

## Electricity Distribution Price Control Review Final Proposals - Financial methodologies

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**Target Audience:** Consumers and their representatives, distribution network operators (DNOs), independent distribution network operators (IDNOs), owners and operators of distributed energy schemes, generators, transmission owners, electricity suppliers and other interested parties.

**Overview:**

Ofgem regulates the 14 DNOs, which are all regional monopolies to protect the interests of current and future consumers. We design a price control every five years. This sets the total revenues that each DNO can collect from customers at a level that allows an efficient business to finance their activities. We also place incentives on DNOs to innovate and find more efficient ways to provide an appropriate level of network capacity, security, reliability and quality of service.

The current price control expires on 31 March 2010 and Ofgem is now undertaking a Distribution Price Control Review (DPCR5) to set the controls for 2010-2015. This document should be read in conjunction with our Distribution Price Control Review Final Proposals core document. This supplementary document sets out in greater detail the process for updating the regulatory asset value (RAV) for outturn costs, the process for incentives and uncertainty mechanisms.

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## Context

This document is one of four more detailed, technical documents that accompany the DPCR5 Final Proposals. These documents explain the methodologies and rationale we have applied in arriving at our Final Proposals and set out further detail on the changes we have made since Initial Proposals. They are targeted at the DNOs and those stakeholders who require an in-depth understanding of our proposals in some or all areas.

Our Final Proposals set out our decision on the maximum allowed revenues each DNO should be allowed to collect from customers between 2010 and 2015. We set out the behaviours and outputs customers want and expect from the DNOs over this period and the incentives and obligations we propose to use to achieve them. If the DNOs accept them, the new arrangements will come into effect on 1 April 2010. If they do not we will refer the matter to the Competition Commission.

In December 2008, we published our Policy Paper. The document focussed on three themes: environment, customers and networks, and sets out our views on the overall approach to setting the price control, the methodologies we propose to use, the structure of incentives and the new regulatory arrangements we think are appropriate.

In May 2009, we published our Methodology and Initial Results document. This set out details of our cost assessment methodology and the initial results for a number of core cost areas. We explained that we would continue to develop our work in this area as we worked towards Initial Proposals.

In August 2009, we published our Initial Proposals for the maximum allowed revenues for each DNO and the associated outputs, incentives and obligations.

In September 2009, we published an update setting out our proposals for those areas of analysis that were incomplete at Initial Proposals because of a lack of clarity in terms of either the requirements DNOs would be facing or issues with the cost data. These included:

- major system risks expenditure (High Impact Low Probability (HILP) events only),
- BT 21st century expenditure,
- expenditure on rising mains and laterals,
- expenditure on Critical National Infrastructure Costs and black start and emergency batteries, and
- costs associated with traffic management.

Since then we have been refining our analysis and results to take into account further evidence submitted by the DNOs, responses to our Initial Proposals and later updates and correcting errors that impacted our cost baselines and refining our methodology.

## Associated Documents

- Electricity distribution price control review. Initial consultation document (32/08)
- Update letter on the DPCR5 process (151/08)
- Electricity distribution price control review. Policy Paper (159/08)
- Electricity distribution price control review. Methodology and Initial Results Paper (47/09)
- Electricity distribution price control review. Initial Proposals (92/09)
- Electricity distribution price control review. Initial Proposals - Incentives and Obligations (93/09)
- Electricity distribution price control review. Initial Proposals - Allowed revenue - Cost Assessment (94/09)
- Electricity distribution price control review. Initial Proposals - Allowed revenues and Financial Issues (95/09)
- Cover note electricity distribution price control review Initial Proposals – Financial Model 2010-15
- Electricity distribution price control review - September Update to Initial Proposals
- Electricity distribution price control review - October update covering letter.
- Regulating energy networks for the future: RPI-X@20 Principles, Process and Issues (13/09)

## Table of Contents

<b>Summary</b> .....	<b>1</b>
<b>1. Regulatory Asset Value roll forward calculations</b> .....	<b>3</b>
Computing the RAV .....	3
<b>Cost Definitions</b> .....	4
Additions to RAV .....	5
Deductions from RAV .....	6
Other RAV requirements .....	8
Efficient costs .....	8
Restated costs .....	8
Related party costs .....	8
Related party margins .....	9
Interaction with the distributed generation incentive .....	10
RAV calculation 2008-09 and 2009-10 .....	10
<b>2. Uncertainty mechanisms and the RAV rolling incentive mechanism</b> .....	<b>11</b>
Further details on the assessment of reopeners .....	11
Load related expenditure reopener .....	11
High-value projects reopener .....	12
Traffic management permitting reopener .....	12
Rising and lateral mains reopener .....	13
Reopener for logged up expenditure items .....	13
Defining the thresholds for reopeners .....	14
How our uncertainty mechanisms will impact allowed revenues .....	15
Over-arching principles .....	15
Volume driver on high-volume low-cost connections .....	15
Revenue adjustments from reopeners and logged up expenditure .....	16
Figure 2.2 - Revenue adjustment worked example .....	17
RAV rolling incentive .....	18
Figure 2.3 - RAV rolling incentive worked example (real 2007-08 prices) .....	19
<b>3. Bad Debts</b> .....	<b>20</b>
<b>4. Losses incentive</b> .....	<b>21</b>
DPCR5 target setting .....	21
Table 4.1 – Target adjustment due to substation electricity .....	22
DPCR5 annual smoothing .....	22
Treatment of DPCR4 LRRM .....	23
DPCR4 Final Proposals .....	23
Figure 4.1 – Example of LRRM .....	23
Close out of DPCR4 losses incentive .....	25
DPCR5 LRRM .....	26
Table 4.2 – Adjustment for loss reduction from allowed discretionary expenditure .....	27
Overall cap and collar and close out .....	28
Spreadsheet example .....	28
Figure 4.1 – Spreadsheet example of the losses incentive framework operation .....	29
<b>5. Distributed generation incentive framework</b> .....	<b>30</b>
<b>6. Transmission connection point charges</b> .....	<b>31</b>

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Figure 6.1: Worked example of the transmission connection point charges incentive mechanism .....	31
<b>7. Worst served customers and undergrounding .....</b>	<b>32</b>
Revenue adjustment from logged up expenditure.....	32
Logged up costs that are allowed .....	32
<b>8. Sole use connections .....</b>	<b>34</b>
<b>9. Tax trigger.....</b>	<b>35</b>
Tax trigger mechanism .....	35
Trigger point .....	36
Timing of revised revenues.....	36
<b>10. Pension methodology .....</b>	<b>39</b>
Scope .....	39
DPCR4 Pensions true up .....	39
DPCR5 Ex ante allowances for deficit funding .....	41
Regulatory fraction .....	42
Early Retirement Deficiency Contributions (ERDCs).....	44
Allowances for normal ongoing service pension contributions .....	45
DPCR5 Pensions deficit true up .....	46
DPCR5 true up for normal ongoing service pension contributions .....	48
<b>11. Statement of tax methodology .....</b>	<b>51</b>
Tax methodology .....	51
Applicable tax regime.....	51
Tax losses .....	51
Modelling of capital allowances .....	51
Opening capital allowance pool balances .....	52
Capitalised indirect costs .....	52
Modelling the tax deductibility of pension costs .....	52
Modelling cash flows of Corporation Tax (CT) payments .....	53
Interest (payable and receivable) .....	53
Tax treatment of incentives.....	53
Treatment of excluded services .....	53
<b>12. Broad measure of customer satisfaction.....</b>	<b>54</b>
Worked examples for the customer satisfaction survey and complaints metric ....	54

