late-2008. Similar trends are observed for conventional gilt yields.

Figure 2.4: Yield on index-linked gilts



Source: Bank of England

2.48. Figure 2.5 summarises the key medium and long term estimates of the risk-free rate.

Figure 2.5: Historical average yields on ILGs and conventional gilts

Measure	Yield (%)
ILGs 5-year average (Sep. 2007 - Sep. 2012)	
5 years	0.3
10 years	0.7
20 years	0.7
ILGs 10-year average (Sep. 2002 - Sep. 2012)	
5 years	1.1
10 years	1.3
20 years	1.2
Deflated conventional gilts 5-year average (Sep. 2007 - Sep. 2012)*	
5 years	-0.1
10 years	0.8
20 years	1.4
Deflated conventional gilts 10-year average (Sep. 2002 - Sep. 2012)*	
5 years	0.8
10 years	1.3
20 years	1.5

* Using assumption of 2.8 per cent RPI

Source: Bank of England

2.49. In light of the above, we propose to use an initial range for the risk-free rate of 1.7 – 2.0 per cent

2.50. We note that there is evidence to suggest that long-term estimates of the risk-free rate are currently lower than the 2.0 per cent we set in DPCR5 and in the initial proposals for RIIO-T1 and GD1. However, it has been argued by some,[14] that the Bank of England's quantitative easing policy has pulled down the yield on ILGs by as much as 100 bps. Hence, we have kept 2.0 per cent as the upper bound of the range owing to the possibility than the downward trend described above or quantitative easing are reversed during RIIO-ED1.

Equity risk premium

2.51. In the CAPM framework, the equity risk premium (ERP) is a measure of the expected return, on top of the risk-free rate, that an investor would expect for a portfolio of risk-bearing assets. This captures the systematic risk that is inherent to the market, and which cannot be diversified through a portfolio of investments.

[14] See, for example, M. A. S. Joyce, A. Lasaosa, I. Stevens, and M. Tong (2011), The Financial Market Impact of Quantitative Easing in the United Kingdom, *International Journal of Central Banking* http://www.ijcb.org/journal/ijcb11q3a5.pdf

2.52. Our preferred approach is to rely on the well-established long term ERP estimates provided by Dimson, Marsh and Staunton (DMS). This study assessed the excess return on equities relative to sovereign bonds in 19 developed countries over more than 100 years (since 1900). In their 2012 update,[15] DMS estimate the ERP for the UK to be 3.6 per cent when using the geometric mean, and 5.0 per cent when relying on the arithmetic mean of the historical series.

2.53. We note that there has been no consensus in the debate about which of the arithmetic mean or geometric mean is more appropriate for the purpose of setting the cost of equity in a regulatory context.

2.54. In its paper for the RIIO-T1 and GD1 initial proposals, FTI Consulting noted that the DMS methodology results in a lower estimate of the ERP when estimated during downturns in a country's stock market. In contrast, a number of academics have argued that the ERP rises at the time of a financial crisis, as investors may seek a higher return to compensate for the perceived increase in risk. Taken together, we consider the ERP for RIIO-ED1 would more likely lie around the upper end of the range suggested by DMS.

2.55. Overall, our initial range for the ERP is 4.75 – 5.5 per cent, unchanged from the range proposed in the strategy decision for RIIO-T1 and GD1. We do note, however, that the upper end of the range is high relative to regulatory precedent on the ERP.

Equity beta

2.56. The equity beta measures the covariance of the returns on a stock with the market return. The weaker this covariance, the greater the contribution a particular stock could make to reducing exposure to systematic risk and, hence, the lower the required return.

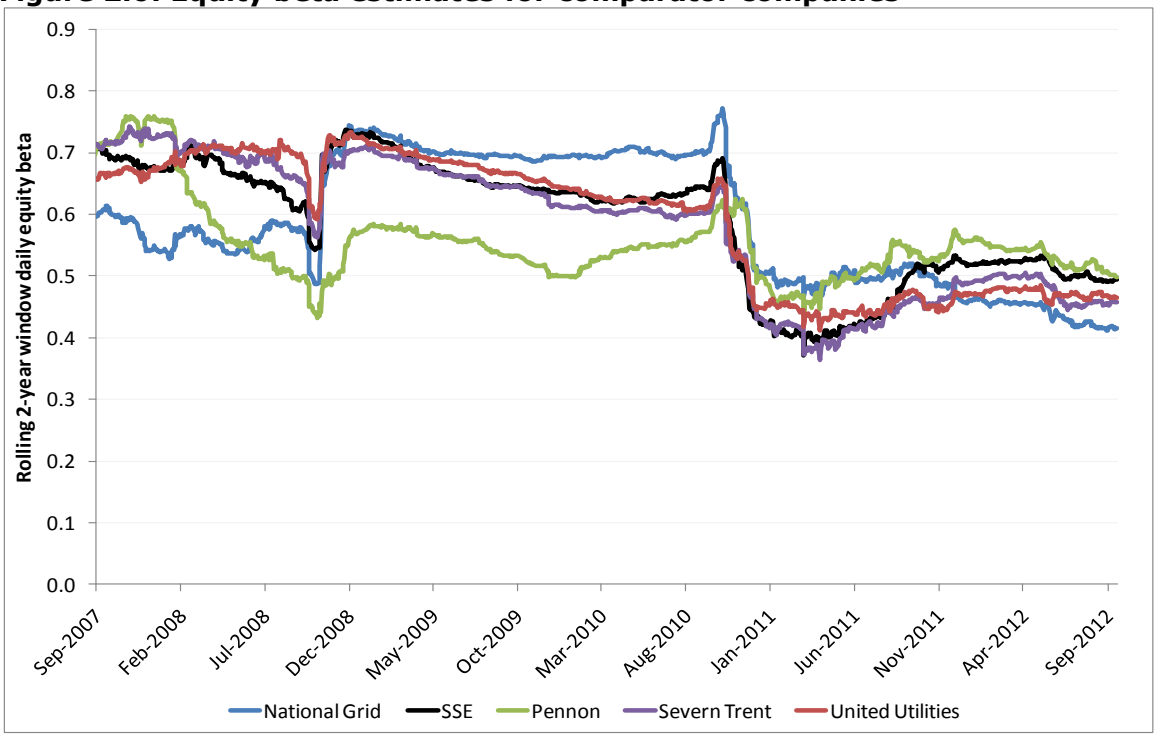
2.57. Since none of the DNOs is publicly listed, there is no direct method for estimating their equity beta and this requires us to rely on comparators. We calculate equity betas for the listed UK energy groups which own network companies (National Grid and SSE), as well as the three listed water companies (Pennon, Severn Trent and United Utilities), which operate under a broadly similar regulatory regime. The analysis focuses on a 2-year moving average of daily betas, in line with the recommendations of the Smithers Report.[16]

2.58. Figure 2.6 plots our estimates of the equity betas for the companies mentioned above. We note an observed range of around 0.4-0.6 over the past year or so, with a range of around 0.5-0.75 in the previous three years. This

[15] Credit Suisse global investment returns sourcebook 2012.
[16] Transmission Price Control Review: Cost of Capital Study - Smithers & Co http://www.ofgem.gov.uk/Networks/Trans/Archive/TPCR4/ConsultantReports/Documents1/15576-smithers_co.pdf

range highlights the fact that regulated network companies would likely have a lower risk profile than the market average, because of the protections afforded to them via the regulatory framework.

Figure 2.6: Equity beta estimates for comparator companies



Source: Bloomberg

Initial range of the cost of equity

2.59. Figure 2.7 summarises our initial range for the cost of equity and compares it to our recent decisions. We consider our range consistent with both observed market trends and recent regulatory precedent.

Figure 2.7: Initial range for the cost of equity

	RIIO-ED1		RIIO-GD1	RIIO-T1	RIIO-T1	DPCR5
Component	**Low**	**High**		**Gas**	**Electricity**	
Risk-free rate	1.7%	2.0%	2.0%			
Equity risk premium	4.75%	5.5%	5.25%			
Equity beta	0.9	0.95	0.9	0.91	0.95	0.9
Cost of Equity (post-tax)	**6.0%**	**7.2%**	**6.7%**	**6.8%**	**7.0%**	**6.7%**

International comparison

2.60. Stakeholders often tell us that returns on equity need to be attractive on a risk-adjusted basis in order to attract investors in the face of competing opportunities for their funds. In order to assess how our initial range compares to returns on equity available in other jurisdictions, Figure 2.8 plots the upper and lower bounds of our range against current electricity distribution determinations in Europe, and against comparators from a number of current UK regulatory frameworks.

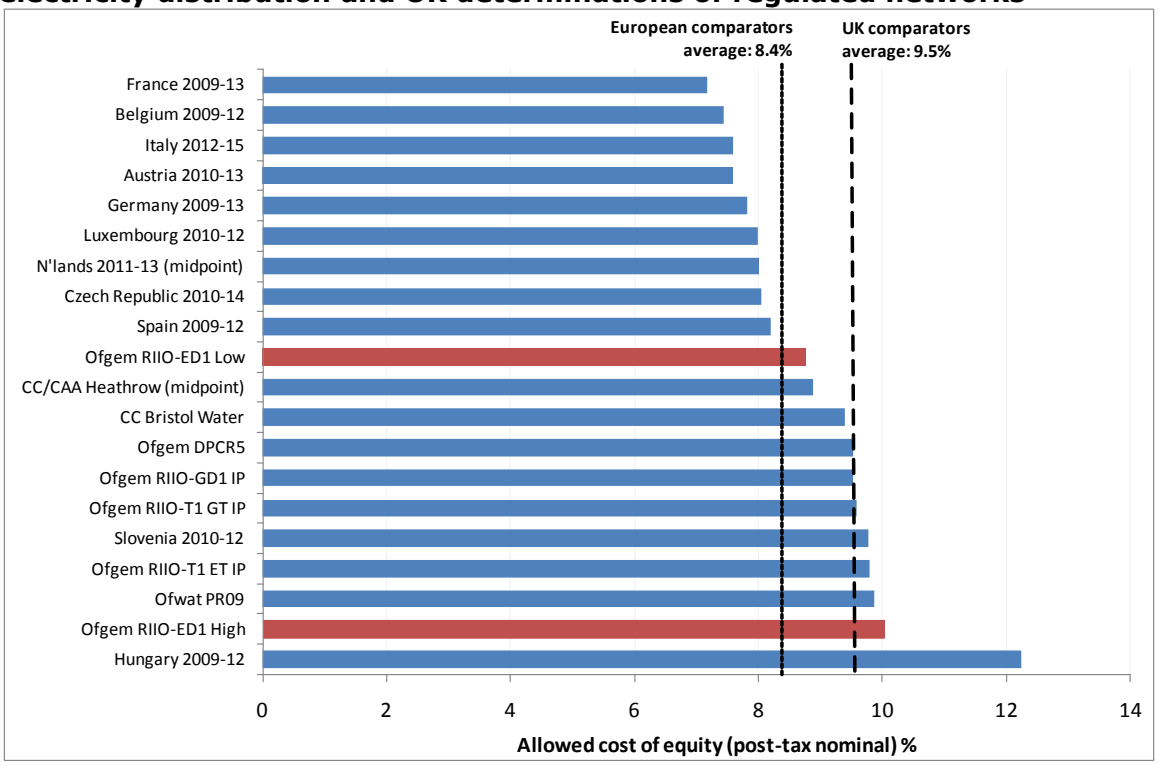
2.61. Since the majority of European determinations are in nominal terms, it is not always possible to calculate the real cost of equity assumed by the regulator. In order to show comparable figures, Figure 2.8 shows the cost of equity in post-tax nominal terms. For UK determinations, we assume inflation of 2.8 per cent.

2.62. Figure 2.8 should be interpreted with caution. The allowed return on equity is just one of a number of aspects that make up a price control package. Since investors are interested in risk-adjusted returns, a comprehensive comparison of different regimes would need to take account of all the other factors that may affect risk. This includes, amongst other things: the ownership type of the companies, the level of government/regulatory intervention, the track record of the regulatory authority, whether allowances are adjusted *ex post*, how overspend and underspend are treated, whether allowances are set on nominal or real basis, the approach to taxation, and the presence of any incentives or uncertainty mechanisms.

2.63. While some of the determinations shown in Figure 2.8 will expire by the time RIIO-ED1 comes into effect, the aim of this exercise is to examine the returns on equity that are currently available to investors in broadly comparable sectors such as electricity distribution in Europe and other regulated sectors in the UK. Since, for the purpose of our comparison, we are interested in total allowed returns on equity, it does not matter that other regulators may use a different gearing assumption (which might affect the equity beta used in the determination).

2.64. Figure 2.8 shows that our initial range offers returns on equity that are broadly evenly distributed around the average for UK comparators. The range is higher than the average for European comparators, although we note that inflation in Europe tends to be lower than RPI inflation in the UK.

Figure 2.8: Cost of equity comparators – European determinations for electricity distribution and UK determinations of regulated networks



Sources: Regulators' decision documents

Equity issuance costs

2.65. In setting price controls, we determine cost allowances consistent with a well-managed and efficient business. Where significant investment is expected to take place over a particular period, companies may experience deteriorating credit ratios or apparent financial strain if this investment is funded wholly through debt and, as in any other sector, may need to raise new equity to fund part of the investment. By putting in place our financeability principles as part of RIIO, which provide longer term stability and clarity over our approach, the DNOs should be able to raise any equity they may require at efficient costs.

2.66. In the initial proposals for RIIO-T1 and GD1 we set out a mechanism by which the companies would be able to recover the cost of issuing new equity. This featured an *ex ante* allowance of five per cent of the amount of notional new equity required, followed by an annual true-up, with the any adjustments occurring two years in arrears through the annual iteration process.

2.67. We are inviting views on whether the mechanism should be introduced for RIIO-ED1. Specifically, we are seeking views on whether the five per cent allowance remains reflective of network operators' cost of issuing new equity.

3. Assessing financeability

Chapter Summary

This chapter sets out our proposed approach to assessing the DNOs' financeability when developing the price control package. We also discuss the role of Return on Regulatory Equity (RoRE) analysis.

Question 1: Have we identified the correct equity and credit metrics?
Question 2: Do the rating agency credit metric levels quoted provide the most appropriate levels?

Our approach to assessing financeability

3.1. Our principal objective is to protect the interests of existing and future consumers. In performing its duties in accordance with the principal objective, 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, in setting price controls, we should have regard to the ability of efficient DNOs 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. However, it is important that the regulatory framework does not provide excessive returns, reward inefficiency or 'bail-out' a company that has encountered financial distress as a result of its own behaviour.

3.2. In order to deliver the outputs that consumers expect, the DNOs will need to be able to finance their activities through both debt and equity. In order to ensure that our price control settlement allows this to happen, we will test the financeability ratios that the companies can be expected to achieve during the price control period, assuming they operate efficiently.

3.3. Central to the RIIO model is that we propose to base our regulatory settlement on robust principles that seek to ensure that the DNOs are financeable in the long term. Financeability analysis (ie the testing of credit and equity metrics) is, however, focused on the upcoming price control period. In line with the RIIO principles, we do not propose to advance cash flow in light of apparent short-term dips in the cash flow metrics. While we will seek to understand the reason behind such shortfalls, the onus will be on the company to resolve any such situations. However, where the application of any of the RIIO principles in a single step would cause an efficient company financing difficulties, we would implement transitional arrangements.

3.4. When assessing financeability we will take into consideration relevant equity metrics and the metrics that credit rating agencies focus on when determining a company's credit rating. We consider that the key equity metrics are:

- Regulated Equity / EBITDA[17]
- Regulated Equity / Regulated Earnings.[18]

3.5. We consider the key credit metrics to be:

- Net debt / RAV
- FFO / Interest[19]
- PMICR[20] (also known as 'adjusted interest cover ratio')
- FFO / Net debt
- RCF / Net debt[21]
- RCF / Capex

3.6. Figure 3.1 summarises the key credit metrics and relevant ratios that the three major credit rating agencies – Fitch, Moody's and Standard & Poor's (S&P) – expect for regulated network companies of BBB and A ratings (to the extent that these have been published). S&P does not publish target ratios for each rating category; therefore, the ratios shown for it in Figure 3.1 are those that S&P observes for specific issuers with an 'excellent' business risk operating in the regulated electricity and gas sector of Great Britain (GB). All three rating agencies told us that they do not expect every issuer to meet every ratio at all times.

Figure 3.1: Credit rating agencies' target or observed ratios for BBB and A rating bands

	Fitch		Moody's		Standard & Poor's	
	A	**BBB**	**A**	**Baa**	**A**	**BBB**
Net debt / RAV (%)	50 - 65	>65	45 - 60	60 - 75	<70	>70
FFO / Interest (x)	4.0 - 5.0	<4.0	3.5 - 5.0	2.5 - 3.5	>3.5	2.5 - 3.5
PMICR[1] (x)	>1.7	<1.7	2.0 - 4.0	1.4 - 2.0		
FFO / Net debt (%)			12 - 20	8 - 12	>12	8 - 12
RCF / Capex (x)			1.5 - 2.5 [2]	1.0 - 1.5 [2]		

[1] Moody's calls this metric 'Adjusted interest cover ratio' but the definition it uses is consistent with the definition of PMICR used by Fitch.

[2] According to Moody's, utilities undergoing a large capex programme who do not benefit from accelerated depreciation are expected to score this metric at a Ba level, i.e in the range 0.5 - 1.0.