## Summary

One of the main objectives of this price control review has been to ensure that it encourages the services and types of behaviours that consumers expect from the DNOs over the next five year period. We have consulted extensively on the objectives for the DPCR5 period and have received wide-ranging support for a regulatory framework that addresses the following three themes:

- **Environment:** encouraging DNOs to play a fuller role in helping to tackle climate change, both directly through managing their own carbon footprint and indirectly by facilitating new uses of the networks that are likely to arise as we move to a low carbon economy,
- **Customers:** encouraging all DNOs to pay more attention to all aspects of customer service. These aspects include the quality of service provided by their call centres, the speed and cost of new connections as well as the number and length of any interruptions to customers' supply,
- **Networks:** encouraging DNOs to invest efficiently, so that they provide secure and reliable supply at an efficient cost while ensuring that any new assets they install meet customers' needs into the future and, where possible, take into account how those needs might change.

We have arrived at a package of allowances, incentives and other measures aimed at achieving this based on public consultation and through detailed working groups comprised of DNOs and other key stakeholders. We have also sought to balance strong incentives for efficiency with appropriate mechanisms that address uncertainty and limit the extent to which allowed revenues and costs move out of alignment with each other. We have sought to make sure that we create a balanced package of incentives so that DNOs are not encouraged to concentrate efforts on one area of their performance at the expense of others.

In some cases, the incentive and uncertainty mechanisms that are set out in these Final Proposals depend on the way in which costs incurred and performance attained in the period 2010-2015 are treated during DPCR5 or at future price reviews. The application of these incentives noted above depends, to a significant extent, on distribution companies and their investors having confidence in how these arrangements will be applied.

In conducting price reviews, Ofgem has discretion over the ways in which price limits are set and needs to keep under review the regulatory framework in the light of all developments. There can be no assurance that future reviews will be conducted in the same manner as this one. In particular, nothing in this appendix is intended to provide any guidance as to how costs arising after 1 April 2015 will be treated in future reviews. This is being considered as part of the RPI-X@20 project.

In the light of these considerations, this appendix sets out key assumptions and principles underlying the review and explains how Ofgem expects to use these assumptions and principles as the basis for the calculation of particular values relating to 2010-15 costs and performance during the price control, at the next price control review and beyond.

Ofgem recognises the importance of predictability in regulation and does not intend to alter the treatment of costs and incentives in relation to the period 2010-2015 from that

set out here unless the formulation is shown to contain manifest errors or to be inconsistent with its statutory duties, taking due account of the disadvantages of changing approach. It is also possible that new, unforeseen issues will arise that are not provided for in the methods set out in this document, in which case Ofgem will consult on the appropriate response.

Should any licensee reject these Final Proposals, the calculations set out here may no longer apply, depending on the outcome of the Competition Commission reference.

The structure of this document is as follows:

- **Chapter 1: Guidance on the RAV roll forward computations**
- **Chapter 2: Uncertainty Mechanisms and the RAV rolling incentive**
- **Chapter 3: The Treatment of Bad Debts**
- **Chapter 4: The Losses Incentive**
- **Chapter 5: Further guidance on the Distributed Generation incentives framework**
- **Chapter 6: Further guidance on Transmission Connection Point Charges**
- **Chapter 7: Worst served customers and Undergrounding**
- **Chapter 8: Sole use connections**
- **Chapter 9: Tax Trigger**
- **Chapter 10: Pensions methodology**
- **Chapter 11: Statement of the tax methodology**

## 1. Regulatory Asset Value roll forward calculations

### Chapter summary

This chapter sets out an overview of our approach for carrying out the Regulatory Asset Value (RAV) roll forward calculations.

### 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 the DPCR5 review we have undertaken a fundamental review of the means by which costs are included in the RAV as a key element in our approach to equalising incentives for the DNOs. The speed of money will be the same as that proposed at Initial Proposals:

- 85 per cent of expenditure covered by the equalised incentive will be funded as "slow" money over 20 years through the RAV.
- The remaining 15 per cent of expenditure covered by the equalised incentive will be funded as "fast" money which is expensed and funded in the year of expenditure.
- Business support costs, non-operational capex and traffic management costs (excluding administration costs), which all sit outside the equalised incentive, will be 100 per cent funded as fast money.

1.2. At the end of each year of DPCR5 we will publish an indicative updated RAV for each DNO with a view to confirming the effective RAV at the end of the period (March 2015). In ascertaining these values it is important that the treatment of expenditure that DNOs incur in this period is consistent with the principles and specific issues set out in the DPCR5 Final Proposals – that is, the same constituents of costs are added to the RAV (i.e. in the slow pot). All costs will be admitted on a normal accruals basis, except where otherwise specified (for example in relation to normal pension contributions). This excludes provisions, except for the actual cash utilisation thereof. The definition of normal accruals will be set out in the Cost and Revenue Reporting Instructions and Guidance (CRRIG), prepared and amended in accordance with the standard licence conditions

1.1. In order to calculate each DNO's RAV balance it is necessary to define a number of relevant categories of costs, to make clear those costs which are added to RAV and those which are not. These categories are:

- net Network Investment (which excludes all sole use connection costs and sole use contributions and is net of contributions relating to direct shared connection costs as defined in the CRRIG),
- Network Operating Costs,
- net Indirects Closely Associated with Direct Activities (which excludes all relevant indirects and contributions relating to sole use connections and is net of contributions relating to relevant indirect costs associated with shared connection costs as defined in the CRRIG),



- net Business Support costs (which excludes all relevant costs and contributions relating to sole use connections and is net of contribution relating to business support costs associated with shared connection costs as defined in the CRRIG),
- Non-Operational capital expenditure,
- Pension costs, and
- Other costs.

1.2. The definitions of each of these categories of costs will be as set out in the CRRIG. A high level overview of the categories is set out in the following paragraphs.

### ***Cost Definitions***

1.3. This section lists the key categories of costs relevant to determining RAV additions each year. The definitions of each of these categories of costs will be as set out in the CRRIG, prepared and amended in accordance with the relevant standard licence conditions.

1.4. Net Network Investment includes the building blocks of:

- net Demand Connections (which excludes all sole use connections costs and sole use contributions. It is net of contributions relating to direct shared connection costs),
- General Reinforcement,
- Diversions,
- Fault level expenditure,
- Legal and Safety,
- Information Technology and Telecoms,
- Asset replacement,
- Quality of service,
- Major System Risks,
- Rising Mains and Laterals,
- Critical National Infrastructure (CNI), and
- Environmental.

1.5. Network Operating Costs (NOCs) include the activities of:

- Faults (including both Quality of Service (QOS) and non-QOS faults),
- Inspections and maintenance,
- Tree Cutting,
- Substation Electricity,
- Dismantlement,
- Remote Location Generation, and
- Severe Weather Atypicals.

1.6. Net Indirects Closely Associated with Directs (which excludes all relevant indirects relating to sole use connections and is net of contributions relating to relevant indirect costs associated with shared connection costs). It includes the activities of:

- Network Design and Engineering,
- Project Management,
- Engineering Management and Clerical Support,
- Control Centre,
- System Mapping,
- Call Centre,

- Stores,
- Vehicles and Transport,
- Health and Safety and Operational Training, and
- Workforce renewal costs.

1.7. Net Business Support Costs (which excludes all relevant costs relating to sole use connections and is net of contributions relating to business support costs associated with shared connection costs. It includes the activities of:

- Network Policy,
- Information Technology and Telecoms,
- Property Management,
- Human Resources and Non-Operational Training,
- Finance and Regulation, and
- CEO etc.

1.8. Non-operational capital expenditure is defined as expenditure on new and replacement assets, which are not system assets (i.e. relevant assets as defined in the licence). It includes:

- Vehicles (including mobile plant and generators but excluding company cars which are a labour cost),
- Plant and machinery,
- Small tools and equipment,
- Office equipment,
- Non-operational property,
- Non-operational information technology and information technology software upgrade costs, and
- Non-operational Telecoms.

1.9. Pension costs are defined as:

- The cost to the employer of normal ongoing pension service costs, including pension administration costs and the Pension Protection Fund (PPF) levies.<sup>1</sup> - All of these costs are an element of labour costs and, as such, follow these costs into the activities in paragraphs 1.4 to 1.8 above, and
- Pension deficit repair funding costs.

1.10. For the avoidance of doubt the other categories of costs defined above exclude all pension costs.

1.11. Other costs are any other economical and efficiently incurred costs of the distribution business not specifically defined above.

### **Additions to RAV**

1.12. In DPCR5 the annual net additions to RAV will be calculated as 85 per cent of the aggregate of net Network Investment, net Network Operating Costs and net Indirect Costs closely associated with Direct Activities. In addition, in each case the attributable normal ongoing pension service costs will follow employment costs in each activity to

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<sup>1</sup> Whether paid directly to the PPF or indirectly via the pension scheme trustees.

RAV. However, pension costs must be separately identified in DPCR5 as they are subject to separate asymmetric incentive rates and do not form part of the Information Quality Incentive (IQI) mechanism. These categories of costs (and their component activities in DPCR5), as with all the categories are intended to be mutually exclusive.

#### 1.13. Costs added to RAV:

- do not include interest, other financing and tax costs<sup>2</sup> (except for business rates on non-operational buildings and stamp duty land tax), and
- are all intended to refer to costs of the distribution business incurred by the licensee or a related party of the licensee undertaking distribution business activities where those costs are recharged to the licensee, but do not include any internal profit margins of the licensee or related party margins, except where permitted. The treatment of related party margins is set out in paragraphs 1.25 to 1.29 below.

1.14. Costs that are eligible for logging up or reopener mechanisms (for example, worst served customer expenditure, undergrounding expenditure, rising mains and laterals (RML), CNI expenditure, flooding expenditure for SSE Hydro, additional costs associated with the high-volume low-cost connections driver) will follow the RAV treatments for the relevant building blocks as set out in paragraphs 1.4 to 1.8 above. However, there will also be a separate table in the CRRIG so that the value of these items are separately recorded to facilitate any adjustment to revenue as part of the review of logged up costs or any reopeners that have been triggered. Further details of these mechanisms are set out in Chapter 2.

#### **Deductions from RAV**

1.15. The following items are not included in the costs added to the RAV but are netted off the relevant cost categories at 85 per cent in carrying out the RAV roll forwards:

- cash proceeds of sale (or market value of intra-group transfer<sup>3</sup>) of operational assets – by netting off the relevant cost category,
- cash proceeds of sale of assets as scrap – by netting off the relevant cost category,
- amounts recovered from third parties in respect of damage to the network – by netting off the relevant cost category, and
- an adjustment (positive or negative) will be also be made to RAV in relation to the difference between FBPQ forecast revenue levels for miscellaneous excluded services (ES7, as defined in the relevant charge restriction condition) and outturn levels of revenue<sup>4</sup>. Where the outturn level is higher, a deduction will be applied to RAV for the year concerned. This is the only category of excluded service in respect of which an ex post RAV adjustment will apply in DPCR5. We will apply an adjustment because an estimate of miscellaneous excluded service revenue is made in calculating allowances. A true-up is made to protect customers.

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<sup>2</sup> Tax costs include corporation tax, capital gains tax, income taxes, recoverable valued added tax and network rates

<sup>3</sup> For the purpose of the RAV calculations all inter-group transfers must be at market value and be supported by third-party valuations.

<sup>4</sup> Chapter 3 of the Final Proposals Allowed Revenues and Financial Issues document provides further information on excluded services.

### Items excluded from the RAV calculations

1.16. The following items are excluded from the RAV calculations:

- pension deficit repair funding costs (and for the avoidance of doubt, all unfunded early retirement deficiency costs (ERDC) post 1 April 2004),
- normal employer ongoing pension contributions related to the provision of excluded services and de minimis activities,
- all metering services (metering excluded services and legacy meter asset provision),
- all statutory or regulatory depreciation and amortisation,
- business support costs,
- non-operational capital expenditure,
- 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 falling within the distributed generation (DG) scheme (except as an agreed transfer from the DG mechanism) and any residual costs from the DPCR4 Registered Power Zone (RPZ) incentive scheme,
- 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 costs (but see paragraph 1.15 above),
- fines and penalties incurred by the DNO (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),
- costs falling within IFI,
- costs falling within the low carbon networks fund,
- Bad Debt costs and receipts (subject to an ex post adjustment to allowed revenues). See chapter 3,
- any asset revaluation amounts,
- all costs of undertaking de minimis activities, and
- reversing, where appropriate, any cost reporting which is not on a normal accruals basis as referred to in paragraph 1.2 above.

## Other RAV requirements

### *Efficient costs*

1.17. Ofgem reserves the option to disallow costs from the RAV for any of these categories if they do not relate to the distribution 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 the consumer.

### *Restated costs*

1.18. For all costs, in whatever category, activity or exclusion, any costs restated will be applied in the year in which the cost was incurred rather than in the year of the restatement.

### *Related party costs*

1.19. Costs are only included to the extent they represent the cost of services required by the distribution business. Costs for services recharged to the licensee by a related party<sup>5</sup> will only be admissible if the licensee would otherwise have needed to carry out the service itself or procure it from a third party. Ofgem 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 licence condition. Where derogations have been granted to DNOs prior to 31 March 2010 to cover the charging and reporting of specified shared services between two or more licensees under common ownership, then the derogations have preference over these requirements.