Sources: Credit rating agencies' published methodologies and rating updates

3.7. We propose to use the ratios in Figure 3.1 to inform our financeability analysis for RIIO-ED1. It is important, however, to understand that our financeability analysis does not intend to replicate the different rating agencies' methodologies. Certain factors that credit agencies look at are largely

[17] EBITDA is an acronym for 'earnings before interest, tax, depreciation and amortisation'.
[18] We use 'profit after tax' as the measure of regulated earnings for the purposes of this ratio.
[19] FFO stands for 'funds from operations'. The ratio FFO / Interest is also known as 'FFO interest cover'.
[20] PMICR is an acronym standing for 'post-maintenance interest cover ratio'.
[21] RCF stands for 'retained cash flow' and is calculated as FFO less dividend payments.

common to all DNOs (eg business risk, regulatory environment) and are taken as a given in our financeability analysis. Other factors are subject to each company's management decisions (eg the allocation of debt between holding company and licensee) and we abstract from these in our analysis by applying a notional financial structure to the licensees.

3.8. Financeability analysis necessarily involves an element of judgement. The major credit rating agencies have historically had a favourable view of the regulatory framework in GB and this has allowed companies to maintain investment grade credit ratings, even where credit ratios may have fallen outside the ranges set out for the relevant rating category under an agency's methodology.

3.9. We take a similar approach and do not consider it necessary for the DNOs to pass all the ratios in all years in order to be financeable. In particular, we seek to understand better any instances in which a DNO:

- Fails to meet a target ratio for a sustained period (ie several years)
- Deviates significantly from a target ratio (either above or below) for more than one year in a row
- Repeatedly fails one target ratio while passing others.

3.10. We expect the DNOs to exercise similar judgement in their business plans and we do not expect all ratios to be achieved in every year of the price control in order to produce a financeable plan.

Return on regulated equity (RoRE)

3.11. In DPCR5, we presented the concept of RoRE as an approach by which we analysed DNOs' actual returns during DPCR4, as well as a tool for checking that the expected outcomes from DPCR5 are financeable. The analysis takes a holistic view of all elements of the price control settlement to ensure that together they provide a fair balance of risk and reward for customers and shareholders. The RoRE analysis was well received among stakeholders.

3.12. We use RoRE analysis to estimate the financial benefits – as measured by the return on the proportion of the RAV that is financed by notional equity – that are available to the DNOs from outperforming the price control assumptions. By the same token, RoRE analysis allows us to assess the financial penalties for underperforming the price control assumptions.

3.13. We regard an appropriately calibrated price control package as one in which RoRE upside (ie the reward available for the best-performing DNOs) provides the potential for double-digit returns on (notional) equity, and RoRE downside (ie the penalties that would apply to the worst-performing DNOs) is at or below the cost of debt. RoRE analysis is one of the factors used in identifying the appropriate notional gearing level.

3.14. However, we acknowledge that, for a given price control package, a balance needs to be struck between the impact of notional gearing on the RoRE range and on financeability. Higher notional gearing means that returns are spread over a smaller equity wedge, which widens the RoRE range. At the same time, higher notional gearing tightens credit ratios. When it comes to our decision on notional gearing, our duty to have regard to the need that network companies are able to finance their activities means that we consider that we should attribute more weight to financeability analysis than to RoRE.

3.15. A key task for the DNOs in preparing their business plans will be undertaking an assessment of the volatility of the cash flows and proposing appropriate, well justified and balanced views on notional gearing, levels of equity injection (if any), transition arrangements (if any) and the cost of equity. This will provide companies with a degree of flexibility (within certain constraints) and the opportunity to set out their preferred approach in their business plans.

4. Regulatory asset value (RAV), asset lives and depreciation

Chapter Summary

This chapter examines a number of options for the implementation of our methodology for calculating additions to regulatory asset value (RAV), asset lives and depreciation, including transitional arrangements. We indicate our preferred treatment.

Question 1: Do you agree with our approach for the calculation of the percentage of totex allowed into RAV?
Question 2: Do you agree with our revised approach to Totex and with the costs that are included and excluded?
Question 3: We invite views on whether the definition of related parties should exclude captive insurance companies and whether our proposed approach is proportionate.

Introduction

4.1. The RAV methodology proposed for RIIO-ED1 is based upon that introduced for DPCR5. In the DPCR5 review, we undertook a fundamental review of the means by which costs are included in the RAV as this is a key element in our approach to equalising incentives for the DNOs. For RIIO-ED1, we propose to develop this approach further.

4.2. For DPCR5, we added a set percentage of total costs (totex) into RAV. For that review, we defined totex as total costs excluding business support costs and non-operational capex. A generic totex capitalisation rate was set at 85 per cent, with the balance treated as fast money. Business support and non-operational capex were also treated as fast money.

4.3. The rationale for this modified approach to determining RAV additions (known as 'slow money') was to help equalise the incentives on capex and opex, which previously had different incentive rates applied to them, potentially distorting decision-making. In DPCR5, all of the costs included in Totex were subject to a single incentive rate although the rate varied by licensee group depending on the outcome of the Information Quality Incentive (IQI).

4.4. Our proposal for RIIO-ED1 is to remove any remaining boundary issues between categories and treat all costs (including business support and non-operational capex but excluding certain specific items detailed in Appendix 2) relating to the licensed entity for its licensed activities as Totex. This provides a simpler approach and is consistent with the approach proposed in RIIO-GD1 and T1.

4.5. We recognise that there are various options for calculating the totex capitalisation percentage. In particular, we consider that the following approaches have merit and invite views on these:

1) treat all expenditure with an asset life of three years or less as fast money with the balance as slow money; within this approach, indirect costs should follow the asset to which they relate
2) review company capitalisation levels in their regulatory accounts over the past five years and use the average capitalised as RAV additions with the balance being fast money
3) using network company business plan projected capitalisation rates, using an average over the eight-year business plan period
4) use a blended average of historical and/or future projected levels of capitalisation.

4.6. Our preferred method is a blend of all these approaches. We propose to review the level of costs, company commentaries on their capitalisation policy and the recent history of capitalisation to arrive at a specific totex capitalisation rate for each DNO. We will look to set an average level for the sake of simplicity if all specific rates are close together. We will also consider and test this against our assessment of the overall financeability of DNOs.

RAV issues

What does totex include?

4.7. We propose that totex will broadly include all costs relating to DNOs' regulated activities, with certain exceptions:

- pension deficit repair payments relating to the established deficit
- Pension Protection Fund levies and pension scheme administration costs, which (subject to outcome of this consultation) may be funded as fast money as set out in Chapter 6)
- related party margins
- some specific exemptions (see Appendix 2)
- some other minor exceptions.

4.8. Under our proposals, any overspend or underspend on totex (when compared to the allowance set at final proposals) would be subject to an efficiency adjustment before being included in the totex amount which is subsequently split between fast and slow money.

4.9. The efficiency adjustment uses the efficiency incentive rate. The higher this rate the smaller the proportion of the overspend or underspend that is passed onto consumers.

4.10. This mechanism for making the efficiency adjustment (the totex incentive mechanism) is illustrated in Table 4.1 below. For this example, the totex

capitalisation rate is assumed to be 80 per cent and the efficiency sharing factor is 50 per cent.

Table 4.1 Illustration of the impact of the sharing factor on the calculation of slow money

Forecast at price control	
Totex allowance	£100
Assumed RAV additions	£80
Actual reported in period	
Actual totex costs	£150
Sharing amount	£25
Totex post sharing	£125
RAV additions	£100

4.11. The full proposed definition of Totex is included in Appendix 2.

4.12. In previous price controls, we defined RAV additions in detail to avoid double funding and to enable the incentive mechanisms to operate effectively. The proposed Totex approach will also have clear rules but will lead to a simplification of the overall reporting requirements and reduce debate about precise definitions and interpretation of rules.

4.13. Under the revised approach to pensions introduced in DPCR5, (see Chapter 6) we have undertaken to fund efficient established deficits from 1 April 2010. We said that from that date the annual funding cost of deficits arising from ongoing service for active scheme members, referred to as the incremental deficit, will be included as part of totex. The incremental deficit has arisen since 1 April 2010 and will be determined in accordance with the deficit allocation methodology.

4.14. We propose to continue to exclude related party margins from costs added to Totex unless the related party concerned earns at least 75 per cent of its turnover from sources other than related parties and charges to the licensed entity are consistent with charges to external customers.

4.15. We propose that the definition of related parties will exclude captive insurance companies whilst not allowing any excess losses (to the extent that they are covered by captive insurers) to be funded by customers. In our view, this protects consumers whilst allowing DNOs to act in an efficient manner.

Other RAV issues specific to electricity distribution

Related party margins on changes of group structures

4.16. We propose to maintain the policy applied at DPCR5 of dealing with related party margins on changes of group structures as, in our view, this has worked effectively in DPCR5 to protect consumers from changes in ownership of DNOs.

Connections

4.17. We propose to continue the methodology used in DPCR5 for connections costs, in that we propose to treat customer contributions in the same way for RAV purposes as the gross costs of providing the connections. Sole use connections (fully funded by customer contributions) will not be taken into account for setting base demand allowed revenues or for Totex and RAV purposes. We will continue to monitor closely the allocation of indirect costs between this activity and other activities covered by price control revenues to ensure that those related to sole use connections are excluded.

RAV calculation 2013-14 and 2014-15

4.18. We propose to use DNOs' estimates of 2013-14 and 2014-15 expenditure to set the opening RAV. The companies should provide the former as part of the annual price control cost reporting returns; and the latter is to be provided by the companies in their business plans. In the event that actual 2013-14 and 2014-15 RAV additions turn out to be different to the forecasts, we will adjust revenue in ED1 in accordance with the annual iteration process (see Chapter 7).

Asset lives and depreciation

4.19. We set the RIIO context for asset lives in the RIIO-T1 and GD1 financial issues strategy documents. In January 2011 we issued a consultation specific to the electricity distribution economic asset lives; and in March 2011 we published our decision[22] on the regulatory asset lives for electricity distribution.

4.20. Our decision on the approach to asset lives for electricity distribution assets is to apply an average expected economic asset life of 45 years for new assets, with straight-line depreciation. The new asset life will only apply to new investment from the commencement of RIIO-ED1 on 1 April 2015. Existing assets will continue to use the existing 20-year asset life.

[22] Decision letter on the regulatory asset lives for electricity distribution assets (49/11) http://www.ofgem.gov.uk/Networks/Policy/Documents1/assetlivedecision.pdf

Transitional arrangements

4.21. We are committed to ensuring that efficient networks are able to raise the finance they require, both equity and debt, in a timely manner. We recognise that, even with the policy of applying the change in asset lives to new assets only, transitional arrangements may be required. DNOs will have the opportunity to demonstrate in their RIIO-ED1 business plans the transitional arrangements that they believe are necessary to ensure financeability.

4.22. Our preference is to manage the transition over one price control period if possible. This period, combined with the extensive period of consultation preceding it, should provide a sufficient time to allow companies to adapt their financing approach and to avoid any financeability concerns. Our prime driver for the length of transition is the need to ensure companies are financeable.

5. Taxation

Chapter Summary

This chapter examines a number of options for the implementation of our taxation methodology. We indicate our preferred treatment.

Question 1: Do you agree with modelling tax under the ASB proposed accounting frameworks for financial reporting in the UK with any changes to be subject to the tax trigger?
Question 2: We invite views on the calibration of the dead-band.
Question 3: Do you agree that clawback of the tax benefit of excess gearing in DPCR5 should be spread over the eight years of the RIIO price control? If not, which alternative option do you prefer?
Question 4: Do you agree that the revenue adjustment for tax clawback should be applied annually as part of the annual iteration process?
Question 5: Do you agree with our treatment of expenditure for tax modelling including the cash flows of corporation tax payments?
Question 6: Do you agree with modelling of expenditure subject to capital allowance and capital allowance pool balances?
Question 7: Do you agree with our proposal for funding business rates?

Introduction

5.1. The proposed methodology for taxation for RIIO-ED1 (as well as RIIO-T1 and RIIO-GD1) follows that applied at DPCR5 as refined for an eight-year compared to a five-year price control. This includes the continuing use of the tax trigger. It takes into consideration specific electricity distribution issues. The proposed methodology is set out in Appendix 3. This chapter deals with issues for consultation.

Modelling taxation on existing legislation or proposals

5.2. We apply the UK standard tax rules that have passed into legislation at the time of the price control proposals, together with any relevant proposed changes. As in DPCR5, any subsequent revision or non-implementation of proposals will fall within the tax trigger mechanism.

5.3. We propose to model tax as at 1 April 2015 based on the Accounting Standards Board's (ASB) revised draft proposals for the future financial reporting in the UK[23]. Broadly, this means that companies would follow, from 1 April 2015, EU-IFRS (International Financial Reporting Standards as adopted by the European Union), if they had already adopted it for the statutory

[23] Draft FRS 100 'Application of Financial Reporting Requirements' and FRS 102 'The Financial Reporting Standard applicable in the UK and Republic of Ireland' published January 2012.

accounts. For companies that have not yet adopted EU-IFRS, the 'new' UK GAAP (Generally Accepted Accounting Principles) accounting framework will apply. This new UK GAAP is proposed to be based on IFRS for small and medium-sized enterprises, with certain exceptions, and retains some existing UK GAAP treatment. The ASB's timetable is to publish their final proposals later this year. We will consider these in our strategy decision document. Any deferral of the new UK accounting frameworks that affects the tax assumptions we have made would be a tax trigger event.

5.4. We assume that all capital allowances are claimed at rates in line with current legislation and, except for deferred revenue, will be treated as claimed in the year the expenditure is incurred. We propose to treat deferred revenue as tax deductible in line with the DNO's accounting policy.

Tax trigger calibration of the dead band

5.5. The trigger point in DPCR5 was modelled as a change or changes that yield a greater than a 0.33 per cent increase or decrease in the total base revenue of an individual regulated business, on the basis of the aggregate effect over the remainder of the price control period. We propose to calibrate the dead band as the greater of a one per cent change in the rate of mainstream corporation tax (CT) and a change of 0.33 per cent in base demand revenues. We propose that these amounts be fixed throughout the price control for each DNO and are not revised through the operation of the annual iteration process. If the amounts are broadly constant over the period, we may set a fixed amount per annum per DNO for the period. We invite views on the calibration of the dead band.

Timing of tax clawback

5.6. Where the tax clawback for excess gearing during DPCR5 is triggered, the options are to apply the adjustment in one of the following ways:

(a) The first year of the subsequent price control review which, dependent on the quantum, may result in a significant increase in costs for customers, compared with the last year of the DPCR5 period
(b) For DPCR5 adjustments, spread evenly over the eight years of RIIO-ED1, this smoothes revenues and impacts customers less than (a) above.

5.7. We invite views on which is the most appropriate option. Our preferred option is (b). We will, make all adjustments NPV neutral.

Timing of tax clawback adjustment to revenues in RIIO-ED1

5.8. The timing of the price control review means that we will set allowed revenues for RIIO-ED1 before we have actual figures for all years of the existing DPCR5 price control period. We consider that waiting until the end of the eight-year RIIO-ED1 period to apply the tax clawback is too long. We propose to update

this annually as part of the annual iteration process. We will use data submitted in the Regulatory Reporting Pack (RRP).

5.9. We invite views on this proposal.

Modelling cash flows of corporation tax (CT) payments

5.10. Tax legislation regards all DNOs as large companies and, as such, they are required to pay their tax liabilities for any given year in instalments commencing in the current year. In DPCR5, we assumed that half the annual charge to CT was paid in the regulatory year, and half in the subsequent year, and ignore subventions for surrendered tax losses. We indicated that we would take no account of additional payments (or receipts) from settling earlier years' tax liabilities. The spreading of CT payments over two years is a useful refinement when tax liabilities are uneven from year to year. In introducing the annual iteration process, such a refinement is an unnecessary complication if liabilities are revised retrospectively. We propose to model tax liabilities and resultant cash flows as being incurred in the year they arise as proposed for RIIO-T1 and GD1 and invite views on this proposal.

Tax treatment of incentives

5.11. All incentive revenues or penalties are on a pre-tax basis (ie it is not intended that they give rise to further revenues in respect of the tax charge in the revenues) apart from those which form part of Totex or are investment related.

Capital allowances

5.12. We propose to retain the application of generic attributions of qualifying expenditure to capital allowance (CA) pools. We do this, as companies should have similar allocation profiles for the same type of expenditure. A comparison of actual allocations during DPCR5 to date against individual company forecasts and historical attributions highlights variations. A similar result is seen in comparing outturn to our generic attributions. In our view, generic attributions have not materially advantaged or disadvantaged individual DNOs; nor have actual attributions followed the DNO's individual forecasts.

5.13. Companies in their business plan should apply their view of the attributions to relevant CA pools.

5.14. We propose to reset the opening CA pools at 1 April 2015 based on the DNO's latest actual returns and forecast for the final year(s) of DPCR5. As part of the annual iteration process we propose to reset the opening pool balances at 1 April 2015, once the 2014-15 data is available and has been reviewed and moderated for any issues.

5.15. We invite views on the above proposal to reset opening CA pools at 1 April 2015.

Business rates

5.16. We have treated business rates as non-controllable operating costs (together with our licence fee) as at past controls. The Valuation Office Agency (VOA) in England and Wales and Scottish Assessors Association (SAA) in Scotland expect to undertake further revaluations in 2015 and 2020. We consider that each network company is able to influence the valuation that is given and hence the business rates that it will incur in the future.

5.17. We recognise that for the ratings valuation that will occur in 2015, there is uncertainty regarding the future level of business rates that network companies will incur. In our view, it is important that network companies should have appropriate incentives to minimise their business rates. We have concerns that the existing mechanism might not provide a strong enough incentive on the network companies to protect the interests of consumers as part of ratings revaluations. However, we have not identified an alternative mechanism to address these concerns. The current mechanism enables companies to recover the difference between the actual and assumed costs. For the period from 1 April 2015, we are minded to switch-off this mechanism pending the outcome of the next revaluation exercise. Where network companies can demonstrate that they have taken reasonable actions to minimise the rating valuations, we will then reactivate the cost adjustment mechanism for the remainder of the period, (ie from 1 April 2015 up to 31 March 2021). We will deal with the 2020 valuation on a similar basis.

5.18. We consider that this approach provides incentives on network companies to minimise costs, whilst recognising that once the rating valuations are concluded the costs that they incur will be non-controllable.

5.19. We invite views on the above proposal.

6. Pensions

Chapter Summary

This chapter examines a number of options for the implementation of our pension methodology and the application of our pension principles in the context of RIIO price controls. It considers issues that are not covered by our existing policy or require decisions to implement policy in the context of a RIIO price control. We indicate our preferred treatment.

Question 1: Do you agree that the fast money true-up adjustments for DPCR5 should be spread over the eight years of the RIIO-ED1 price control if they exceed £1m per DNO? If not, which alternative option do you prefer?
Question 2: Do you agree with our proposals for the basis for the first and subsequent reset adjustments?
Question 3: We invite views from interested parties on how we conducted the latest pension reasonableness review, with a view to understanding what elements of the review were conducted well, what could be improved and what should be done differently in future reviews.
Question 4: We invite views on which of the options for pension scheme administration costs and Pension Protection Fund levies we should adopt; and, if our preferred approach were adopted, the methodology itself, and the level of the *de minimis* thresholds.
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?
Question 6: Do you agree that the costs of contingent assets be funded if clearly demonstrated to be in consumer's interests?
Question 7: We invite views on whether the revised guidance to our pension principles and the methodology is comprehensive and adequate for DNOs and stakeholders to understand how the principles will be applied in RIIO controls and for network companies to prepare their business plan.

Introduction

6.1. We propose to continue the methodology for RIIO-ED1 that was set out in DPCR5 Final Proposals[24], our 22 June 2010 Pension Principles document[25] and as refined for RIIO in our March 2011 Strategy document Financial Issues Supplement.[26] The proposed detailed methodology is in Appendix 6. We

[24] DPCR5 Final Proposals – Financial methodologies
http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=372&refer=NETWORKS/ELECDIST/PRICECNTRLS/DPCR5
[25] Pension Principles document
http://www.ofgem.gov.uk/Networks/Documents1/Price_Control_Treatment_of_Pension_Costs_final.pdf
[26] RIIO March 2011 Strategy document Financial Issues Supplement
http://www.ofgem.gov.uk/Networks/GasDistr/RIIO-GD1/ConRes/Documents1/GD1decisionfinance.pdf

consider issues in this chapter that are not covered by our existing policy or require decisions to implement policy in the context of a RIIO price control.

6.2. Our pension principles under RIIO remain the same as previously set out in our June 2010 decision document. We have updated the implementation guidance notes to apply our methodology to RIIO price controls (as noted above) and the items that we are consulting on - see Appendix 7.

6.3. We invite views on whether the revised guidance is comprehensive and clear enough to allow DNOs and stakeholders to understand how the principles will be applied in RIIO controls, and for DNOs to prepare their business plans.

Timing

Timing of true-up adjustments for DPCR5

6.4. The established deficit is funded over our notional 15-year funding period as set out in our proposed pensions methodology (Appendix 6) and pension principles (Appendix 7). This applies a rolling triennial reset and true-up outside the price control cycle. Under this the first three years established deficit funding costs to 31 March 2013 will be subject to true-up (based on valuations at the latter date) and reset in revenues on 1 April 2015. Any adjustments are spread evenly over the residual years of the 15-year notional funding period, ie 10 years as at the start of RIIO-ED1 to 31 March 2025.

6.5. We propose to spread the true-up of the difference between the forecast deficits (at 30 September 2009) used to set allowances for DPCR5 and the established deficits at 31 March 2010 equally over our notional 15-year funding period. We propose to do the same for the true-up of forecast costs for 2009-10.

6.6. All network operators' pension costs in their last full valuations (usually 31 March 2010) were the subject of a reasonableness review by the Government Actuary's Department (GAD). We published their report on our website on 28 May 2012.[27] We propose to make any necessary adjustments as part of the first reset.

6.7. We also propose to true-up the DPCR5 ongoing service costs on an NPV neutral basis using the methodology set out in the DPCR5 Final Proposals[28]. Part of the adjustment will be added to the RAV (as slow money) and part will be treated as fast money. The DPCR5 efficiency incentive rate will be applied to the total adjustment. Where the adjustment relies on forecast data, we will

[27] Government Actuary's Department (GAD) Report - Review of network operator's pensions costs May 2012 http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=126&refer=Networks
[28] DPCR5 Final Proposals – Financial Methodologies (chapter 10) http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=372&refer=NETWORKS/ELECDIST/PRICECNTRLS/DPCR5

adjust revenues for any differences between the forecasts used and the actual costs when reported at the first reset in RIIO-ED1, ie 1 April 2015, or 2016 - dependent on when the data is received.

6.8. The period of time over which the fast money element of ongoing service costs arising in DPCR5 is applied was not specified in DPCR5 Final Proposals. We invite views on the following options:

(a) one year, ie the first year of the RIIO-ED1 period, which could, dependent on the quantum, result in a significant volatility in charges for customers compared with the last year of the DPCR5 price control period
(b) the length of the RIIO-ED1 price control period, ie eight years.

6.9. To alleviate significant volatility in revenue (and charges to customers) our preference is to spread the true-up when it exceeds £1m in a DNO over the period of the RIIO-ED1 price control (option b). We invite views on this proposal.

Determining the established deficit

6.10. In our DPCR5 Final Proposals and our 22 June 2010 Pension Principles document, we published a proposed methodology for the attribution of a pension scheme's deficit between established and incremental deficit. This was to apply to all energy network operators. Since then, discussions with network operators (NWOs) have been ongoing. The DNOs, through the Energy Network Association (ENA) are in the process of responding to our latest proposals. We expect to publish the final methodology before the Strategy decision document. This methodology replaces the previous basis for ascertaining the regulatory fraction from 1 April 2010 in DPCR5. The DNOs and other NWOs will need to submit a return in support of their first reset when their March 2013 valuations have been finalised.

Timing of updated valuations

6.11. In accordance with our pension methodology and principles, deficit-funding allowances for the RIIO price controls are determined using valuations every three years. For DNOs, this cycle commenced on 1 April 2010. At DPCR5, we stated that there would be a reasonableness review at the end of the price control period or in any case no longer than five years after the initial allowances were set. We propose to align the reviews across all RIIO controls and to set allowances for both fast and slow-tracked companies based on the outcome of the March 2013 valuations and reasonableness review thereon. This takes into consideration the potential for the approval of final March 2013 valuations to be delayed beyond 30 June 2014[29] and that completion of the subsequent reasonableness review thereon, may take until late November 2014 or later. In accordance with our triennial true-up and reset methodology,

[29] Under The Pensions Regulator (TPR) rules, valuations and recovery plans must be agreed and submitted to TPR within 15 months of the valuation date.

we will apply the true-up adjustments and reset revenues for both slow- and fast-tracked companies effective 1 April 2015. If the reasonableness review is not completed in time to be reflected in final proposals, we will reset revenues from 1 April 2016 on an NPV neutral basis.

6.12. We will require actuarial valuations to inform the first and subsequent resetting and true-up and reasonableness reviews. Those valuations will be full triennial valuations where the DNOs scheme full valuation date is 31 March 2013 (and every three years thereafter). Where this is not the case, we require the DNO to submit a roll forward valuation based on the last full valuation. The basis for roll forward valuations has recently been discussed with all NWOs and the proposed approach is set out in Appendix 6.

6.13. In preparing their business plans, we propose that DNOs should use a roll-forward of their previous full actuarial valuation (ie at 31 March 2009 or 2010) to 31 December 2012. We do this so that the underlying valuation has been included in the recent reasonableness review. This proposal accords with the triennial reset and true-up process in RIIO controls.

6.14. In accordance with our pension methodology and our pension principles, the annual funding cost for the incremental deficit should be included in totex. The forecast of any future annual incremental deficit funding costs should be sufficiently robust to justify their inclusion. We require these to be supported and justified by actuarial evidence.

6.15. Annual incremental deficit funding payments will be the actual payments made by the network operators determined in accordance with the pension deficit allocation methodology.

6.16. This basis will be followed at subsequent triennial reset points and aligns with the annual iteration process.

Deficit

Notional deficit repair period

6.17. As set out in our 22 June 2010 Pension Principles document and DPCR5 Final Proposals, we propose that efficient established deficit costs will be funded over the notional 15-year deficit-funding period commencing from 1 April 2010. We will apply a flat profile over the deficit-funding period allowing a rate of return. We do not reset the 15-year period at each subsequent control. Our intention is that the established deficit at the 31 March 2010 cut-off date will be fully funded over the following 15 years in accordance with our pension principles, subject to increases in the deficit due to factors outside the DNO's control.

6.18. We see no reason to change from a 15-year notional period set in the 22 June 2010 Pension Principles document. Our view is that given the monopoly status of the DNOs, our financing duty and the strong commitment to funding the deficits, these provide a strong employer covenant and, we believe, a long notional recovery period is appropriate. We note that the Competition Commission set funding at 15 years in their review of Bristol Water plc.

Deficit funding rate of return

6.19. Prior to DPCR5, the Weighted Average Cost of Capital (WACC) was used to annuitise deficit funding. At DPCR5, we considered that this was not appropriate and amended the basis to use a pre-retirement real discount rate. We propose to retain this basis. We will derive this rate of return from the range of moderated benchmarked pre-retirement real discount rates in DNOs' schemes in accordance with our methodology. We will review and reset this rate every three years commencing with the review of valuations at 31 March 2013.

The reasonableness review

6.20. We introduced a reasonableness review process as part of our revised approach to pensions in 2010. GAD carried out the first review under this new approach using March 2010 data wherever possible. As noted above, we published their report[30] on 28 May 2012. We will make any necessary adjustments as part of the price control process and we have advised companies of the outcome so that they may apply the latest information when preparing their business plans.

6.21. The latest GAD reasonableness review is the outcome of a two-year process. We are keen to understand stakeholders' views of how that review process worked. We would like to build on these experiences when undertaking the next review and use the lessons learned to improve the process and meet the time constraints imposed by the annual iteration process, DNOs, trustees and the pension regulators timetables.

6.22. We invite views from interested parties on how we conducted the review, with a view to understanding what elements of the review were conducted well, what could be improved and what should be done differently in future reviews.

Resetting allowances during the price control period

6.23. We propose to undertake a reasonableness review in mid-2014, true-up and reset revenues from 1 April 2015 and every three years thereafter. We do not intend to true-up at the end of the each price control period unless this coincides with the rolling three year true-up and reset cycle. We will conduct

[30] Government Actuary's Department (GAD) Report - Review of network operator's pensions costs May 2012 http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=126&refer=Networks

all future reasonableness reviews across all energy network operators, as with the recently completed review. We set out a three-year true-up and reset process in RIIO-T1 and GD1 March 2011 Strategy document[31]. We propose to apply the same methodology in RIIO-ED1, as set out in Appendix 6.

6.24. We invite views on whether that methodology is comprehensive; and, if not, what additional guidance we should provide.

Pension Protection Fund levy and pension scheme administration costs

6.25. Under our DPCR5 methodology, PPF levies and pension scheme administration costs were subject to separate allowances and subject to the same incentive sharing mechanism as all other costs. They were not subject to true-up.

6.26. The PPF introduced a new framework for setting levies that applies from 1 April 2012. All Defined Benefit schemes were required to submit data to the PPF under this framework on 31 March 2012. The PPF will review the levies and may amend them every three years. This new basis may increase, or decrease, the quantum of each schemes annual levy as the PPF adopts a more risk based approach to each scheme's assets and liabilities and the likelihood of failure. DNOs and other NWOs, as scheme sponsors or co-sponsors, have some influence over the quantum of the PPF levy and some scope to mitigate the costs.

6.27. In RIIO-T1 and GD1, we have proposed a separate allowance for both PPF levies and scheme administration costs. We have proposed to true-up and reset these allowances every three years, subject to a review for efficiency and a de minimis threshold, below which there will be no true-up adjustment or reset. In RIIO-T1 and GD1, the proposed de minimis threshold is £1m for each licensee. These costs will not be part of the totex incentive mechanism. A universal threshold when applied at individual licensee level may disadvantage singletons and conversely, advantage those schemes with two or more licensees. Any over or under-spend against the allowance below the threshold would be for licensees to fund or retain respectively. If the outturn is over the threshold, then subject to costs being economic and efficient, the excess over the threshold will be funded.

6.28. For RIIO-ED1, we can either retain the DPCR5 approach or, for consistency, adopt that proposed for RIIO-T1 and GD1. Our preference is for a common approach across all RIIO price controls. We invite views on the options.

Deficit values, de-risking strategies and current market conditions

6.29. Companies are experiencing a significant increase in their updated deficits (used to set allowances) compared to recent years and their last full valuation.

[31] RIIO March 2011 Strategy document Financial Issues Supplement http://www.ofgem.gov.uk/Networks/GasDistr/RIIO-GD1/ConRes/Documents1/GD1decisionfinance.pdf

We have observed that scheme valuations are currently being adversely affected by the low or negative real returns, currently experienced for gilts.

6.30. Companies consider that de-risking should protect the funding position of their scheme, in that it limits the downside risk. However, it may significantly reduce the upside from future out-performance.

6.31. We will keep under review any increase in the burden for consumers from the trend to de-risking these mature closed schemes. Such an increase may arise from a combination of the speed and timing of de-risking, the use of conservative valuation and asset return assumptions (particularly of gilts, which are currently showing negative real returns) and increasing longevity. We expect companies to demonstrate how their de-risking strategies are protecting future scheme funding and the benefits that they expect to flow to consumers.

6.32. We invite views on whether companies should demonstrate how their de-risking strategies are protecting pension scheme funding levels and highlight the potential benefits of these strategies to consumers.

Innovative investment strategies and contingent assets

6.33. Our pension principles in Appendix 7 set out our proposed approach to both innovative investment strategies, used to manage scheme's liabilities and hedge risks, and contingent assets. Where these are used, we will examine each on its merits. Where these include the use of internal inflation hedges, eg as adopted by United Utilities, we will discuss with companies the appropriate mechanisms to be applied to additional funding payments within our pension principles; and set out the methodologies in advance to provide regulatory certainty on their treatment. The use of contingent assets may present issues under the Indebtedness licence condition; and, dependent on how they are instituted and their actual costs will be dealt with on a case-by-case basis. We will also need to consider and be satisfied that the related costs are in consumer's interests, before we may allow them. We will expect network companies to provide a detailed and robust demonstration that such costs and the expected benefits are in consumers' interests.

6.34. Do you agree that the costs of contingent assets should be funded if demonstrated to be in consumers' interests?

Appropriate valuations

6.35. We require an actuarial valuation from all DNOs and other NWOs at each cut-off date and subsequent triennial review dates. We have set these dates to be concurrent with the majority of licensees' pension schemes full triennial valuation dates. Where the latter is not the case, we require those companies to provide a roll forward valuation from their last full valuation, to the relevant

cut-off date and at each subsequent review date. Any network company whose actual full valuation date is not concurrent with the relevant price control cut-off date is requested to prepare a roll forward valuation on the above basis as at the respective cut-off dates. The proposed cut-off and review dates are set out in Appendix 6.

7. Annual iteration process for base revenue

Chapter Summary

This chapter sets out our proposals for an annual iteration process which would allow base revenue to be updated annually in the light of the performance and output levels achieved by each DNO.

Question 1: We invite views from interested parties on the proposed annual iteration process.

Introduction to the annual iteration process

7.1. We propose that the RIIO-ED1 price control will include an Annual Iteration Process. This will allow base revenues to be updated during the price control in light of the performance and output levels achieved by DNOs and other NWOs. Under the proposed annual iteration process, base revenues would be remodelled using a series of revised variable values. The process would calculate an incremental change to base revenue, the 'MOD' term, which would be advised by 30th November proceeding each regulatory year. The rules for determining revised variable values and for carrying out the Annual Iteration Process would be contained in special conditions of the RIIO-ED1 licences and in the Price Control Financial Handbook. The Price Control Financial Model and Handbook (the Financial Instruments) are proposed to be incorporated into licences and subject to formal modification procedures. The Financial Instruments would be published on the Ofgem website to promote transparency and so that stakeholders can use them for revenue and charging forecasts.

Adjustments to base revenues during RIIO price control periods

7.2. The RIIO-ED1 price control covers an eight-year period, providing a longer period of settled price control arrangements than the five-year period under the RPI-X price control regimes. In the RIIO approach the DNO's allowed revenues should reflect its performance under incentive schemes, its innovativeness, and the network operation outputs that it achieves. Under RPI-X, base revenue allowances were fixed at the outset of the five-year price control period; for eight-year RIIO price controls we need a way to remodel base revenue allowances on an annual basis.