1.20. All companies and related parties charging the licensee 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 implementing national legislation where these apply.

1.21. We would expect the DNO 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<sup>6</sup>.

1.22. We would expect 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 would expect the basis to be documented and approved at board level, assessed, and challenged annually, all of which should be evidenced.

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<sup>5</sup> A related party is a term used to cover both Affiliate and Related Undertakings as defined in Standard Licence Condition 1.

<sup>6</sup> Whilst not defined, licensees would be expected to demonstrate to Ofgem's satisfaction why a period in excess of 6 months was reasonable.

1.23. The basis should be consistent from year to year and where there are changes they should be both documented and justified.

1.24. The method used to attribute costs from the related party to the licensee and to activities should be transparent and the revenues, costs, profits, assets and liabilities separately distinguishable from each other.

#### *Related party margins*

1.25. Related party profit margins will be excluded 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 customers. For this purpose, an entity will be considered a related party if it is an Affiliate or Related Undertaking or if that entity and the DNO 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).

1.26. 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, provided that the following requirement is met. 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 that there was more than one bidder.

1.27. Whilst not precluding other demonstrations of competitiveness, 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.

1.28. Irrespective of whether competition is demonstrated and margins no longer disallowed, the licensee must arrange to comply with the requirements of the relevant standard 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.

1.29. Where a principal related party resource provider<sup>7</sup> ceases to be a related party during a price control period, for example on the restructuring of a group, it shall continue to be treated as a related party until the end of that price control period and the margins charged will be disallowed. 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 that there is more than one bidder.

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<sup>7</sup> A principal related party resource provider is one that has a contract to operate or manage a substantial part of a licensee's day-to-day operations, and that the contract was entered into before or as part of the arrangements for a change in ultimate controller, or controllers, where there is more than one.

### **Interaction with the distributed generation incentive**

1.30. The distributed generation incentive will not include any capital expenditure or associated indirect costs already included in RAV additions and, where capital expenditure is incurred for the benefit of both demand and generation, costs shall be apportioned accordingly.

1.31. Where related assets are not used by generators but are used by demand customers, the DNO concerned may, by agreement with Ofgem, transfer the undepreciated value of capex to the RAV.

### **RAV calculation 2008-09 and 2009-10**

1.32. We have used estimates of 2008-09 and 2009-10 expenditure. The former has been provided by the companies as part of the annual price control cost reporting returns but have yet to be reviewed in detail. The latter were provided by the companies in August 2009 based on revisions to their previous forecasts, on the understanding that these were the best estimates available.

1.33. In the event that actual 2008-09 and 2009-10 RAV additions turn out to be materially different to the estimates, we would not expect to alter revenue in the period 2010-15. Unless the difference is due to genuine efficiencies that could reasonably have been foreseen at the time the forecast was provided, Ofgem will claw back the benefits of any under-spend in 2008-09 and 2009-10 relative to the estimate used in these proposals at the next review and alter the revenue in the next price control.

## 2. Uncertainty mechanisms and the RAV rolling incentive mechanism

### Further details on the assessment of reopeners

2.1. Chapter 7 of the Cost Assessment document sets out our proposals for reopeners. The section provides further details of the process for assessing reopener requests.

2.2. Our proposals for reopeners involve application windows when the requests can be made. Two to three months ahead of these windows we will consult on the reopener template to be used for submitting the relevant information. This will allow the DNOs sufficient time to prepare the necessary information for the reopener itself in the required format.

### Load related expenditure reopener

2.3. When a DNO applies for this reopener we would expect the following information to be contained within the application:

- Data on the volume and unit costs of high-cost connections. The contribution of this element towards the 20 per cent threshold would be calculated as efficient net expenditure on these connections minus the baseline assumed in the price control. If this amount is negative then it would raise the hurdle to be cleared by the general reinforcement element of the reopener.
  - The DNOs will need to provide evidence that any increase is explained by higher volumes and/or that the assumption for net costs as a proportion of gross at the price control did not adequately reflect the build-up of costs for these connections. Any increase due to under-recovery of connection charges will be deducted from any contribution to meeting the 20 per cent threshold.
- On the general reinforcement side of the reopener we expect its contribution towards the threshold to be calculated by summing:
  - The additional net efficient expenditure on reinforcement caused by the combination of actual and forecasted demand being greater than expected. We would expect this increase in demand to be demonstrated through the common framework output measures. This net increase would take into account areas of the network where actual and forecasted demand for the period was less than expected and general reinforcement had been avoided. This avoided expenditure would be subtracted from the additional expenditure required in areas of the network where greater than expected reinforcement was required.
  - The additional general reinforcement that had been avoided by demand side management (DSM) activities.

2.4. Ofgem would review this submission and if the threshold had been met then the price control would be reopened to allow the recovery of efficient expenditure over the threshold that would not otherwise be recoverable. The reopener would also require the one per cent of base demand revenue materiality threshold to be met.

2.5. If Ofgem decides to activate this mechanism at DPCR6 then we would make an assessment of whether efficient expenditure in the DPCR5 period was 20 per cent less than forecast at the price control due to the outturn of demand and the volume of high-cost connections. This assessment would follow the same approach as the assessment on the upside described above. As discussed in Chapter 7 of the Cost Assessment document, DNOs that had not triggered the reopener during the application window



would also be able to activate the mechanism at DPCR6. There would then be a separate assessment of whether the additional funding required above the 20 per cent threshold breached the one per cent of base demand revenue materiality threshold. If material, an adjustment would be made to DPCR6 revenues to allow the recovery of the excess above the 20 per cent threshold. We describe in paragraph 2.17 onwards below how this materiality threshold will be assessed.

### **High-value projects reopener**

2.6. If DNOs activate this reopener they will be required to justify the increased efficient expenditure requirement by demonstrating that they have met or will meet the relevant outputs and that the total of efficiently incurred costs will be 20 per cent greater than the Ofgem baseline. Factors that can be used to demonstrate this include the requirements for the work being more complex, a different method being required to deliver the outputs or revised legislative requirements. For example, planning constraints might involve additional tunnelling work. Real Price Effects (RPEs) cannot be used as a justification for expenditure being greater than or less than the baseline - the risk of RPEs exceeding the assumptions included in the baselines is for the DNOs to manage in this area. Like the load related expenditure reopener, this reopener only allows the recovery of expenditure beyond the 20 per cent threshold that would not otherwise be recoverable. The one per cent of base demand revenue materiality threshold also applies.

2.7. If Ofgem decides to activate this mechanism at DPCR6 then we would make an assessment of whether efficient expenditure in the DPCR5 period was 20 per cent less than forecast at the price control due to the same factors as described above. This assessment would follow the same approach as the assessment on the upside described above. As discussed in Chapter 7 of the Cost Assessment document, DNOs that have not triggered the reopener during the application window would be able to activate the mechanism at DPCR6. There would then be a separate assessment of whether the additional funding required above the 20 per cent threshold breached the one per cent of base demand revenue materiality threshold. If material, an adjustment would be made to DPCR6 revenues to allow the recovery of the excess efficient costs above the 20 per cent threshold. We describe below how this materiality threshold will be assessed.