7.3. We propose to achieve this through an annual iteration process for the Price Control Financial Model (PCFM) under a governance regime set down in the price control licence conditions and the supporting Price Control Financial Handbook.

7.4. Opening base revenue levels (PU values) for each DNO (for each year of the RIIO price control period) will be determined using values and parameters contained in the PCFM, consistent with the RIIO-ED1 Final Proposals. They will also be set down in the allowed revenue price control licence condition for each DNO. Base revenue is the largest component of a DNO's overall allowed revenue under the price control arrangements - typically over 80 per cent of the total.

7.5. The annual iteration process for the PCFM will generate a value for the modification term MODt, which serves to adjust the DNO's opening base revenue each year, as illustrated in the simplified formula below:

Base revenue for year t (BRt) = opening base revenue for year t (PUt) + MOD for year t (MODt).

The Price Control Financial Instruments

7.6. The handbook and PCFM are collectively referred to as the Price Control Financial Instruments ("the financial instruments"). The financial instruments are proposed to be incorporated into a new 'Governance of Price Control Financial Instruments' licence condition' of each licence and will be subject to a formal modification process set out in that condition. However, in any case of conflict of meaning the following order of precedence will apply:

i. the licence
ii. the handbook and constituent methodologies
iii. the PCFM.

7.7. The proposed modification process for the financial instruments provides for:

- modifications which are not expected to have a significant impact on stakeholders to be made by the Authority, subject to a 28 day notice period
- modifications which are expected to have a significant impact on stakeholders to be made in accordance with section 11 of the Electricity Act 1989 as applicable.

7.8. DNOs would have the right to prevent a modification being made under the 28 day notice process (thereby effectively requiring modifications to be made under the legislative provisions) where they reasonably consider that a modification would in fact have a significant impact on stakeholders.

7.9. We propose to keep official copies of the financial instruments together with the official copies of licences. Up to date copies of the PCFM and the handbook will be maintained on the Ofgem website, allowing DNOs and other interested stakeholders to:

- reproduce the calculation of MODt each year using the values directed by the Authority
- use their forecasts of PCFM Variable Value revisions (see next section) to carry out revenue sensitivity analysis.

7.10. The proposed PCFM has been designed to be as user-friendly as possible for these purposes.

The Annual Iteration Process for the PCFM

7.11. The PCFM is contained in an Excel® workbook which includes a PCFM Variable Values Table on the input sheet, specific to each DNO. The PCFM Variable Values Table is arranged with:

- columns – one for each relevant/regulatory year of the RIIO price control period
- rows – one for each type of PCFM Variable Value.

7.12. The annual iteration process involves a re-running of the calculation functions in the PCFM by Ofgem, after a defined range of PCFM Variable Values have been revised in accordance with provisions contained in the price control licence conditions and in relevant chapters of the handbook. The basis for determining a PCFM Variable Value revision may be:

- a formula in a licence condition
- an application/review process set out in a licence condition
- a detailed methodology described in the handbook.

7.13. In all cases, however, the name and purpose of a PCFM Variable Value will be specified in the relevant special condition, and a description of its effect under the annual iteration process will be given in the methodology chapters of the handbook.

7.14. The PCFM for RIIO-ED1 is proposed to operate in a constant 2011-12 price base. This means that all revisions to monetary PCFM Variable Values would be input in 2011-12 prices and the relevant licence conditions and handbook methodologies will provide for this.

Types of adjustment under the annual iteration process

7.15. The incorporation of the annual iteration process into the RIIO price controls means that timely adjustments can be made to DNOs' base revenue allowances in respect of:

- tax, pensions and cost-of-debt factors (specified financial adjustments)
- allowed totex for various aspects of network operation
- the Totex Incentive Mechanism (TIM)
- the close-out of financial adjustments relating to previous price control periods (legacy price control adjustments).

7.16. A key advantage of this approach is that changes to allowed totex expenditure will be subject to the RIIO equalised incentives approach (fast/slow money treatment) on a prompt basis. In addition, financial adjustments represented by PCFM Variable Value revisions will interact fully with other modelling factors under the annual iteration process.

7.17. PCFM Variable Values can be:

Revenue allowance amounts

This type of PCFM Variable Value relates for example to pension and tax cost allowances. These amounts are determined off-line under methodologies contained in the handbook

Allowed expenditure figures

This type of PCFM Variable Value relates to categories of allowed Totex expenditure which can be varied during the price control period. A revised allowed expenditure figure overwrites the existing one for the regulatory year concerned. These amounts are modelled, subject to the regulatory capitalisation rate, as:

- fast money – flowing directly to the base revenue figure for the relevant/regulatory year to which the allowed expenditure relates
- additions to the DNO's RAV in the relevant year to which the allowed expenditure relates, generating a slow money adjustment to allowed revenues through the cost of capital return, depreciation and Totex incentive mechanism.

Percentage

This type of PCFM Variable Value currently relates only to the cost of corporate debt.

True-up revenue allowances

This type of PCFM Variable Value relates to revenue adjustments due from the close out of legacy (pre-RIIO) price control mechanisms.

True-up RAV additions

This type of PCFM Variable Value relates to RAV balance adjustments due from the close out of legacy (pre-RIIO) price control mechanisms.
The handbook includes a table listing each PCFM Variable Value, indicating the licence condition in which it is specified and its type.

Calculation of the value of MODt

7.18. Under the annual iteration process, the base revenue figure for each DNO, for each year of the price control period, is remodelled using the latest revised set of PCFM Variable Values. The remodelling includes all of the consequential effects of variable value revisions. For example, PCFM Variable Value revisions reflecting increased levels of allowed totex expenditure might trigger a change to the modelled allowance for notional new equity issuance. Consequential adjustments of this kind for the RIIO-ED1 PCFM would be in accordance with the RIIO-ED1 Final Proposals and would feed through into the value of the term MODt produced as the output of the annual iteration process.

7.19. The PCFM functionality applies appropriate time value of money adjustments wherever PCFM Variable Values for regulatory years before regulatory year t are revised. If we only changed the PCFM Variable Values on a single occasion during the price control period, the value of the term MOD for each regulatory year would be the difference between the originally modelled value of base revenue for that year and the remodelled value.

7.20. However, each annual iteration process can involve the revision of PCFM Variable Values across a range of years, including values for earlier years, which might have been revised on a previous occasion. The PCFM functionality is designed to deal with this, and takes account of previously directed values of MOD in bringing forward the effects of re-modelling calculations to the extant value of MODt (see also the section on timetable for the annual iteration process below). This means that once the value of the MOD term for a particular regulatory year has been directed, it is not subsequently changed as a result of later annual iteration processes.

Timetable for the annual iteration process

7.21. The annual iteration process for the PCFM is proposed to take place by 30 November each year. On or before that date, or if that is not possible, as soon as is reasonably practicable thereafter, we would publish a direction to each DNO setting out:

- any revisions to PCFM values for the annual iteration process
- a complete, updated copy of the PCFM Variable Values Table for the DNO
- the value of the term MODt for the DNO.

7.22. The MOD term is used to adjust the opening base revenue figure for each regulatory year t during the price control period. References to regulatory years are made relative to that usage so that, for example, in a context where MODt applied in the formula for base revenue in 2015-16, a reference in the same context to regulatory year t-1 would mean 2014-15 and so on.

7.23. Should any change in PCFM functionality be necessary during the course of the RIIO-ED1 price control, it would be governed by the formal change control

process as set out in the handbook. The cut off date for updating functional changes to the PCFM is expected to be 30 September each year.

7.24. The annual iteration process takes place in regulatory year t-1 (relative to regulatory year t in respect of which a value for MODt is being calculated). The proposed summary timeline for the annual iteration process is:

- 31 July – deadline for submission of price control data by DNOs
- 30 September – cut off for functional modifications to the PCFM
- 31 October – cut off date for establishing data needed to determine PCFM Variable Values
- by 15 November – notify DNOs of proposed PCFM Variable Values
- by 30 November – direct PCFM Variable Values & complete annual iteration process and direct values for MODt.

7.25. This timeline is driven by two constraining factors. Firstly, the process must begin late enough so that price control data for regulatory year t-2 (relative to the regulatory year for which MODt is being determined) can be obtained and validated. Secondly, the annual iteration process must be completed early enough so that DNOs can prepare indicative use of system charging statements for publication by 31 December (in regulatory year t-1). We will, however, strive to complete each stage of the annual iteration process as early as possible each year.

7.26. The drafting of the licence conditions and methodologies in the handbook will set out the regulatory years (columns on the PCFM Variable Values Table) in respect of which each type of PCFM Variable Value will normally be revised. However, they also provide for PCFM Variable Values to be revised for other years (columns) when necessary. This provides the flexibility needed to deal with data errors or omissions. The annual iteration process for the PCFM will appropriately bring forward the effect of any such revisions in the calculation of the latest value for the MOD term.

Appendices

Index

Appendix	Name of Appendix	Page Number
1	Consultation Response and Questions	51
2	RAV methodology	54
3	Taxation methodology	59
4	Taxation trigger	64
5	Tax clawback methodology	73
6	Pension methodology	77
7	RIIO price control pension principles	84

Appendix 1 - Consultation Response and Questions

1.1. Ofgem would like to hear the views of interested parties in relation to any of the issues set out in this document.

1.2. We would especially welcome responses to the specific questions which we have set out at the beginning of each chapter heading and which are replicated below.

1.3. Responses should be received by 23 November 2012 and should be sent to:

- Peter Trafford
- Regulatory Finance
- 9 Milbank, London SW1P 3GE
- Telephone number: 020 7901 0510
- Email: RIIO.ED1@Ofgem.gov.uk

1.4. Unless marked confidential, all responses will be published by placing them in Ofgem's library and on its website www.ofgem.gov.uk. Respondents may request that their response is kept confidential. Ofgem shall respect this request, subject to any obligations to disclose information, for example, under the Freedom of Information Act 2000 or the Environmental Information Regulations 2004.

1.5. Respondents who wish to have their responses remain confidential should clearly mark the document/s to that effect and include the reasons for confidentiality. It would be helpful if responses could be submitted both electronically and in writing. Respondents are asked to put any confidential material in the appendices to their responses.

1.6. Next steps: Having considered the responses to this consultation, Ofgem intends to publish a strategy decision in February 2013. Any questions on this document should, in the first instance, be directed to:

- Peter Trafford
- Regulatory Finance
- 9 Milbank, London SW1P 3GE
- Telephone number: 020 7901 0510
- Email: RIIO.ED1@Ofgem.gov.uk

CHAPTER: Two

Question 1: Is our approach for setting the allowed return appropriate, particularly in the context of an eight-year price control?
Question 2: What considerations do we need to take into account when setting the notional gearing level?
Question 3: Is our proposed mechanism for annually updating the cost of debt assumption based on an index appropriate?
Question 4: Does our range for the cost of equity capture the DNOs' probable cost of equity in RIIO-ED1?
Question 5: Is the *ex ante* approach to the cost of raising notional equity appropriate for RIIO-ED1?

CHAPTER: Three

Question 1: Have we identified the correct equity and credit metrics?
Question 2: Do the rating agency credit metric levels quoted provide the most appropriate levels?

CHAPTER: Four

Question 1: Do you agree with our approach for the calculation of the percentage of totex allowed into RAV?
Question 2: Do you agree with our revised approach to Totex and with the costs that are included and excluded?
Question 3: We invite views on whether the definition of related parties should exclude captive insurance companies and whether our proposed approach is proportionate.

CHAPTER: Five

Question 1: Do you agree with modelling tax under the ASB proposed accounting frameworks for financial reporting in the UK with any changes to be subject to the tax trigger?
Question 2: We invite views on the calibration of the dead-band.
Question 3: Do you agree that clawback of the tax benefit of excess gearing in DPCR5 should be spread over the eight years of the RIIO price control? If not, which alternative option do you prefer?
Question 4: Do you agree that the revenue adjustment for tax clawback should be applied annually as part of the annual iteration process?
Question 5: Do you agree with our treatment of expenditure for tax modelling including the cash flows of corporation tax payments?
Question 6: Do you agree with modelling of expenditure subject to capital allowance and capital allowance pool balances?
Question 7: Do you agree with our proposal for funding business rates?

CHAPTER: Six

Question 1: Do you agree that the fast money true-up adjustments for DPCR5 should be spread over the eight years of the RIIO-ED1 price control if they exceed £1m per DNO? If not, which alternative option do you prefer?
Question 2: Do you agree with our proposals for the basis for the first and subsequent reset adjustments?
Question 3: We invite views from interested parties on how we conducted the latest pension reasonableness review, with a view to understanding what elements of the review were conducted well, what could be improved and what should be done differently in future reviews.
Question 4: We invite views on which of the options for pension scheme administration costs and Pension Protection Fund levies we should adopt; and, if our preferred approach were adopted, the methodology itself, and the level of the *de minimis* thresholds.
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?
Question 6: Do you agree that the costs of contingent assets be funded if clearly demonstrated to be in consumer's interests?
Question 7: We invite views on whether the revised guidance to our pension principles and the methodology is comprehensive and adequate for DNOs and stakeholders to understand how the principles will be applied in RIIO controls and for network companies to prepare their business plan.

CHAPTER: Seven

Question 1: We invite views from interested parties on the proposed annual iteration process.

Appendix 2 – RAV methodology

Computing the RAV

1.1. The RAV is a key building block of the price control review. RAV is a financial construct for providing funding for costs over a prolonged period and represents the value upon which the companies earn a return in accordance with the regulatory cost of capital and receive a depreciation allowance. In DPCR5, as a key element in our approach to equalising incentives, we made a fundamental review of the means by which costs are included in the RAV. We propose to follow this approach for all network companies. The speed of money will be as follows:

- an agreed percentage of Totex will be funded as slow money and added to the RAV
- the remainder will be funded as fast money which is expensed and funded in the year of expenditure.

1.2. Updated RAV values for each DNO will be included within the PCFM which will be published each year as part of the annual iteration process. In ascertaining these values it is important that the treatment of expenditure that network companies incur in this period is consistent with the principles and specific issues set out in the final proposals – that is, the same constituents of costs are added to the RAV (ie in the slow pot). We add all costs on a normal accruals basis. The definition of normal accruals will be set out in the Reporting Instructions, prepared and amended in accordance with the licence conditions.

Definition of Totex

1.3. The annual net additions to RAV will be calculated as a percentage of Totex. Totex consists of all economical and efficiently incurred expenditure relating to a DNO's regulated distribution business with the exception of:

- all costs relating to de minimis activities
- all costs relating to excluded services activities (including normal ongoing pension service costs and incremental deficit funding costs), except ES7 Miscellaneous excluded services (see 1.23)
- all metering services (metering excluded services and legacy meter asset provision)
- pension deficit repair payments relating to the established deficit (see Chapter 4) and for the avoidance of doubt, all unfunded early retirement deficiency costs (ERDC) post 1 April 2004, and (dependent on outcome of consultation) pension protection fund levies and pension scheme administration costs
- all costs associated with specific incentive schemes (including related normal ongoing pension service costs and incremental deficit funding costs), eg NIA/NIC
- all statutory or regulatory depreciation and amortisation
- profit margins from related parties (except where permitted as defined below)

- all additional costs relating to rebranding a company's assets or vehicles following a name or logo change
- all costs related to or arising from a change of ultimate controller, eg reconstructions and reorganisation
- any residual costs falling within the DPCR5 distributed generation (DG) scheme (except as an agreed transfer from the DG mechanism)
- any residual costs from the DPCR4 registered power zone (RPZ) incentive scheme
- fines and penalties incurred by the network company (including all tax penalties, fines and interest)
- compensation payments made in relation to standards of performance
- traffic management costs (including any associated fines or penalties)
- bad debt costs and receipts (subject to an *ex post* adjustment to allowed revenues)
- any asset revaluation amounts
- costs in relation to pass-through items, including business rates (except for business rates on non-operational buildings), Ofgem licence fees, Shetland Balancing costs, wheeled units and all transmission connection point charges
- all other excluded services
- interest, other financing (including costs of derivatives, hedges and swaps, and tax costs (except for business rates on non-operational buildings and stamp duty land tax); and reversing, where appropriate, any cost reporting which is not on a normal accruals basis.

1.4. The categories of costs comprising Totex are set out in the Cost Reporting RIGs.

1.5. In addition, the incentive payment given under the Totex incentive mechanism (TIM) where DNOs have spent less than their allowance is included in Totex; and, conversely, the unfunded overspend against the allowance is deducted from Totex.

1.6. For avoidance of doubt, in each case normal ongoing pension service costs and incremental deficit funding costs (which exclude pension scheme administration costs and PPF levies) will follow employment costs in each activity to RAV.

1.7. Costs included in Totex are all intended to refer to costs incurred by the DNO or a related party of the DNO undertaking regulated distribution business activities where those costs are recharged to the DNO, but do not include any internal profit margins of the DNO or related party margins, except where permitted. The treatment of related party margins is set out below.

1.8. Costs that are eligible for logging up or reopener mechanisms will follow the Totex treatment as set out above. However, there will also be a separate table in the Regulatory Reporting Instructions so that the value of these items are separately recorded to facilitate any adjustment to revenue as part of the review of costs or any reopeners that have been triggered.

Deductions from Totex

1.9. The following items are not included in the costs added to the RAV but are netted off additions to the relevant cost categories in carrying out the RAV roll forward calculation:

- cash proceeds of sale (or market value of intra-group transfer) of operational assets – by netting off the proceeds from the calculated additions to RAV
- cash proceeds of sale of assets as scrap – by netting off the proceeds from the calculated additions to RAV
- amounts recovered from third parties in respect of damage to the network – by netting off the proceeds from the calculated additions to RAV
- cash contributions and proceeds of claims - by netting off the proceeds from the calculated additions to RAV.

Other Totex requirements

Efficient costs

1.10. Ofgem reserves the option to disallow costs from Totex and, hence RAV, for any of these categories if they do not relate to the regulated business or are demonstrably inefficient or wasteful. We will specifically review all costs in relation to restructuring of a company's business or operations in relation to corporate transactions, including the associated redundancy costs to satisfy ourselves that these costs are efficient and will deliver future savings for the benefit of consumers.

Restated costs

1.11. For all costs, in whatever category, activity or exclusion, where a company makes any restatement of costs, we will apply these in to the year in which they were originally incurred rather than in the year of the restatement. This treatment aligns with the annual iteration process methodology.

Related party costs

1.12. Costs are only included to the extent they represent the cost of services required by the DNO's business. Costs for services recharged to the DNO by a related party will only be admissible if the DNO would otherwise have needed to carry out the service itself or procure it from a third party. We will expect these services and associated costs to be itemised and justified. Such costs are only included to the extent that they satisfy the criteria regarding the prohibition on cross-subsidy in the relevant standard or standard special licence condition. Where DNOs already hold derogations to cover the charging and reporting of specified shared services between two or more DNOs or other NWOs under common ownership, then the derogations have preference over these requirements.

1.13. All companies and related parties charging the DNO should be able to demonstrate they have a robust and transparent framework governing the attribution, allocation and inter-business recharging of revenues, expenses, assets and liabilities. There should be documented procedures to demonstrate compliance with EU Procurement directives and national legislation where these apply.

1.14. We would expect the network company to be able to justify the charge by reference to external benchmarking, or by reference to market-related testing, or tendering. We would expect related parties to be able to support their charges by either service level agreements or contracts; and that such contracts would be finalised on a timely basis and not remain in draft for an unreasonable period.

1.15. The attribution of costs relating to shared services must be on a demonstrably objective basis, not unduly benefiting the regulated company or any other company or organisation and be based on the levels of service or activity consumed by each entity. We expect DNOs to document the basis on which they approve these at board level and provide evidence of this together with details of how the continuing annual assessment and challenge, takes place.

1.16. The basis should be consistent from year to year and where there are changes the DNO should document and justify them. The method used to attribute costs from the related party to the DNO and to activities should be transparent and the revenues, costs, profits, assets and liabilities separately distinguishable.

Related party margins

1.17. We will exclude related party profit margins from costs added to RAV unless the related party concerned earns at least 75 per cent of its turnover from sources other than related parties and charges to the licensed entity are consistent with charges to external consumers. For this purpose, an entity we consider a related party if it is an Affiliate or Related Undertaking or if that entity and the network company have any other form of common ownership. A key indicator of entities being in common ownership is that they are affiliates of the Ultimate Controller (or controllers where there is more than one). The definition of related party will exclude captive insurance companies whilst not allowing any excess losses (to the extent that they are covered by captive insurers) to be funded by consumers. This protects consumers whilst allowing network operators to act in an efficient manner.

1.18. When an entity ceases to be a related party, for example on a change in ultimate controller, then from the time it ceases to be a related party its margins will be allowable, if it meets the following requirement. There must be an unambiguous demonstration that its charges to the distribution business (in the original or amended contract) remain competitive and are in line with market rates, or the contract was re-tendered and there was more than one bidder.

1.19. Whilst not precluding other demonstrations of competiveness, we consider that an open competitive tender is likely to be the clearest indicator. In the absence of an

open competitive tendering exercise, we will seek strong evidence that the terms of any contract are competitive.

1.20. Irrespective of whether the DNO demonstrates competition and they no longer disallow margins, the DNO must arrange to comply with the requirements of the relevant standard or special licence condition (on the maintenance and provision of information). It must continue to report the former related party's costs and margins as if it were still a related party for the remainder of the price control period. The data is required in order for us to be able to monitor performance against the price control and carry out cost analysis to inform future reviews.

1.21. Where a principal related party resource provider ceases to be a related party during a price control period, for example on the restructuring of a group, we shall continue to treat them as a related party until the end of that price control period and we will continue to disallow the margins charged. At the next price control period the margins will be allowed provided that there is unambiguous demonstration that the charges to the distribution business (in the original or amended contract) remain competitive and are in line with market rates, or that the contract is re-tendered and there is more than one bidder.

Adjustments for outturn variance on miscellaneous excluded services

1.22. There will be an *ex post* adjustment to Totex in respect of the difference between forecast and out-turn activity levels for miscellaneous excluded service (ES7) for item 1 below. We allow DNOs to set charges for excluded services at a level that allows them to recover their reasonable costs in providing the service with a reasonable margin of profit. The reasonable costs are comprised of two elements:

1) a share of the asset or operating cost funded by DUoS consumers
2) the incremental cost of providing the service.

Item 1 will be rebated to consumers via an adjustment to the DNO's Totex. Item 2 will not be adjusted provided the costs can be clearly identified from all other costs. The reasonable margin of profit will not be subject to adjustment provided it is demonstrated to be reasonable.

RAV calculation 2011-12 and 2012-13

1.23. The RAV additions used in determining allowed revenues for RIIO-ED1 will rely on company forecasts for 2013-14 and 2014-15 in their business plans. In the event that actual RAV additions for these years turn out to be different to the estimates, we will adjust the RAV through the annual iteration process with any adjustments being made to additions in the first year of RIIO-ED1. This is consistent with the approach adopted for such adjustments in RIIO-T1 and GD1.

1.24. An assessment of the efficiency of any Totex spend will be carried out as part of the Price Control review work. We will make adjustments relating to DPCR5 at that time, if appropriate.

Appendix 3 – Taxation methodology

Overriding principle

1.1. We model each regulated business for price control purposes as a standalone entity. We treat all expenditure as incurred directly by the regulated business. For this purpose, we consider each electricity distribution network to be an individual regulated business.

Applicable tax regime and accounting regime

1.2. We apply the UK standard tax rules that have passed into legislation at the time of the price control final proposals, together with any relevant Government proposed changes. As in DPCR5, any subsequent revision or non-implementation of proposals will fall within the tax trigger mechanism.

1.3. We are proposing to model tax as at 1 April 2015 based on the Accounting Standards Board (ASB) revised draft proposals for the future financial reporting in the UK. Broadly, this means that companies would follow, from 1 April 2015, EU-IFRS (International Financial Reporting Standards as adopted by the European Union), if they had already adopted it for the statutory accounts. For companies that have not yet adopted EU-IFRS, the 'new' UK GAAP (Generally Accepted Accounting Principles) accounting framework will apply. New UK GAAP is based on IFRS for small and medium-sized enterprises, with certain exceptions, and retains some existing UK GAAP treatment. The ASB's timetable is to publish their final proposals later this year and we will take them into account in our strategy decision document. Any deferral of the new UK accounting frameworks that affects the tax assumptions we have made would be a tax trigger event.

1.4. We assume that all capital allowances are claimed at rates in line with current legislation and, except for deferred revenue, is claimed in the year the expenditure is incurred. Deferred revenue is allowed as tax deductible applying the DNO's accounting policy.

Tax losses

1.5. Tax losses have not been an issue for electricity distribution companies in the past. We do not expect this to be an issue for RIIO-ED1. If tax losses arise we will not give affected network companies negative tax allowances; instead we will roll forward any tax losses as calculated on a regulatory basis and deduct them from expected tax allowances when the timing differences that led to the loss reverse.

1.6. In computing regulatory losses, we will ignore and reverse any surrender by a network company of losses to a group company and similarly for consortium relief, so that consumers benefit from the full amount of the losses as they reverse.

Modelling of expenditure allocations to capital allowance pools

1.7. We will use the following capital allowance pools:

- General Pool (for this purpose this includes vehicles, cars and short life assets)
- Special Rate Pool (for long life assets) - and the relevant rates of annual writing down allowance
- Deferred Revenue Expenditure Pool for costs capitalised in the financial statements and allowed as deductible when charged to revenue.

1.8. These pools reflect the relevant legislation in place and take into account the legislative changes to the capital allowances regime since previous reviews.

1.9. We will identify expenditure that does not qualify for capital allowances (principally interests in land), or is not deductible for computing taxable profits.

1.10. We will allow for specific expenditure that qualifies for research and development allowances, environmentally beneficial technologies, and for environmental remediation allowances at the relevant rates.

1.11. We will treat all other expenditure not qualifying for capital allowances or treated as non-qualifying, as revenue, which will attract a 100 per cent deduction.

1.12. We will derive the allocation of expenditure to individual capital allowance pools, revenue and expenditure non-qualifying for tax deduction from the regulated businesses' attributions in each allocation table.

Allocations to capital allowance pools

1.13. For RIIO-ED1, as for DPCR5, we will retain and apply a common approach to allocate allowed expenditure to capital allowance (CA) pools. This relies on an 'average' actual allocation based on the information we received from the network companies. We have adopted this basis as network companies have similar allocation profiles. We may need to do limited moderation of the allocations based on our view of where expenditure should be allocated according to the current legislation and published HMRC guidance manuals

1.14. There are two common allocation tables:

- one for DNOs who were party to an agreement with HMRC, which in effect created a separate 'deferred revenue' capital allowance pool for defined replacement and fault costs
- for the two DNOs that were not party to that agreement and who do not allocate any expenditure to this pool.

1.15. Cost allocation to CA pools, revenue and expenditure non-qualifying for tax deduction are derived from the average of all DNOs' attributions in each allocation table. The allocation basis of the key building blocks to the capital allowances pools are set out in table A2.1 below is that for DPCR5. This will be updated for RIIO-ED1 when the companies' business plans have been received.

Table A2.1 – Cost allocation to capital allowance pools - RIIO-ED1

	General Pool	Special Rate	Deferred Revenue	Revenue	Non-qualifing
DNOs party to non-load agreement					
Load Related	0.9%	91.3%	3.1%	0.0%	4.7%
Non-Load Related - asset replacement	0.0%	19.0%	78.0%	0.0%	3.0%
Non-Load Related - other	19.6%	33.3%	38.3%	0.0%	8.7%
Network operating costs	0.0%	3.7%	7.4%	88.8%	0.0%
Faults	0.0%	3.2%	63.0%	33.8%	0.0%
Trees	0.0%	18.3%	13.8%	67.8%	0.0%
Non Operational Capex	90.1%	2.3%	0.1%	0.0%	7.5%
Easements	0.0%	0.0%	0.0%	0.0%	100.0%
DNOs not party to non-load agreement					
Load Related	0.0%	98.1%	0.0%	0.0%	1.9%
Non-Load Related - asset replacement	0.0%	93.2%	0.0%	0.0%	6.8%
Non-Load Related - other	10.0%	80.8%	0.0%	0.0%	9.2%
Network operating costs	0.0%	0.0%	0.0%	100.0%	0.0%
Faults	0.0%	75.2%	0.0%	24.8%	0.0%
Trees	0.0%	0.0%	0.0%	100.0%	0.0%
Non Operational Capex	85.6%	0.0%	0.0%	0.0%	14.4%
Easements	0.0%	0.0%	0.0%	0.0%	100.0%

Opening capital allowance pool balances

1.16. The opening CA pool balances will be determined from the latest annual regulatory cost reporting pack (RRP) received, updated to the price control base year by addition of forecast spend by pool types from the Business Plans to 31 March 2015.

1.17. For DNOs with a 31 March accounting reference date, we expect to receive the CT600 corporation tax returns and supporting computations (CT600 information) for the year ended 31 March 2011 with the RRP due by 31 July 2012. For network companies with a 31 December accounting reference date, we will require CT600 information for the year ended 31 December 2011.

1.18. We will review the closing CA pools (as shown in the RRP) for consistency with the CT600 information, and for any adjustments made to exclude non-regulated activity allowances.

1.19. When the CA pools per the tax returns have been adjusted, so that they are on a comparable basis, we will identify outliers. We will then take a view as to whether to accept the balances as they stand, or amend them.

1.20. We will reset the opening CA pools at 1 April 2015 based on the DNO's latest actual returns and forecast for the final year(s) of DPCR5. As part of the annual iteration process we propose to reset the opening pool balances at 1 April 2015, once the 2014-15 data is available and has been reviewed and moderated for any issues.

1.21. We will roll forward the pools using the allocation methodology described above.

Capitalised indirect costs

1.22. We will use individual DNO-specific capitalisation policies to determine the treatment of indirect costs and to these we apply the allocation rates (as updated) to capital allowance pools set out above.

Modelling the tax deductibility of pension costs

1.23. The cash payments made by a DNO into a pension scheme are 100 per cent deductible in the year incurred, except where there are large irregular payments. Under the irregular payments rules, these are spread over the current and up to three future years in accordance with the legislation, dependent on their magnitude. For modelling and allowance setting, we assume that all pension payments attributable to the individual regulated business are paid in the year in which the allowance is given (to take account of the spreading of deficit repair costs). Pension adjustments relating to earlier price control periods are computed net of tax and will not attract any further tax relief.

Modelling cashflows of Corporation Tax (CT) payments

1.24. We treat all DNOs and the regulated business segments as large companies.

1.25. Under current tax legislation, network companies are treated as large companies and are required to pay their tax liabilities for any given year in instalments commencing in the current year. In DPCR5, we assumed that half the annual charge to CT was paid in the regulatory year, and half in the subsequent year, and ignore subventions for surrendered tax losses. We indicated that we would take no account of additional payments (or receipts) from settling earlier years' tax liabilities. The spreading of CT payments over two years is a useful refinement when tax liabilities are uneven from year to year. In introducing the annual iteration

process, such a refinement is an unnecessary complication when liabilities are revised retrospectively.

1.26. We have proposed to model tax liabilities and resultant cash flows as incurred in the year they arise and we are consulting on this proposal. We will confirm the treatment when the consultation has concluded.

Interest (payable and receivable)

1.27. We model interest payable by applying the nominal rate of interest (the assumed cost of debt plus modelled RPI estimate) to net debt as determined by the financial model, on an accruals basis year-on-year. We treat interest for tax purposes as fully deductible/taxable in the period in which it arises, subject to the tax clawback. We will ignore the forecast movement, if any, in derivative financial instruments in our modelling as these cannot be predicted with certainty.

Tax treatment of incentives

1.28. All incentive revenues or penalties are on a pre-tax basis, ie it is not intended that they give rise to further revenues in respect of the tax charge in the revenues.

Treatment of excluded services

1.29. We give no allowance or relief for tax in respect of excluded service costs and revenues, including sole use connections. In setting ex ante allowances, the costs attributable to these services are deducted from the cost base of providing use of system services.

Appendix 4 – Taxation trigger

Tax trigger mechanism

1.1. The trigger mechanism protects DNOs from material effects on their cashflows of legislative changes and is symmetrical for both DNOs and consumers. It fulfils the following key criteria, in that it:

- is unambiguously clear when a trigger event has occurred
- is measurable by Ofgem with minimal recourse to DNOs, (subject to ex post adjustment for those that cannot be determined until tax returns are agreed by Her Majesty's Revenue and Customs (HMRC)
- is simple and transparent to apply.

1.2. We will calculate these changes by re-running the price control financial model (without profiling, if adopted) to assess the impact on the tax allowance component of revenues. This will be based on the aggregate effect over the remainder of the price control period of changes in relevant legislation, whether introduced in a Finance Act, other Act of Parliament, Statutory Instrument or other legislative instrument.

1.3. In accordance with our tax methodology, we model the regulated business for price control purposes as a standalone entity. We treat all expenditure as if it is incurred directly in the regulated business. The trigger is only applicable to the activities for which base demand revenues are set, ie the regulated electricity distribution business. We will not apply the tax trigger to expenditure logged up or held outside of RAV, until it transfers into RAV.

1.4. The methodology and text below is that proposed for the draft RIIO-ED1 Price Control Financial Handbook and follows that proposed for RIIO-GD1 and T1.

Adjustments driven by tax trigger events - methodology

1.5. The methodology provides for the DNO’s tax liability allowances to be updated (subject to a threshold described below) to take account of tax trigger events. This means that consumers will derive a benefit when tax liability costs fall materially, and the DNO and its shareholders will be appropriately reimbursed when they rise.

Tax trigger events

1.6. There are two types of tax trigger event (TTE) for the purposes of tax liability allowance adjustments:

Type A
Type A events consist of:

- changes to corporation tax rates, applicable to one or more Formula Years
- changes to capital allowance rates applicable to one or more Formula Years.

Type B
Type B events consist of other factors (exogenous to the DNO, its owners or controllers) which cause a change to the DNO's notional tax liabilities for one or more Formula Years including:

- changes to applicable legislation
- the setting of legal precedents through case law
- changes to HMRC interpretation of legislation
- changes in accounting standards, including any deferral of the Accounting Standard Board's (ASB) implementation date for Financial Reporting Exposure Draft 48 (FRED48)[32].

1.7. Where a Type B event changes the allocation of allowable expenditure into different or introduces new capital allowance pools, the model will only be updated for the scale of the change driven by the policy and the applicable allowance rates will be adjusted to the new expected allocation basis. There is no adjustment of allocations to DNO's actual allocations for Formula Years up to the date of the change.

1.8. Type B events will only be taken into account where the DNO has demonstrably used all reasonable endeavours to minimise any increase in its tax liabilities.