### **Traffic management permitting reopener**

2.8. In assessing the additional costs arising from permit fees our approach will be mechanistic. Our baseline allowance for each DNO is based on the DNOs' forecasts of the number of works/notices. When revising allowances we will only consider the proportion of notices that have been replaced by permits and the actual average cost of permits. This will be used to extrapolate forward assumptions for the remainder of the price control period. These differences will then feed back through our original volume and penalty rate assumptions to allow revised allowances to be calculated.

2.9. For example, suppose that our baselines were set on the basis of there being 100 works undertaken over DPCR5. If a permitting scheme is introduced where the average permitting fee per works is £100 and it is estimated that 20 per cent of the works planned over DPCR5 will be affected by this permitting scheme then we will revise allowances by £2,000 (100 works \* £100 per works \* 20 per cent of works affected). Revising allowances in this way ensures that the volume risk over the number of works is retained by the DNOs. This analysis will not be comparative as the level of permit fee will vary by permit scheme and DNO region.

2.10. Our assessment of the efficiency of any one-off set-up costs, additional administration costs and the impact of any permit conditions (such as the London Code of Practice) will be more comparative in nature. We will benchmark these costs against those submitted by other DNOs and those from other industries (e.g. gas distribution) to ensure that the strong efficiency incentives are preserved on this expenditure.

2.11. Our assessment of costs will also take into account the proportion of load related expenditure that will be funded outside the price control (sole use connections and the sole use element of shared connections under the apportionment rule). Traffic management costs associated with these activities are outside the price control. We will ensure that any adjustments that we make to allowances are consistent with the FBPQ assumptions of the DNOs in this area.

2.12. The additional funding required as part of this reopener would need to pass a one per cent of base demand revenue materiality threshold which is described further below.

### **Rising and lateral mains reopener**

2.13. As part of the assessment of this reopener, the DNOs will need to provide the following information to Ofgem:

- the steps that they have taken to quantify the scale of the work that is required,
- the actions they have taken to determine ownership,
- the details of the costs for work undertaken to date including any inspection and legal costs,
- the workings behind their cost estimates for the necessary work for the remainder of the DPCR5 period,
- their estimates of the costs that can be recovered from customers, and
- a detailed plan for resolving any outstanding ownership issues.

2.14. If the reopener is activated by a DNO, the one per cent of base demand revenue materiality threshold applies. Chapter 7 of the cost assessment document sets out further details.

### **Reopener for logged up expenditure items**

2.15. If the DNOs apply for a reopener for the logged up expenditure items (critical national infrastructure costs, black start capability and emergency batteries) they will need to:

- demonstrate that actual and forecasted costs over the entire DPCR5 period are likely to exceed the relevant threshold,
- provide evidence of the requirements mandated by the relevant government agencies, and
- demonstrate that the costs were efficiently incurred, for example by showing that the work has been competitively tendered.

2.16. The additional funding required as part of this reopener would need to pass the one per cent of base demand revenue materiality threshold which is described further below. In assessing whether the threshold had been breached, we would consider total expenditure on these items. It would not be necessary for each individual item to separately pass the threshold.

## Defining the thresholds for reopeners

2.17. Most of the reopeners that we are including in DPCR5 have a one per cent of base demand revenue threshold in order for them to be triggered. In addition, there is also a threshold set at 20 per cent of the Ofgem baseline for load related expenditure and high-value projects reopeners. Here we set out how these thresholds will be assessed.

2.18. When we assess these reopeners we will use 2010-11 prices as a common basis. We have selected this financial year as the anchor for these calculations as all of the relevant data for that year will be available at the time of the application windows. The change in the average RPI all items index (April - March) will be used for any rebasing.

2.19. For both the thresholds that relate to reopeners the numerator will be sum of the additional funding sought over the DPCR5 period in 2010-11 prices. This will involve deflating any expenditure after 2010-11 if it is in nominal terms. The additional funding element will need to take into account the incentive rate applied to each element of expenditure. For example, at a 50 per cent incentive rate on costs the DNOs will only be exposed to half of any expenditure in the absence of a reopener. To ensure that a reopener is only activated for the recovery of a material amount, we define the additional funding sought over the DPCR5 period as the change in the baseline allowances multiplied by the incentive rate applicable to the expenditure. The following example illustrates this:

- Consider a DNO with an allowance of £100 for load related expenditure for the DPCR5 period and an incentive rate of 50 per cent from the IQI which applied to this expenditure.
- At the application window for the reopener the DNO is able to demonstrate that efficient expenditure for the DPCR5 period is £122.
- For the reopener to be triggered the excess over the 20 per cent threshold multiplied by the relevant incentive rate would need to be greater than the one per cent of base demand revenue threshold. In this example the relevant amount to be assessed against the 1 per cent of base demand revenue would be £1 (£2\*50%).

2.20. For the 1 per cent of base demand revenue threshold the denominator will be base demand revenue in 2010-11 as calculated using the charge restriction conditions in the DNOs' licences in the relevant year's prices. Fixing 2010-11 as the denominator ensures that the threshold remains constant whether adjustments are triggered at the windows or at DPCR6.

2.21. For the load related expenditure and high-value projects reopeners the denominator will be the Ofgem baselines (summed over the entire DPCR5 period) rebased to 2010-11 prices. Our baselines for high value projects are set out in Table 3.9 of Chapter 3 in the Cost Assessment document, the low-volume high-cost connections and general reinforcement baselines are set out in Tables 7 and 9 of Appendix 4 of the Cost Assessment document. For the load related expenditure reopener the denominator will be the sum of the low-volume high-cost connections baseline and the general reinforcement baseline. Table 9 on general reinforcement includes the high value projects relating to general reinforcement – for the purposes of the reopener threshold the baselines for these high value projects will need to be removed from the general reinforcement baselines when assessing the relevant threshold. The load related expenditure reopener does not consider high value projects.

## How our uncertainty mechanisms will impact allowed revenues

### Over-arching principles

2.22. When we make any adjustments to allowed revenue following the outturn of a mechanism our intention will be to achieve the following:

- The DNOs should be indifferent whether they receive the revenues after the adjustment or whether the relevant allowance was included at the price control review. When trading off revenues between time-periods we will use the Weighted Average Cost of Capital (WACC) appropriate to the period in which the costs were incurred as the discount rate.
- Any adjustments that we make will follow the same regulatory treatment as the underlying costs. This has two implications:
  - Costs which are subject to the equalised incentive will continue to have the same treatment as fast and slow money. The RAV will be updated to reflect the impact of outturn expenditure less depreciation like any other costs. The "fast" element of such expenditure plus financing costs and lost depreciation will be funded as fast money after the adjustment, i.e. these elements will not feed into RAV.
  - The incentive strengths that apply to the expenditure will be preserved. This means that any adjustments we make will take into account the impact of any under- or over-spends against our baselines, having adjusted those baselines as described below under each uncertain issue. This means that expenditure subject to the equalised incentive will still be subject to the rolling incentive scheme. Any expenditure treated as fast money will keep its 100 per cent incentive strength meaning that the DNOs are fully exposed to any under- or over-spends.
- When making any changes to allowed revenues we will look to smooth out any fast money adjustments (subject to any financeability constraints) to reduce the volatility of charges - this might for example result in the fast money adjustments being spread over three years.