Materiality threshold and 'deadband'

1.9. A materiality threshold is applied to tax trigger events during the price control period and a £m threshold amount for each Formula Year is included amongst the fixed values on the Tax Trigger sheet for the DNO in the RIIO-ED1 PCFM.

1.10. The materiality threshold for each Formula Year is fixed for the period of the price control. The threshold is determined as the greater of:

- 0.33 per cent of opening base revenue allowances ('PU' values) for the DNO
- effect of a one per cent change in the rate of corporation tax on the opening values of the PU term for each Formula Year.

[32] FRED48 The Financial Reporting Standard applicable to UK and Republic of Ireland published by ASB January 2012, which is expected to become FRS102

1.11. A change to tax liability allowances for a particular Formula Year is only applied where one or more trigger events result in a change to the DNO's tax liabilities for that year (upward or downward) by an amount which is greater than the threshold amount. Furthermore, any change to the tax liability allowance (upward or downward) is limited to the amount that is in excess of the threshold amount for the year concerned.

1.12. Where the change to the DNO's tax liabilities for a particular Formula Year is below the threshold, subsequent tax trigger events, relating back to that Formula Year could cause the threshold amount to be exceeded. In that case, a change to the DNO's tax liability allowance for the Formula year concerned (a revised TTE value) would be determined once the threshold has been exceeded.

1.13. For the avoidance of doubt, a regulatory tax loss figure attributable to a particular Formula Year is not taken into account for the purposes of deciding whether the threshold amount has been exceeded for that year.

Accounting standards

1.14. The DNO's tax liability calculations are subject to:

- specific legislative requirements
- case law
- HMRC interpretation of legislation
- requirements of the accounting framework applicable to preparation of the DNO's statutory accounts[33].

1.15. The accounting frameworks to be applied by the DNO for the purpose of computing tax liabilities are:

- EU- IFRS, if adopted for use by the DNO prior to 1 April 2015 or
- UK GAAP (under Financial Reporting Standard 102, as it will be known on the implementation of FRED48).

Notification of tax trigger events

Type A trigger events

1.16. Ofgem will, by 30 September in each Formula Year t-1, notify the DNO of the Type A trigger events which it proposes to take into account in determining any revised TTE values for use in the Annual Iteration Process that is required to take place by 30 November in that same Formula Year t-1. It is however, open to the DNO to contact Ofgem in advance of this date to discuss the current view of Type A events.

[33] Section 385 of the Companies Act 2006 refers.

1.17. The notification from Ofgem will specify the corporation tax rate change(s) or changes to rates of capital allowances concerned and the Formula Years to which they relate.

1.18. If, after receiving the notification referred to in paragraph 1.16, the DNO considers that a Type A trigger event has occurred, which has not been included in the notification, it should contact Ofgem within 14 days and provide details of the event concerned. If Ofgem agrees that a further Type A trigger event has occurred, it will notify the DNO by 31 October in the same Formula Year t-1.

1.19. If any Type A trigger event is left out of account when it ought to have been included in the determination of a revised TTE value (either because it was not included in a notice or otherwise) the position will be rectified in a subsequent revision of the TTE value(s) concerned. In such a case, the functionality of the PCFM means that a time value of money adjustment would be applied.

Type B trigger events

1.20. The DNO must notify Ofgem by 30 September in each Formula Year t-1 of all the Type B trigger events that it becomes aware of, except those that have been previously reported. This requirement applies equally to events that could be expected to increase or to reduce the DNO's tax liability allowances.

1.21. If the DNO fails to notify Ofgem of any increase in its tax liability it will not be made retrospective nor made PV neutral. If the failure relates to a reduction in the DNO's tax liability, then subject to the DNO demonstrating that is has taken all reasonable steps to identify all Type B trigger events this may not be held a breach of the licence conditions.

1.22. The notification from the DNO should include, in respect of each Type B trigger event:

(a) a description of the event
(b) the change in tax liabilities which the event is considered to cause and the Formula Years to which they relate
(c) the calculations (including all relevant parameters and values) which the DNO used to arrive at the amounts referred to in sub-paragraph b)
(d) any relevant information provided by HMRC in relation to the event
(e) evidence of mitigating measures which the DNO has taken to minimise any additional liabilities arising from the event.

1.23. The licensee's notification should also state whether the licensee considers that the materiality threshold has been exceeded for the Formula Year(s) concerned, taking into account the total net amount of tax liability changes (upward and downward) included in the current notification and any previous notifications.

1.24. Ofgem will review any notifications given to it by the licensee and may ask the licensee:

- for additional information in respect of one or more of the notified events and/or
- to submit the results of limited scope audit procedures, specified by Ofgem and carried out by the licensee's appropriate auditors , to assist in confirming the appropriateness and accuracy of the licensee's calculations.

1.25. Ofgem will inform the licensee by 31 October in the same Formula Year t-1 whether, in respect of each Type B trigger event:

- it has agreed the change in tax liabilities figure calculated by the licensee
- it has determined a different change in tax liabilities figure from that calculated by the licensee or
- it has decided that consideration of any change in tax liabilities should be deferred until further/better information is available.

1.26. Where Ofgem determines a different change in tax liabilities from that calculated by the licensee or decides that consideration of any change in tax liabilities should be deferred, it will set out its reasons and/or calculations.

1.27. Ofgem will also notify the licensee by 31 October in each Formula Year t-1, of any Type B trigger events that it proposes to take into account, but which have not been included in a notification sent to Ofgem by the licensee.

1.28. The final quantification and adjustment for any type B trigger event will be deemed to have occurred when the licensee and HMRC conclude the agreement of the licensee's tax liabilities for the relevant Formula Year.

Logging of trigger events

1.29. Ofgem will keep a log of tax trigger events which have been subject to notifications by it or by licensees showing for each event:

- a description of the event and whether it was Type A or Type B
- the name of the party who notified the event (Ofgem or licensee)
- the date of notification
- the amount of any change in the licensee's tax liabilities which has been determined under the procedures set out below
- details of any events for which a determination is in abeyance and a description of the outstanding actions to be taken.

Determination and direction of revised TTE values

Determination of revised TTE values using the tax trigger calculation tool

1.30. The design of the ED1 PCFM includes additional functionality meaning that a copy of the ED1 PCFM (held on Ofgem's website) can be used as a tax trigger calculation tool, as an adjunct to the Annual Iteration Process.

1.31. During each Formula Year t-1, Ofgem will generate a duplicate copy of the ED1 PCFM, in its state following the last completed Annual Iteration Process (but including any subsequent functional modifications) for use as the tax trigger calculation tool. It will then take the following steps to determine TTE values for each licensee:

i. the 'Tax allowance before tax trigger' amount for the licensee for each Formula Year shown on the tax trigger worksheet will be noted
ii. the PCFM copy will be put into 'tax trigger tool mode' using the selector on the User Interface worksheet
iii. all of the other PCFM Variable Value revisions which have been determined for use in the prospective Annual Iteration Process (and which Ofgem expects to include in the notices of proposed Variable Value revisions to licensees) will be applied to the Variable Values Table
iv. all of the existing TTE values will be re-set to zero
v. any existing values in the yellow input cells on the tax trigger worksheet will be cleared
vi. changes to corporation tax rates or writing down allowance rates (reflecting Type A trigger events) will be input into the yellow input cells in the appropriate rows and Formula Year columns on the tax trigger worksheet
vii. the tax trigger macro calculation programmed into the workbook will be run
viii. the aggregate changes to the licensee's tax liabilities determined in respect of all Type B trigger events (whether notified during Formula Year t-1 or on an earlier occasion) will be input into the yellow input cells on the 'Type B event values' row in the appropriate Formula Year columns on the tax trigger worksheet
ix. the tax trigger macro calculation will be re-run
x. the new 'Tax allowance' amount for the licensee shown on the tax trigger worksheet will be noted – this is displayed net of the deadband amount which is also calculated under the macro calculation
xi. the difference between the 'Tax allowance before tax trigger' referred to at point (i) and the new 'Tax allowance' referred to at point (x) above, will be calculated as a £m amount, for the licensee for each Formula Year.

1.32. The amounts calculated under step (xi) will then be determined to be the TTE values for the licensee for each Formula Year. Where these values differ from the TTE values shown on the Variable Values Table for the licensee in the ED1 PCFM (following the last completed Annual Iteration Process), Ofgem will direct that the TTE values concerned are to be changed.

Notes on the tax trigger calculation

- The two stage calculation process referred to in steps (vii) and (ix) allows the tax trigger calculation tool to take full account of the interrelationship between Type A and Type B events
- The nullification of existing TTE values referred to in step (iv) together with the inclusion of all determined changes to the licensee's tax liabilities referred to in step (viii) ensures that the determination of TTE values under step (xi) is on a consistent basis and accurately applies the materiality threshold/ deadband applicable to each Formula Year
- The inclusion of all available revisions to other PCFM Variable values under step (iii) ensures that the tax allowance calculation is as up to date as possible for each Formula Year.

Direction of revised TTE values

1.33. The Authority will direct any revisions to TTE values for the licensee by 30 November in each Formula Year, having given the licensee at least 14 days notice of the values that it proposes to direct.

1.34. Revised TTE values can be directed in respect of a particular Annual Iteration Process for any Formula Year during the price control period, including for years later than year t.

Examples of the timing of revised revenues

1.35. The following examples are not expected to form part of the handbook when finalised but are provided for additional information at this stage. They illustrate the activation of the trigger and the timing of revised revenues, firstly for the adjustment of A effects, and secondly for the ex post adjustment where B effects cannot be quantified until tax submissions are agreed with HMRC. In both examples the deadband trigger point is 0.33 per cent; the CT rates (based on the Finance Act 2012) and the cost of capital (DPCR5), are for illustrative purposes only.

Table A4.1: Example of trigger in period straight forward from A effects

Trigger with restriction to adjust only the excess over the trigger point

2010/11 prices	RIIO-1								RIIO-2
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
	£m	£m	£m	£m	£m	£m	£m	£m	£m
Impact on accounting tax charge:									
Year 1	(2.0)	(2.0)	(2.0)	(2.0)	(2.0)	(2.0)	(2.0)	(2.0)	
Year 2		(3.0)	(3.0)	(3.0)	(3.0)	(3.0)	(3.0)	(3.0)	
Year 3			15.0	15.0	15.0	15.0	15.0	15.0	
Year 4				2.0	2.0	2.0	2.0	2.0	
Year 5					(10.0)	(10.0)	(10.0)	(10.0)	
Year 6						2.0	2.0	2.0	
Year 7							1.0	1.0	
Year 8								2.5	
Sub total	(2.0)	(5.0)	10.0	12.0	2.0	4.0	5.0	7.5	
Adjustment for base amount	2.0	3.3	(3.3)	(3.3)	(2.0)	(3.3)	(3.3)	(3.3)	
Impact	0.0	(1.7)	6.7	8.7	0.0	0.7	1.7	4.2	
Additional tax on additional revenue	0.0	(0.4)	1.6	2.1	0.0	0.2	0.4	1.0	
Impact on subsequent year's revenue	0.0	(2.1)	8.3	10.8	0.0	0.9	2.1	5.2	
Trigger at 0.33%	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	
Trigger exceeded	NO	YES	YES	YES	NO	YES	YES	YES	
CT rate	25%	24%	24%	24%	24%	24%	24%	24%	

	RIIO-1								RIIO-2
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
	£m	£m	£m	£m	£m	£m	£m	£m	£m
Modelled Base Revenue	1000.0	1000.0	1000.0	1000.0	1000.0	1000.0	1000.0	1000.0	
Impact on revenues		0.0	(2.1)	8.3	10.8	0.0	0.9	2.1	5.2
Total adjusted Base Revenue	1000.0	1000.0	997.9	1008.3	1010.8	1000.0	1000.9	1002.1	5.2

Table A4.2 Example of trigger to show the deferral working

Trigger with restriction to adjust only the excess over the trigger point

		RIIO-1								RIIO-2							
2010/11 prices	Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m
Impact of tax legislation on accounting tax charge:																	
Year 1		(3.0)	(3.0)	(3.0)	(3.0)	(3.0)	(3.0)	(3.0)	(3.0)								
Year 2			20.0	20.0	20.0	20.0	20.0	20.0	20.0								
Year 3				4.0	4.0	4.0	4.0	4.0	4.0								
Year 4					2.0	2.0	2.0	2.0	2.0								
Year 5						(16.0)	(16.0)	(16.0)	(16.0)								
Year 6							(10.0)	(10.0)	(10.0)								
Year 7								(5.0)	(5.0)								
Year 8									(15.0)								
Deferred settlement		0.0	0.0	25.0	50.0	40.0	0.0	0.0	(25.0)								
Sub total		(3.0)	17.0	46.0	73.0	47.0	(3.0)	(8.0)	(48.0)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Adjustment for base amount		3.0	(3.3)	(3.4)	(3.5)	(3.6)	3.0	3.3	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Impact		0.0	13.7	42.6	69.5	43.4	0.0	(4.7)	(44.7)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additional tax on additional revenue		0.0	3.3	10.2	16.7	10.4	0.0	(1.1)	(10.7)								
Total impact on base revenue		0.0	17.0	52.9	86.2	53.8	0.0	(5.8)	(55.5)								
Deferred settlement				25.0	50.0	40.0	0.0	0.0	(25.0)								
(Value of total less amount settled in following year)																	
Corporation Tax rate		25%	24%	24%	24%	24%	24%	24%	24%								
Years to settlement				5	5	5			4								
Year in which revenues adjusted				8	9	10	0	0	12								
Deferred settlement (NPV at Cost of Capital)				31.5	62.9	50.3			(30.0)								
Trigger at	0.33%	3.3	3.3	3.4	3.5	3.6	3.5	3.3	3.3								
Trigger exceeded		NO	YES	YES	YES	YES	NO	YES	YES								

Revised Revenue		RIIO-1								RIIO-2							
	Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m
Base Revenue		1000.0	1000.0	1000.0	1000.0	1000.0	1000.0	1000.0	1000.0								
Impacts of change from:																	
Year 1			(3.0)	(3.0)	(3.0)	(3.0)	(3.0)	(3.0)	(3.0)	(3.0)							
Year 2				20.0	20.0	20.0	20.0	20.0	20.0	20.0							
Year 3					4.0	4.0	4.0	4.0	4.0	4.0							
Year 4						2.0	2.0	2.0	2.0	2.0							
Year 5							(16.0)	(16.0)	(16.0)	(16.0)							
Year 6								(10.0)	(10.0)	(10.0)							
Year 7									(5.0)	(5.0)							
Year 8										(15.0)							
Deferred settled			0.0	0.0	25.0	50.0	40.0	0.0	0.0	(25.0)							
Adjustment for base amount			3.0	(3.3)	(3.4)	(3.5)	(3.6)	3.0	3.3	3.3							
Tax on tax impact			0.0	3.3	10.2	16.7	10.4	0.0	(1.1)	(10.7)							
Total adjusted revenue for calculating trigger		1000.0	1000.0	1017.0	1052.9	1086.2	1053.8	1000.0	994.2	(55.5)							
Actual phasing of adjusted base revenues:		1000.0	1000.0	1013.7	1017.6	1019.5	1003.4	1000.0	995.3	(19.7)							
Revenues deferred									31.5	62.9	50.3	0.0	(30.0)	0.0	0.0	0.0	0.0
Tax on tax allowed									7.5	15.1	12.1	0.0	(7.2)	0.0	0.0	0.0	0.0
Total Revenues									1034.3	58.3	62.4	0.0	(37.3)	0.0	0.0	0.0	0.0

1.36. In the example in above table A4.2, this shows when B amounts cannot be readily quantified and the revenue adjustment is deferred until tax computations are agreed. In the example, these are in years 8, 9, 10 and 12 with settlement made for each of years - 8, 9, 10 and 12. The amount settled is the calculated additional (or reduction in the) tax effect plus any change that this would make to the trigger, adjusted to be NPV-neutral to the year of settlement.

Appendix 5 – Tax clawback methodology

Scope

1.1. The RIIO methodology is based on that set out in the 31 July 2009 Open letter and the DPCR5 final proposals and, with refinements to the definitions and the interaction with regulatory tax losses as applied for RIIO-GD1 and T1.

1.2. The methodology and text below is that proposed for the draft ED1 Price Control Financial Handbook and follows that proposed for RIIO-GD1 and T1.

Adjustments driven by gearing levels and corporate debt interest costs ('tax clawback') - methodology

1.3. At the outset of the price control period, modelling assumptions are made about financing requirements, gearing levels and corporate debt costs for the licensee's business. These result in modelled levels of tax-deductible interest costs and tax relief for the licensee.

1.4. If the licensee operates at a higher level of gearing than the modelled level, it stands to benefit from the tax value of higher levels of deductibility. We apply a mechanism that 'claws back' this benefit for consumers by updating the licensee's tax liability allowances using the methodology set out in this Part. It should be noted that there is no provision to give additional tax allowances to the licensee if it chooses to operate at a level of gearing lower than the modelled one.

Determination and direction of revised TGIE values

1.5. As a function of each Annual Iteration Process of the PCFM, an updated figure for the expected amount of tax-deductible interest payable by the licensee is calculated. Ofgem will obtain the most recently modelled figure for tax-deductible interest payable by the licensee in Formula Year t-2 from a copy of the ED1 PCFM, in its state following the last completed Annual Iteration Process (but including any functional modifications).

1.6. The licensee is required to submit its price control cost reporting pack by 31 July in each Formula Year.

1.7. Ofgem will obtain from that submission:

i. the licensee's indicative RAV balance as at 31 March in Formula Year t-2
ii. the licensee's net debt figure as at 31 March in Formula Year t-2

iii. the amount of tax-deductible net interest payable by the licensee during Formula Year t-2, measured on an accruals basis.

1.8. The criteria, which the licensee must observe in reporting each of these items, are set out in the Cost and Revenue Reporting RIGs and Ofgem reviews the licensees reporting in this regard.

Calculation of benefit to licensee

1.9. Ofgem will subtract the modelled figure for tax deductible interest payable by the licensee in Formula Year t-2 from the tax deductible interest payable reported by the licensee and multiply the result by the corporation tax rate for the licensee to derive the licensee's benefit figure.

Applicability tests

1.10. Ofgem will use two tests to see whether the benefit figure should be used to determine a revised TGIE value for the licensee in respect of Formula Year t-2.

Positive benefit test

1.11. If the benefit figure is a negative value then the TGIE is set to zero.

Gearing level test

1.12. Ofgem will divide the licensee's net debt figure as at 31 March in Formula Year into the licensee's indicative RAV (including any Shadow RAV) balance as at 31 March in Formula Year to obtain a gearing ratio.

1.13. If the gearing ratio established, expressed as a percentage, is lower than the modelled level of gearing then:

- if the existing TGIE value is zero, no revised TGIE value is determined or
- if the existing TGIE value is not zero, it is revised to zero.

1.14. If the gearing ratio established is higher than the modelled level, then the revised TGIE value for the licensee for Formula Year t-2 is determined as:

Revised TGIE value = benefit figure X -1

Interaction with unutilised regulatory tax losses

1.15. If for any Formula Year the licensee has a clawback but no modelled profits subject to tax then the pre-tax value of TGIE is added to the cumulative unrelieved regulatory tax losses.

Direction of revised TGIE values

1.16. Revised TGIE values will usually be directed in respect of Formula year t-2 because the figures used in determining them are obtained from the licensee's annual cost reporting return which, at the time of first submission, contains data relating to Formula Year t-2.

1.17. If, for any reason, RAV, net debt or tax deductible interest figures submitted by the licensee are subject to amendment after they have been used in determining revised TGIE values, the following procedure will be followed for the next Annual Iteration Process:

- Ofgem will re-perform the calculation of a benefit figure and the applicability tests set out above to determine whether any revised TGIE value should be determined and directed in respect of the Formula Year to which the amended figures relate. For this purpose, Ofgem will use a copy of the PCFM in its latest state to obtain a modelled figure for tax-deductible interest payable by the licensee
- If a revised TGIE value is directed for a year earlier than Formula Year t-2, any resultant changes to recalculated base revenue figures for years earlier than Formula Year t-2 calculated under an Annual Iteration Process will, subject to a time value of money adjustment, be brought forward and reflected in the calculation of the term MOD to be directed for Formula Year t. For the avoidance of doubt, such a revision will not have any retrospective effect on a previously directed value of the term MOD.

1.18. The Authority will direct any revisions to TGIE values for the licensee by 30 November in each Formula Year t-1, having given the licensee at least 14 days notice of the values which it proposes to direct.

Part 4 - Processing of revised TTE and TGIE values under the Annual Iteration Process

1.19. A positive incremental change in a TTE value will increase the 'recalculated base revenue figure' for the Formula Year concerned by the same amount. However, if there is any outstanding (unused) amount of regulatory tax loss for the licensee, attributable to that Formula Year or to an earlier Formula Year, the increase to the recalculated base revenue figure will be partially or fully abated by that amount, and the record of regulatory tax losses held within the ED1 PCFM will be updated accordingly.

1.20. For the avoidance of doubt, regulatory tax losses are not carried back and offset against tax liability allowances for Formula Years earlier than the Formula Year to which the regulatory tax loss concerned is attributable.

1.21. Only negative incremental changes in TGIE value are possible (resulting from a positive tax saving multiplied by minus one).

1.22. A negative incremental change in a TTE value or TGIE value will decrease the 'recalculated base revenue figure' for the Formula Year concerned by the equivalent amount. However, if the modelled tax liability (in the ED1 PCFM under the Annual Iteration Process) for the Formula Year concerned is smaller (in absolute terms) than the aggregate change in the TTE and TGIE value for that year, then:

- a portion of the aggregate incremental change in the TTE and TGIE values equal to the modelled tax liability will be deducted from the recalculated base revenue figure for the Formula Year concerned
- the remaining amount will be added to the regulatory tax loss balance for the Formula Year concerned and carried forward.

Appendix 6 – Pension methodology

Scope

1.1. We set out the pension methodology that companies should apply in their fast-track business plan submissions for RIIO-ED1; and as to how we will set allowances and its application to the annual iteration process encompassing the triennial true-up and reset procedures. These methodologies cover:

- true-up of DPCR5 pension costs
- appropriate actuarial valuation
- updating allowances for deficit funding.

1.2. The RIIO pension methodology continues that set out in the 22 June 2010 pension paper and the DPCR5 final proposals, as modified and applied for RIIO-GD1 and T1 to an eight, rather than a five-year price control period. For electricity distribution networks the policy commenced on 1 April 2010 (with DPCR5), applying a 15-year notional funding period. This methodology explains the transition between the two price control periods.

1.3. We will not fund any pension costs that relate to unregulated activities of the licensee, including the cost of repairing the relevant proportion of any deficit. In RIIO, we do not set specific allowances for both ongoing (defined benefit or defined contribution) pension service costs and the annual deficit funding costs of the incremental deficit.

Established Deficit

1.4. The term 'Established Deficit' means the difference between the assets and corresponding liabilities within a defined benefit pension scheme, sponsored by the licensee, which are attributable to:

- the licensee's distribution business
- pensionable service up to and including 31 March 2010.

1.5. The proportion of a wider group pension scheme deficit which is attributable to the licensee's distribution business will be determined in accordance with the deficit allocation methodology which is currently under development with licensees.

1.6. Allowances for Established Deficit repair are set at/revised to levels intended to allow the licensee to clear its Established Deficit (by making payments to the pension scheme's trustees) over a 15-year period, beginning on 1 April 2010 and ending on 31 March 2025. The RIIO-ED1 price control period ends on 31 March 2023, but established deficit repair allowances will be determined having regard to the projected Established Deficit repair completion date of 31 March 2025.

Pension scheme administration and PPF levy[34]

1.7. Pension scheme administration expenditure refers to payments made by the licensee to cover an appropriate proportion of the trustees' costs of running the pension scheme. It does not include investment or asset management costs; these are netted into the pension fund's investment returns.

1.8. PPF levy expenditure refers to payments made by the licensee in respect of the compulsory annual levies on eligible pension schemes to support the Pension Protection Fund.

Pension costs for service after 31 March 2010

1.9. Pension costs attributable to the licensee, but which relate to pensionable service on or after 1 April 2010 will be considered as a constituent part of labour costs for price control purposes. This includes costs relating to any incremental deficit that accrues in relation to such service.

True-up for DPCR5

1.10. We set out in DPCR5 Final Proposals – Financial Methodologies supplement ('the FM supplement')[35] how the true-up mechanisms will be made for ongoing service costs. For pension deficits, we said we would reset deficit funding at the commencement of each subsequent price control and true-up any under or over-funding of efficient pension costs over the residual period of the 15-year notional funding period.

Ongoing service costs

1.11. A specific sharing mechanism was applied to ongoing pension costs for DPCR5. The sharing mechanism is applicable to the normal ongoing contributions of both network companies' DB and DC schemes (and, where appropriate, employer contributions to Personal Accounts[36]) and includes pension scheme administration costs. It excludes the PPF levies, which will be subject to review and, where appropriate, adjustment dependent on the action taken to mitigate these costs.

1.12. The sharing is asymmetric, the DNOs share of downside risk is 20 per cent and the upside incentive rate is 50 per cent and is shown in table 10.8 of the DPCR5 financial methodologies supplement.

[34] Subject to outcome of consultation process adopting this option
[35] http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=372&refer=Networks/ElecDist/PriceCntrls/DPCR5 - at appendix 10
[36] Personal Accounts for employees introduced by the Pension Act 2008 being introduced in stages from 2012.

1.13. The incentive rate will be applied to the difference between network companies' allowances of ongoing pension costs (including the allowances for pension scheme administration costs) and actual outturn costs. If the difference in the outturn costs exceeds the allowance, network companies will receive a true-up of 80 per cent of that difference in their revenue allowances in RIIO-ED1 on an NPV neutral basis. Shareholders will bear 20 per cent of the difference. If the difference is an under-spend against the allowance, network companies will retain 50 per cent and the other 50 per cent will be adjusted by reducing revenue allowances in RIIO-ED1 on a NPV neutral basis.

1.14. The true-up will take the actual DNOs allowed spend (ie the element relating to distribution activity only), rebase it to 2007-08 prices and compare this to the allowances in the DPCR5 price control.

1.15. The difference between actual and allowed is then adjusted for the sharing impact; that is the actual spend is adjusted in line with the ratio of actual elements of expenditure.

1.16. In accordance with the DPCR5 rules, part of the allowed adjustment relating to 85 per cent of Totex will flow as slow money into RAV. Adjustments are made for the time value of money (at DPCR5 cost of capital) and tax.

1.17. The actual RAV is then recalculated using the revised RAV additions.

1.18. The element attributable to fast money is then recalculated and this is compared to the original calculation. The difference between the original and revised fast money element is then adjusted for the time value of money (at DPCR5 cost of capital).

1.19. This figure is then adjusted for tax and will be allowed as a revenue adjustment in RIIO-ED1.

1.20. The difference between the revised RAV and the RAV based on actual spend is then adjusted to the opening RAV for RIIO-ED1. An indicative annual calculation is reported annually in the annual cost reporting returns.

1.21. The true-up will be calculated for five years of the price control as shown in table 10.8 of the DPCR5 FM supplement.

Deficits

1.22. In DPCR5, we stated that, at the end of the control period, or in any case no longer than five years after the initial allowance was set, a reasonableness review would be undertaken. This would determine whether a company's pension costs are reasonable so that the DNO can recover its economic and efficient pension costs, irrespective of the allowance set at the start of the control.

1.23. All DNOs' pension costs in their last full valuations (usually at 31 March 2010) were the subject of reasonableness review and this will affect the true-up of pensions deficit repair costs for the first three years DPCR5.

1.24. In accordance with the RIIO pensions methodology, we will undertake the next reasonableness review on all network companies' pension valuations at 31 March 2013. This will inform the true-up of the remaining portion of DPCR5 established deficit funding and the resetting of allowances with effect from 1 April 2015.

True-up for forecast years

1.25. We propose that the true-up of the difference between the forecast deficit (at 30 September 2009) that was used to set allowances for DPCR5 and the established deficit at 31 March 2010 be spread equally over our notional 15-year funding period. We will do the same for the forecast costs for 2009-10.

1.26. True-up adjustments for DPCR5 are based on actual expenditure and a forecast for 2012-13, 2013-14 and 2014-15. When the actual costs are available, we will true-up against DNOs' forecast costs. The difference shown between the forecast and actual cost will be adjusted in accordance with the annual iteration process in RIIO-ED1.

Timing of adjustments

1.27. The timing in revenue of the fast money element of ongoing service costs arising from DPCR5 is subject to consultation. The approach to be used will be advised in the March 2013 strategy decision document.

Appropriate actuarial valuation

1.28. We require an actuarial valuation from all DNOs at each cut-off date and subsequent triennial review dates. We have set these dates to be concurrent with the majority of DNOs' pension schemes full triennial valuation dates. Where the latter is not the case, we require those DNOs to provide a roll forward valuation from the last full valuation which has been included in our latest reasonableness review, to the relevant review date.

1.29. We acknowledge that roll forward valuations are approximate in nature, compared to a full valuation; and that the results may vary the more it moves away over time from the date of the base full valuation. DNOs can mitigate these issues if they align their full valuations to be concurrent with our triennial reset and reasonableness timetable. We regard it as important that the valuations we use have been subject to a reasonableness review, ie a roll forward valuation must be based on a full valuation that has been included in a previous reasonableness review.

Requirements of a roll forward valuation

1.30. The updated roll forward valuation should be prepared and certified by the scheme actuary based on:

(a) The Pension Regulator's guidance in their document *Regulatory Code of Practice 03 Funding defined benefits* at paragraph 129 on actuarial reports between actuarial valuations; and
(b) The scheme's Statement of Funding Principles (SFP), which must be supported by:
    - A copy of the SFP on which the roll forward valuation is based
    - A statement from that actuary setting out the basis of the valuation
    - Together with a schedule of the actuarial assumptions at both the last full valuation and the rolled forward valuation, explaining each of the following changes since that last full valuation:
        - Asset values and how they have been recalibrated from known asset data and latest asset allocations, which must be specified, eg index returns and which ones
        - Movements in liabilities as a result of yields and hence inflation and discount rate assumptions
        - Movements in contributions (specifying lump sum contributions (and date) separately from ongoing service and deficit contributions)
        - Movement from benefit payments
        - Confirm it maintains the assumption that demographic experience is in line with assumptions in the last full valuation
        - Significant bulk transfers out (eg arising from corporate transactions)
        - Significant bulk transfers in (eg arising from corporate transactions).

(c) Confirmation whether the roll forward valuation has, or has not, taken into account:
    - Variations in liabilities arising from salary rises, deferred pension revaluation or pension increases differing relative to assumptions;
    - Variations between actual and expected demographic experience (eg early retirement or mortality)
    - Benefit changes
    - If it has, set out each of the changes.

Updating allowances through the Annual Iteration Process

1.31. The opening base revenue allowances ('PU' values) includes allowances for:

(a) pension scheme established deficit allowed expenditure
(b) potentially pension scheme administration and Pension Protection Fund (PPF) levy expenditure.

for each Formula Year of the RIIO-ED1 price control period.

1.32. The DNO's allowances for pension scheme Established Deficit repair and subject to consultation, pension scheme administration/PPF levy costs will be updated during the RIIO-ED1 price control period to reflect:

- Established Deficit level information contained in pension scheme valuation reports provided by the DNO to Ofgem
- scheme administration and PPF costs information contained in the DNO's price control review information submitted to Ofgem
- any adjustments identified in the triennial reasonableness review.

1.33. It is anticipated that allowances will be revised twice during the RIIO-ED1 price control period, driven by the triennial scheme valuation cycle indicated in the timetable below. It is possible that the review due to be completed by 30 Nov 2014 will not be completed in time for Final Proposals and the adjustments will instead be made as part of the proposed annual iteration process in 2015-16.

Table A6.1 - Expected timetable for revisions to allowances

A	B	C	D
Actuarial pension scheme valuation as at:	Pension reasonableness review completed no later than:	Revised allowances directed no later than:	Revised allowances applied during RIIO-ED1:
31 March 2016	30 September 2017	30 November 2017	1 April 2018
31 March 2019	30 September 2020	30 November 2020	1 April 2021

Reasonableness review

1.34. Ofgem will commission an independent review of the reasonableness of the Established Deficit position for each tranche of scheme valuations. The expected completion times for the reasonableness reviews due to take place during the RIIO-ED1 price control period are shown in Table A6.1.

Determination and direction of revised EDE values by 30 November 2014

1.35. Revised established deficit funding allowances are proposed to be determined as part of the annual iteration process using the following methodology.

Annual Established Deficit repair allowance in 2011-12 prices computed as:

= "B" / ((1-(1+DR)^ -R) / LN(1+DR))

Where:

- B is the established deficit amount following reasonableness review, deflated to 2011-12 prices

- DR is the discount rate determined by Ofgem derived through a benchmarking process against energy network operators pre-retirement discount rates as applied in their valuations at "A" and moderated against similar rates reported by occupational pension schemes in Great Britain
- R is the remaining deficit repair period
- LN returns the natural logarithm of the subject value.

1.36. The true-up adjustment will be calculated on a similar basis.

Scheme surplus

1.37. If the difference between the assets and corresponding liabilities represents a surplus position, then deficit repair allowances will be revised to zero pending the next review process. The policy position with regard to pension scheme surpluses is set out in the pensions principles set out in Appendix 7.

Appendix 7 – RIIO price control pension principles

1.1. Under RIIO price controls, our pension principles remain the same as previously set out. These revised guidance notes for each principle take into account how we intend to apply them to Defined Benefit (DB) pension schemes in RIIO price controls.

Principle 1 - Efficient and Economic Employment and Pension Costs

Customers of network monopolies should expect to pay the efficient cost of providing a competitive package of pay and other benefits, including pensions, to staff of the regulated business, in line with comparative benchmarks.

1.2. We should not expect consumers to pay the excess costs of providing benefits that are out of line with the wider private sector practice, nor for excess costs avoidable by efficient management action. We may, unless inappropriate, benchmark total employment costs within total costs, to ensure companies have correct incentives to manage their costs, including pension costs, efficiently.

Funding Commitment

1.3. For each network company, consumers will fund the established deficit as at the end of the relevant price controls (ie DPCR4, TPCR4 and GDPCR1). The established deficit means the difference between assets and liabilities attributable to pensionable service up to the end of each respective price control period set out below and relating to the regulated business under principle 2:

- for DNOs – the price control period ending on 31 March 2010
- for GDNs – the price control period ending on 31 March 2013
- for TOs and SOs – the price control period ending on 31 March 2012.