2.23. The only expenditure category which is subject to our uncertainty mechanisms and is funded solely as "fast" money is traffic management permitting costs (excluding administration) - any reopener for these costs will result in a "fast" money adjustment only. The remainder of the expenditure covered by our mechanisms is subject to the equalised incentive meaning that any adjustment will be made to both "fast" and "slow" money as described above.

### Volume driver on high-volume low-cost connections

2.24. Our ex ante allowance for costs associated with these connections is the product of our assumed volumes and unit costs and an assumption for the proportion of costs recovered through distribution use of system (DUoS) charges rather than through connection charges. At DPCR6 we will true up this allowance for actual volumes of these connections and will apply a true-up between our ex ante assumption and the actual proportion of net to gross costs. This true-up will involve Ofgem making a forecast for volumes in 2014-15 at DPCR6. If there is a material difference between this forecast and the outturn volume for 2014-15 we will true this up at DPCR7.

2.25. The DPCR6 true-up will be conducted by carrying out the following steps:

- Calculating a revised allowance for DPCR5 that would have resulted had we set our baselines equal to the outturn volume of the number of connections combined with the actual recovery rate from customers.
- Calculating the NPV difference between the revenue stream provided by the ex ante allowance and that provided by the revised allowance in the step above. This difference will form the basis of our revenue adjustment which will be funded as fast money (and may be smoothed over a number of years subject to financeability concerns).

2.26. Figure 2.1 below provides a worked example of how the true-up will be calculated. In each of the examples in this chapter we have used a WACC of 4.685 per cent.

**Figure 2.1 - Worked example of the true-up calculation for high-volume low-cost connections driver**

WACC 4.69%

	2010-11	2011-12	2012-13	2013-14	2014-15
Assumed connection volume	100	100	100	100	100
Gross unit cost	£1.00	£1.00	£1.00	£1.00	£1.00
Assumed proportion to be recovered from customers	50%	50%	50%	50%	50%
Ex ante allowance	£50.00	£50.00	£50.00	£50.00	£50.00
Actual connection volume	95	100	105	110	105
Actual proportion recovered from customers	45%	45%	45%	45%	45%
Revised allowance adjusted for actual volumes and a true up for actual recovery rate	£52.25	£55.00	£57.75	£60.50	£57.75
Difference to be trued up	£2.25	£5.00	£7.75	£10.50	£7.75
Difference NPVed to 2015/16	£2.83	£6.00	£8.89	£11.51	£8.11

Total adjustment to be made in 2015/16 £37.34

2.27. In addition to the true-up for the difference in volumes there will also be adjustments for actual expenditure as there is for all other expenditure:

- RAV will be adjusted to reflect actual expenditure that entered the "slow" pot less depreciation. (Figure 2.2 below gives an example of how we will calculate the adjustment to RAV.)
- Any differences between actual expenditure and the allowance provided by actual volumes multiplied by the assumed units costs feed into the RAV rolling incentive scheme to ensure that the appropriate incentive rate is applied to any under- or over-spends. This is set out in paragraphs 2.33 to 2.36.

#### **Revenue adjustments from reopeners and logged up expenditure**

2.28. Any revenue adjustments following a reopener of the closing out of logged-up costs will follow a very similar process to that described above for the driver true-up. We will calculate the adjustment in the following manner:

- Modelling of the allowances for DPCR5 that would have resulted had we set our baselines equal to the expenditure assessment from the reopener or the value of logged up costs that are allowed.
- Modelling of the actual allowances for the DPCR5 period.
- Calculating the NPV difference between the two revenue streams above. This difference will form the basis of our revenue adjustment which will be funded according to the regulatory treatment of the expenditure (i.e. whether it is an equalised incentive expenditure item or a pure "fast" money item).

2.29. The worked example below illustrates the calculation adjustment that we will make for an equalised incentive expenditure item where the assessment is made at DPCR6.

**Figure 2.2 - Revenue adjustment worked example**

WACC		4.69%				
	2010-11	2011-12	2012-13	2013-14	2014-15	
Ex ante allowance	£0.00	£0.00	£0.00	£0.00	£0.00	
Allowance set after the reopener or review of logged up expenditure	£100.00	£0.00	£0.00	£0.00	£0.00	
Element that would have been funded as fast money	£15.00	£0.00	£0.00	£0.00	£0.00	
Element that would have been funded as slow money	£85.00	£0.00	£0.00	£0.00	£0.00	
Lost depreciation (assuming 20 year asset life)	£0.00	£4.25	£4.25	£4.25	£4.25	
Difference in RAV opening balance	£0.00	£85.00	£80.75	£76.50	£72.25	
Difference in RAV closing balance	£85.00	£80.75	£76.50	£72.25	£68.00	
Lost return on RAV	£1.99	£3.88	£3.68	£3.48	£3.29	
Lost depreciation plus lost return plus lost fast money	£16.99	£8.13	£7.93	£7.73	£7.54	
Lost revenue NPVed to 2015/16	£21.36	£9.77	£9.10	£8.48	£7.89	
Total fast money adjustment to be made in 2015/16	£56.60					
RAV addition to be made in 2015/16	£68.00					

2.30. The example above relates to an item where the assessment takes place at DPCR6. For a reopener that takes place at the application window: the RAV addition will take place in the financial year following the reopener, and any fast money adjustment would be smoothed in line with our policy. This allows for a mid price control revenue adjustment. If the assessment was for a pure "fast" money item (e.g. TMA permitting costs excluding administration costs) then no adjustment to RAV would be required and 100 per cent of the allowed expenditure will feed through the "element that would have been funded as fast money" line in the example above.

2.31. Any differences between actual expenditure and the allowance provided by the reopener or review of logged up expenditure will feed through to the RAV rolling incentive to achieve the desired incentive strength on any under- and over-spends relative to the revised baseline.

2.32. For rising and lateral mains we will take into account the fact that interim funding has already been provided in some cases - this will feed into the "Ex ante allowance" line

of the example. It is possible that a negative adjustment will be made if our revised baseline is less than the ex ante allowance.

## RAV rolling incentive

2.33. The RAV rolling incentive will follow the same principles as the DPCR4 capital expenditure rolling scheme. The key difference between the mechanisms is that in DPCR5 85 per cent of all network-related costs will enter the incentive rather than the 100 per cent of capex during DPCR4.