1.4. In accordance with principle 5, subject to an adjustment for the regulatory fraction, the funding commitment covers:

- The quantum of the established deficit at the respective cut-off dates in paragraph 1.3 above
- Changes in the amount of the established deficit at the end of each price control period within our notional 15-year funding period caused by exogenous factors, for example caused by a fall in the value of stock markets or changes in longevity assumptions. With the overriding provisos that the scheme or schemes have been efficiently managed in accordance with principle 3; and, that the costs are efficient and economic in

accordance with this principle 1. This will apply, even if there has been an interim period during which a funding surplus is reported.

1.5. Conversely, the funding commitment does not cover any element of deficit falling outside the scope of the established deficit (eg non–regulated activities and bulk transferees) or future service of those employees still active in the scheme after the relevant cut-off date. We will not make any future allowance for funding such deficit elements, ie the incremental deficit, other than through the benchmarking process and the same incentive sharing mechanism which all other costs are subject to.

1.6. We will treat any deficit funding payments that arise from service after the relevant cut-off dates above, as part of the benchmarked employment (or total) costs. These are subject to the same incentive mechanism(s) as employment and total costs in general. These payments will be the actual payments made by the network operators determined in accordance with the pension deficit allocation methodology.

Notional deficit repair funding period

1.7. The established deficit will be funded over the notional 15-year deficit-funding period. We will apply a flat profile over the deficit-funding period allowing a rate of return. We do not reset the 15-year period at each subsequent control. The intention is that the deficit at the cut-off dates will be fully funded over the following 15 years from the respective cut-off dates. However, it is possible that if the established deficit increases materially in the later part of the 15-year period the funding period may be extended. In addition, if a new established deficit arises following the 15-year funding period, additional allowances will be provided if the deficits are considered to be efficient.

Pension scheme administration costs and Pension Protection Fund Levy

1.8. We are consulting on whether to (a) retain the approach adopted at DPCR5 where the levy formed part of ongoing service costs and was subject to the same incentive mechanisms as other costs; or (b) apply the approach as introduced in RIIO-GD1 and T1.

1.9. We will standardise the treatment of these costs whether they are paid directly by DNOs or funded through increased employer contributions to the scheme in setting allowances.

1.10. The quantum of the PPF levy may change triennially following the PPF revision of their new methodology from 31 March 2012. Its magnitude is partly outside the control of sponsors and trustees. If option (b) is adopted for either of these costs, they will not form part of the ongoing pension costs subject to benchmarking nor to the same incentive mechanisms as other costs. There would be a restricted true-up adjustment in RIIO price controls for that part of efficient annual costs, which exceed a threshold set at, and revised, during the relevant RIIO price control.

Stranded surplus

1.11. In the event that a surplus arises (ie assets exceed the full buy-out cost of accrued liabilities as shown by an appropriate actuarial valuation), only the trustees have the power to decide whether it is in the interests of scheme members to repay it to the employer (in accordance with the scheme rules and other legal requirements). Trustees' have obligations to protect scheme members. DNO' schemes are generally closed mature schemes with the majority of members either pensioners or deferred and with the average age of active members around 48-50 years. As such, we understand that they are generally looking to match their assets and revenues to their liabilities, which should become easier to forecast. In doing this, their investment strategies may move from riskier to less risky assets, and they will likely use hedging strategies and, possibly, innovative funding strategies. Sponsors may also seek to use contingent assets, where possible, to mitigate increases in deficit funding costs where schemes have achieved very high funding levels. In these circumstances, network companies consider that the potential for a surplus is very unlikely to arise. If this is the case, they consider that consumers may indirectly benefit from investing in less risky assets to protect schemes from increased deficits on riskier assets, which are subject to market movements. For the avoidance of doubt on the regulatory treatment, DNOs may wish to seek guidance on a case-by-case basis from Ofgem.

1.12. We will monitor each scheme's position on an annual basis. In the event that a scheme was in surplus for a given period, we consider that there is a reasonable expectation for symmetry in the treatment for funding of deficits and use of a surplus. We would therefore expect to share the benefit across members and consumers. We would consider our options when setting allowances such that consumers would benefit and the shareholders would cover the cost in the event that contribution levels remain the same. We will review each instance on a case-by-case basis.

Buy-ins and buy-outs of pension schemes liabilities

1.13. These currently fall within the scope of principles 1, 2 and 5. Buy-ins and buy-outs are effectively a de-risking of future liabilities. It will be necessary to determine how such de-risking should be shared between consumers and shareholders, to facilitate efficient management of the schemes and to remove uncertainty as to the regulatory treatment. It is difficult to be prescriptive as to how they should be spread between different generations of consumers. For guidance, an equitable option is to spread these costs over the same deficit repair period used to set ex ante allowances, for DPCR5 and RIIO price controls this is our notional 15-year funding period commencing from the respective cut-off dates. However, if these occur towards the end of that funding period, we reserve the right to review the spreading period. We will deal with buy-ins and buy-outs, if they occur, applying these existing pension principles on a case-by-case basis.

Principle 2 - Attributable Regulated Fraction Only

Liabilities in respect of the provision of pension benefits that do not relate to the regulated business should not be taken into account in assessing the efficient level of costs for which allowance is made in a price control.

1.14. It is for shareholders, rather than consumers of the regulated services, to fund liabilities associated with businesses carried on by the wider non-regulated group. This includes businesses that were formerly carried on by the same ownership group and have been sold, separated and/or ceased to be subject to the main price control review. In principle, this may include costs related to self-financing excluded services, metering, and de minimis activities of the network company and of unregulated businesses in the same scheme in the context of a transportation and/or distribution price control; for the purposes of the regulatory fraction and the deficit allocation methodology, these are collectively labelled 'non-regulated activities'. These will be dealt with on a case-by-case basis, as in some cases the costs of such businesses or activities are not readily separable from the regulated business.

1.15. At DPCR4, there was a general assumption of a 20 per cent disallowance for non-regulated activities for most DNOs. For movements up to the start of DPCR5, we retained this split as a starting point. Structural changes may occur when:

- schemes merge or demerge
- members are transferred in or out in bulk
- there is a change of ultimate controller
- there is a buy-in/buy-out of any part of the scheme membership.

1.16. Movements in the regulatory fraction from the respective cut-off dates must be made and reported periodically by network operators in accordance with the pension deficit allocation methodology. That methodology is currently under discussion with DNOs and will be published separately. We require DNOs to maintain, or cause to be maintained, appropriate detailed records of scheme members and related assets and liabilities to enable them to report movements in assets and liabilities related to the established deficit, non-regulated activities, the incremental deficit, actuarial valuations; and to comply with that methodology. In the absence of detailed records, we will apply our own judgement.

Bulk transfers

1.17. During a price control period, there may be bulk transfers of members in or out of a DB scheme through corporate activity. These transfers are usually only accepted when the transfer value finances the deficit, if any, of the transferees. Bulk transfers in to a scheme require approval by trustees and as specified by the Pensions Regulator (TPR), they must be fully funded (in all but exceptional circumstances). TPR guidance states: "There is no statutory obligation for a trust-based scheme to accept transfers-in and provide benefits in exchange. Some schemes do offer defined benefit transfer credits, typically in the form of added years counting for benefits on the scheme's normal formula. Other schemes offer money purchase benefits in exchange for transfers, in which case no issues arise as to assumptions for

determining benefits". It also states, "A transfer credit should not be expected to require additional funding from the employer in the long term unless agreed by the employer in advance".

1.18. Under our commitment to fund the established deficits, movements in deficits arising from bulk transfers that result from corporate transactions, whether fully funded or not, are a risk for shareholders and not consumers. This applies even where the transferred protected person's pension liability is underfunded where it arises from a corporate transaction.

1.19. Trustees may accept bulk transfers in to a scheme. These may include protected persons who may or, may not, be considered part of the regulated activities. We acknowledge that, network operators subject to the protected person's legislation, may have very limited scope to decline transfers in of protected persons. Where protected persons have been funded by one set of consumers in a price-controlled licensee, and transfer into a different licensee's scheme we are minded to continue that funding of the amount transferred relating to an established deficit. In all other circumstances, we consider that these are not part of the established deficit and therefore shareholders, not consumers, will fund any increase related to the transferees at future price controls.

1.20. This clarification covers only bulk transfers where individuals or groups of individuals (but not whole, or substantially, whole schemes) are transferred as part of a smaller transaction to acquire an activity rather than a licensee. We exclude a full merger between two existing DB schemes because of a corporate transaction. We will deal with this as a structural change (see above).

1.21. We cannot predict whether this treatment will be equitable to all situations. If we are satisfied that there are exceptional circumstances, we retain the option to deal with these on a case-by-case basis.

Principle 3 - Stewardship - Ante/Post Investment

Adjustments may be necessary to ensure that the costs for which allowance is made do not include excess costs arising from a material failure of stewardship.

1.22. We will disallow any excess costs arising from material failure in the responsibility for taking good care of entrusted pension scheme resources. Examples might include items such as recklessness, negligence, fraud or breach of fiduciary duty. We will review stewardship and reserve our position to make adjustments to allowances if we observe, for example, any of the following:

- poor investment returns over a long period, eg greater than a single price control
- whether the scheme investment managers are underperforming against their peers or the market and expectations and their performance has not been reviewed or benchmarked at appropriate intervals

- not matching investment/returns to fund future liabilities as they fall due
- material increase in deficits and need for increasing the funding
- maintaining a higher balance of investments in riskier assets compared to investment returns which do not match future liabilities
- accepting transfers in at under value
- making transfers out at over value.

1.23. In determining whether pension costs are reasonable, we may compare the level of funding rate recommended by periodic actuarial valuations to the actual funding rate adopted by the licensee. As long as a funding valuation uses actuarial assumptions, which are in line with best practice the costs will be included without adjustment in the benchmarking of employment (or total) costs and be subject to any incentivisation adjustment and the reasonableness review set out in principle 1. This is one potential indicator of whether there has been a material failure in stewardship. We reserve our position to examine investment and scheme administration costs to see whether these are materially out of line with industry figures.

1.24. The choice of investment strategy is one for trustees and necessarily involves the exercise of judgment, which, for any particular scheme and at any particular point in time, the trustees are best placed to make. These pension principles make clear that we do not think it is appropriate, given our statutory remit, for us to make judgments about investment strategies. In particular, the success or otherwise of any particular strategy can only be measured in hindsight, whereas trustees must make ex ante choices. Moreover, the strategy, which optimises outcomes over the whole life of a scheme, may produce inferior results over any particular shorter period (and vice versa). Therefore, it would be inappropriate for us to make judgements about investment strategies based on outcomes over the period of one price control. As part of a reasonableness review, we will review investment returns and will do so over a period of at least 10 years.

Principle 4 - Actuarial Valuation/Scheme Specific Funding

Pension costs should be assessed using actuarial methods, on the basis of reasonable assumptions in line with current best practice.

1.25. We expect the level of scheme funding to be assessed on the basis of forward looking assumptions regarding long-run investment returns and other key variables. DNOs are required to provide up-to date actuarial calculations (including the most recent formal actuarial valuation of the relevant schemes) to support their business plan estimates. During an eight-year price control period, DNOs are required to provide annual up-dated rolled forward valuations to 31 March each year and triennial valuations to enable resetting of ex ante and truing up ex post of opening adjustments.

1.26. We would not expect substantial differences between companies. However, if a reasonableness review identifies an outlier, we will investigate and review the reasons for this. If evidence of material differences arise, and these differences have

contributed to an increase in funding required we may adjust the recommended funding rate for the purposes of setting and truing up price control allowances.

1.27. Network companies have advised that, in their view, de-risking strategies should protect the funding position of their scheme over the long term, in that it places a floor on the downside. However, it may significantly reduce the potential upside from future out-performance of various asset classes.

1.28. Whilst a move to de-risking these mature closed schemes may be expected, we will keep under review the increase in the burden for consumers. This may arise from a combination of the speed and timing of de-risking, the use of conservative valuation and asset return assumptions (particularly of gilts, which have shown negative real returns) and increasing longevity. We may require companies to demonstrate how their de-risking strategies are protecting future scheme funding and the benefits that they expect to flow to consumers.

Principle 5 - Under Funding/Over Funding

In principle, each price control should make allowance for the ex ante cost of providing pension benefits accruing during the period of the control, and similarly for any increase or decrease in the cost of providing benefits accrued in earlier periods resulting from changes in the ex ante assumptions on which these were estimated on a case-by-case basis.

1.29. We will not set allowances or make true-up adjustments for ongoing pension service costs; in the RIIO-T1 and GD1 price controls we propose that they exclude scheme administration costs and PPF levies[37]. Instead, they form part of the overall benchmarking of costs and as such are subject to the same incentive mechanisms for sharing under- or over-spend. We are consulting on the options of setting a separate allowance for both PPF levies and pension scheme administration costs, or maintaining the DPCR5 approach. If the first option is adopted, any overspend or underspend against the allowance below the threshold would be for DNOs to fund or retain respectively. If the outturn were over the threshold, then subject to their being economic and efficient, the excess over the threshold will be funded.

1.30. Typically, pension schemes undertake full actuarial valuations triennially; whereas, RIIO price controls are typically set for periods of eight years. It is likely that funding rates will change during the period of a price control. It is inappropriate to leave deficit funding unaltered for an 8-year period. We will reset ex ante allowances effective 1 April 2015 based on full triennial (where available) or rolled forward updated valuations (as set out in our methodology) as at 31 March 2013 and every three years thereafter. At the same time, there will be a reasonableness review to inform the quantum of the costs and, if considered necessary, adjustments to the allowances for funding of the established deficit but not ongoing service costs or funding the incremental deficit.

[37] They may do so in RIIO-ED1 dependent on the outcome of this consultation.

1.31. The annual funding payments for the incremental deficit (from the respective cut-off dates in principle one) will be subject to the same incentive mechanism as all other costs (including ongoing pension service costs). Those annual payments are (a) those actually made by the company in accordance with the deficit recovery plan in the relevant valuation, which are not based on our notional 15-year funding of the established deficit; and (b) attributed to the incremental deficit in accordance with deficit allocation methodology.

1.32. We will apply the following guidelines to the funding of the established deficit:

a. An attribution must be made of the deficit and its constituent assets and liabilities between the established deficit, the incremental deficit and non-regulated activities in accordance with the deficit allocation methodology
b. We will perform triennial reasonableness reviews and the reset allowances for the remainder of the notional 15-year funding period and make any necessary true-up adjustments since the previous review or cut-off date. The reasonableness review will inform us as to whether a DNO's pension costs are an outlier from their peers and UK DB pension schemes, so that under principle 1, the DNO can recover its economic and efficient established deficit funding costs irrespective of the allowance set at the cut-off date and each subsequent review. We will determine and share the terms of reference with licensees at each review. The review will inform the level of any additional funding if either the outturn costs are higher than the allowances, or where the deficit has increased and either is demonstrably due to inefficiencies. Conversely, where outturn costs are lower than the ex ante allowances it will determine whether the licensee should retain any, or a proportion of, the savings
c. At each subsequent triennial review and related reset date commencing 2013, deficit-funding allowances will be reset based on the methodologies set out in the PCFM
d. Any under- or over-recovery of efficient established deficit funding costs against the allowance in the previous three years as determined above, will be adjusted in future revenues over the remaining period of the initial notional 15-year funding period and be NPV neutral using the same discount rates as used for spreading the ex ante deficit allowances. Consumers will be unaffected by the actual funding period set by companies
e. As noted under principle 2, we will apply a revised regulatory fraction at each triennial reset in accordance with the deficit allocation methodology. This will include the effect of any structural changes to a scheme on a case-by-case basis. We will update the element of the fraction related to movements in unfunded early retirement deficiency contributions (ERDCs) at each triennial review and reset dates.

Unexpected lump sum deficit payments

1.33. These tend to occur in instances of change in corporate control, or through corporate activity within the DNO's wider group. Whilst the trustees may take the opportunity to repair the deficit faster, it is not clear why consumers should pay an accelerated profile. Our default position is that we will treat the funding of the

established fraction of the payment as being made in equal annual instalments over the remaining period of the 15-year notional deficit funding period.

1.34. However, in exceptional circumstances, we may review the payment of the lump sum compared to what the position would have been if the deficit were spread over a number of years. This is to ensure that consumers have either positively benefited from, or have not been disadvantaged by the accelerated funding. Where a company cannot satisfy us that the accelerated payment has been in the interests of consumers (as opposed to shareholders or scheme members), our default position will apply.

Accelerated deficit funding payments

1.35. Where an annual deficit payment is accelerated by one or two years, for the purpose of the true-up and NPV neutral adjustments, we will treat it as having been made in the year for which they were scheduled (in accordance with the original deficit funding plan) to be made.

Principle 6 - Severance - Early Retirement Deficiency Contributions

Companies will also be expected to absorb any increase (and may retain the benefit of any decrease) in the cost of providing enhanced pension benefits granted under severance arrangements which have not been fully matched by increased contributions

1.36. Since 31 March 2004, ERDCs whether fully funded, partially funded or totally, unfunded, are a matter solely for shareholders.

1.37. The principle requires that an adjustment be made to the allowances for future price controls to exclude the impact of ERDCs resulting from redundancy and re-organisation, which have been offset by use of surpluses, rather than being funded by increased contributions.

1.38. This provides for consistent treatment with other restructuring and rationalisation costs. For this purpose, it will be necessary to roll forward the previously agreed amounts of ERDCs arising prior to 1 April 2004. The methodology is set out in our 22 June 2010 pension document and will be incorporated in the pension deficit allocation methodology.