2.34. The objective is to ensure that an adjustment is made at DPCR6 to ensure that any network cost under- or over-spend made during the DPCR5 period is subject to the same incentive strength regardless of the year that it occurs. To achieve this objective the benefit (cost) of any under-spend (over-spend) is calculated in NPV terms in the absence of any rolling adjustment and compared against the benefit targeted by the incentive rate also in NPV terms. The difference between these amounts is the required adjustment to achieve the targeted incentive rate. This adjustment will be a fast money provision in 2015-16 which may be smoothed over further years to reduce volatility in charges. The assessment requires the use of a forecast for 2014-15 actual expenditure. Any deviations between the forecast and actual expenditure will be trued up at DPCR6.

2.35. For the rolling scheme to have its desired effect on all expenditure subject to the equalised incentive the "allowance" line in the worked example must include the following changes to allowances set at the DPCR5 review:

- any change to allowances from the high-volume low-cost connections driver (i.e. it must reflect the revised allowance line in the worked example above), and
- any changes to allowances from the assessment of reopeners and logging up mechanisms (i.e. it must reflect the "allowance set after the reopener or review of logged up expenditure" line in the worked example set out above).

2.36. Figure 2.3 below provides a worked example of how the RAV rolling incentive will operate for DPCR5.

**Figure 2.3 - RAV rolling incentive worked example (real 2007-08 prices)**

WACC	4.69%
IQI incentive strength	45.0%
Incentive strength on the "slow" pot	35.3%

	2010-11	2011-12	2012-13	2013-14	2014-15
Actual equalised incentive expenditure	£900	£1,000	£1,000	£1,000	£1,000
Allowance	£1,000	£1,000	£1,000	£1,000	£1,000
Under-spend (over-spend)	£100	£0	£0	£0	£0
Funding of under-spend as fast money	£15.00	£0.00	£0.00	£0.00	£0.00
Under-spend addition to RAV	£85.00	£0.00	£0.00	£0.00	£0.00
Depreciation earned on under-spend (assuming 20 year asset life)	£0.00	£4.25	£4.25	£4.25	£4.25
Addition to RAV opening balance	£0.00	£85.00	£80.75	£76.50	£72.25
Addition to RAV closing balance	£85.00	£80.75	£76.50	£72.25	£68.00
Return earned on under-spend	£1.99	£3.88	£3.68	£3.48	£3.29
Depreciation plus return earned on under-spend	£1.99	£8.13	£7.93	£7.73	£7.54
Depreciation plus return earned on under-spend NPVed to 2015/16	£2.50	£9.77	£9.10	£8.48	£7.89

Total slow pot gain from under-spend NPVed to 2015/16	£37.74
Desired slow pot gain (under-spend addition to RAV NPVed to 2015/16 multiplied by the incentive strength)	£37.72
Fast pot adjustment to revenues in 2015-16 to achieve target incentive rate	(£0.02)



### 3. Bad Debts

3.1. DNOs should continue to 'log up' any future bad debts, keeping sufficient records to allow for future evaluation against best practice criteria and the specific credit control requirements set out in the DCUSA<sup>8</sup>. Although we expect any commensurate adjustment to allowed revenue to apply at the next price control review we will consider whether it is appropriate to approve/disapprove amounts as part of the annual cost reporting process (subject to later adjustment for any recoveries).

3.2. We do not expect that bad debts during the DPCR5 period will reach a level at which deferral of pass-through (until DPCR6) will be a material financeability issue. However, in the unlikely event that bad debts were to reach such levels, the Authority would consider representations for earlier recovery of costs, subject to reviewing the costs against the best practice criteria and credit control requirements specified above.

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<sup>8</sup> Distribution Connection and Use of System Agreement (Standard Licence Condition 22 refers)

## 4. Losses incentive

4.1. In Chapter 6 of the Incentive and Obligations document we set out our proposals on the losses incentive. In this chapter we describe in further detail how we will calculate specific elements of the incentive.

### DPCR5 target setting

4.2. As described in Chapter 6 we propose to base the DPCR5 targets on historical (DPCR4) losses calculated according to the common losses reporting methodology proposed for DPCR5. This means that we will calculate the targets during DPCR5, once the historical data is available. In this section we set out how we intend to calculate the targets.

4.3. Each DNO will have a losses target (Allowed Loss Percentage, ALP) that will remain constant throughout DPCR5. We propose to calculate the losses target for DPCR5 as the average of the actual loss rates over all five years of DPCR4. An adjustment will be made to account for the electricity usage in substations that was recorded as losses in DPCR4.

4.4. In DPCR5 Initial Proposals we stated that the targets would incorporate the agreed loss reductions generated from low loss expenditure allowed in the DPCR5 settlement. However, since these loss reductions are not constant over DPCR5 it would not be possible to set a constant target. We therefore propose that the DPCR5 losses targets will not be adjusted for allowed discretionary low loss expenditure. Instead, when calculating the total incentive payments to/or by DNOs under the losses rolling retention mechanism (LRRM), we will adjust the losses performance in the final year of DPCR5 based on the forecast loss reductions from allowed discretionary low loss expenditure. This change in methodology will be financially neutral to the companies.

4.5. The actual loss rates during DPCR4 will be calculated from DPCR4 losses, recalculated using the common losses reporting methodology proposed for DPCR5, except that for regulatory years 2005-06 to 2008-09 'Dispute Final' (DF) settlement data will be used in the calculation of losses, whilst for 2009-10 'Run Final' (RF)<sup>9</sup> settlement data will be used. Where DF data is not available, RF data will be used. An adjustment will also be made to exclude any electricity usage in substations that was recorded as losses in DPCR4.

4.6. The target adjustment has been set as the forecast annual substation electricity usage, as contained in Table 4.1 below:

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<sup>9</sup> The last required timetabled reconciliation settlement run (of the balancing and imbalance settlement of the wholesale electricity market) which occurs 14 months after consumption. DF is then the post-final settlement run, which is received later than RF.

**Table 4.1 – Target adjustment due to substation electricity**

	Adjustment for substation electricity (GWh)
CN West	-
CN East	-
ENW	14.00
CE NEDL	8.59
CE YEDL	14.41
WPD S Wales	-
WPD S West	-
EDFE LPN	-
EDFE SPN	-
EDFE EPN	-
SP Distribution	47.00
SP Manweb	6.00
SSE Hydro	-
SSE Southern	-

4.7. The substation electricity usage is forecast in GWh. As the losses target is defined as a percentage, we will convert the substation electricity adjustments into a percentage using the 2009-10 units distributed (re-calculated using the common losses reporting methodology).

4.8. The formula below shows how the target (ALP) for DPCR5 will be calculated:

$$ALP_{DPCR5} = \frac{\sum_{t=2005/06}^{2009/10} ALR_t}{5} - \frac{S}{UD_{2009/10}}$$

where

- ALP is the Allowed Loss Percentage (%)
- ALR<sub>t</sub> is the Actual Loss Rate (%) where ALR<sub>t</sub> = RL<sub>t</sub>/UD<sub>t</sub>
- UD<sub>t</sub> is the Units Distributed (GWh). As stated above this will be re-calculated using the DPCR5 common losses reporting methodology
- RL<sub>t</sub> is the losses (GWh). As stated above this will be re-calculated using the DPCR5 common losses reporting methodology
- S is the forecast DPCR5 annual level of substation electricity usage previously reported as losses in DPCR4 (GWh) as shown in Table 4.1

### DPCR5 annual smoothing

4.9. We will apply a mechanism to smooth the annual loss incentive payments. This mechanism will not alter the amount of the incentive earned over DPCR5 (including the LRRM for DPCR5). Any losses incentive payment that exceeds fixed annual revenue thresholds (positive and negative) will be carried over into the next regulatory year. In the subsequent year the total of the losses incentive earned in that year and the amount carried over will be compared against the annual thresholds. The annual thresholds will

be updated such that they are kept constant in real terms. The annual smoothing mechanism is included in the calculation of the annual losses incentive in the relevant charge restriction condition of the licence.

### Treatment of DPCR4 LRRM

4.10. It should be noted that in this chapter we provide further explanation of the treatment of the DPCR4 LRRM (Chapter 7 of the Incentive and Obligations document) before we explain the treatment of the LRRM in DPCR5 (contained in Chapter 6). This is because there are common concepts throughout both sections, and the explanation is more logical if the DPCR4 treatment is explained first.

#### *DPCR4 Final Proposals*

4.11. As stated in Chapter 7, we propose to give effect to the DPCR4 Final Proposals when calculating the total losses incentive over DPCR4 and reflect the interaction between the retention of benefits under the five year rolling retention mechanism and the level of targets beyond 2010.

4.12. In DPCR4 the incentive mechanism was created so that the LRRM retains each year's incentive amount earned on the incremental change in outturn losses for five years.

4.13. As demonstrated in Figure 4.1 this equates to five times the final outturn losses. We consider this property to be appropriate as the purpose of the incentive is to reward sustainable changes in losses, and therefore the final year should reflect the cumulative efforts over the entire price control period. As shown in Figure 4.1 the net change is 5 x E, where E is the target losses minus the reported losses in the final year.

**Figure 4.1 – Example of LRRM**

	DPCR 4					DPCR 5				
GWh	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Outturn (target losses - actual)	A	B	C	D	E					
Incremental change (05-06)	A	A	A	A	A					
Incremental change (06-07)		B-A	B-A	B-A	B-A	B-A				
Incremental change (07-08)			C-B	C-B	C-B	C-B	C-B			
Incremental change (08-09)				D-C	D-C	D-C	D-C	D-C		
Incremental change (09-10)					E-D	E-D	E-D	E-D	E-D	
Net change	A	B	C	D	E	E-A	E-B	E-C	E-D	
Total Net Change =	A+B+C+D+E+(E-A)+(E-B)+(E-C)+(E-D)									
	= 5 x E									

4.14. This means that if  $TL_{2009/10}$  is the target losses (GWh) in 2009-10 and  $ACL_{2009/10}$  is the reported losses<sup>10</sup> in 2009-10 then the total incentive under the LRRM ('total incentive') is calculated as follows:

$$\text{total incentive} = 5 \times \text{IR} \times (TL_{2009/10} - ACL_{2009/10})$$

where

$$\text{IR} = \text{PIAL}_{2009/10} \times \text{LR} \times 1000$$

<sup>10</sup> subject to adjustments as described in paragraph 4.19 and 4.20 below

PIAL is the price indexation adjustment

LR is the losses incentive value, which was £48/MWh for DPCR4

$$TL_{2009/10} = ALP_{DPCR4} \times LUD_{2009/10}$$

ALP is the Allowed Loss Percentage (i.e. the target percentage, %)

LUD is the units distributed (GWh) in the final year excluding any corrections to prior years, but with subsequent settlement corrections to the final year added in

4.15. However, in DPCR4 Final Proposals we highlighted the interaction between the retention of benefits and future targets. For example, if a DNO's performance over DPCR4 results in final year losses below the DPCR5 target, it will benefit from a starting position in DPCR5 that allows it to earn under the DPCR5 losses incentive without making further efforts to control losses. These benefits will be retained over the five years of the price control period.

4.16. This means that the total incentive value arising from the offset of the DPCR4 end losses position versus the DPCR5 target ('incentive under DPCR5 target') is calculated as follows:

$$\text{incentive under DPCR5 target} = 5 \times IR \times (TL_{DPCR5} - ACL_{2009/10})$$

where

$TL_{DPCR5}$  is the DPCR5 loss target expressed in GWh (explained in 4.25 below)

4.17. Therefore, in order not to double count the incentive, the net incentive under the LRRM ('net LRRM incentive') which should be paid by or to the DNO is the difference between the total incentive under the LRRM and the incentive under the DPCR5 target:

$$\begin{aligned} \text{net LRRM incentive} &= \text{total incentive} - \text{incentive under DPCR5 target} \\ &= 5 \times IR \times (TL_{2009/10} - ACL_{2009/10}) - 5 \times IR \times (TL_{DPCR5} - ACL_{2009/10}) \\ &= 5 \times IR \times (TL_{2009/10} - TL_{DPCR5}) \end{aligned}$$

(this is equivalent to setting the final year losses performance as the DPCR5 target and aligns with what was set out in the DPCR4 Final Proposals<sup>11</sup>).

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<sup>11</sup> Appendix 1 of Electricity Distribution Price Control Review, Final Proposals, 265/04; available for download from <http://www.ofgem.gov.uk/Networks/ElecDist/PriceCntrls/DPCR4/Documents1/8944-26504.pdf>

*Close out of DPCR4 losses incentive*

4.18. As stated in Chapter 7, in closing out the DPCR4 losses incentive we intend to apply the LRRM (as described above) and to take steps to ensure that there are no windfall gains or losses to the DNOs arising from:

- settlement data corrections and provision accounting,
- changes in reporting methodology, and
- adjustments to the DPCR5 targets.

Adjustments arising from settlement corrections and provision accounts

4.19. As stated in Initial Proposals we will require the DNOs to report corrections to the DPCR4 losses that take place after the end of the DPCR4 period, so that all the settlement data associated with DPCR4 has been accounted for and the DPCR4 annual reported losses have been revised accordingly. This includes subsequent corrections to DPCR4 settlement data and the 'closing out' of DPCR4 provision accounts. As we stated, this will ensure that all DNOs receive the losses incentive based on their absolute losses performance over DPCR4 and ultimately, that rewards/penalties under the DPCR4 scheme are not influenced by the different reporting bases that companies used.

4.20. However, the final year losses reported by the DNOs will probably include corrections in settlement data for prior years. In order to ensure that the LRRM works correctly, the final year losses figure adjusted in paragraph 4.17 above will exclude any corrections to prior years.

4.21. Therefore we will determine  $ACL_{2009/10}$ , the reported losses in the last year of DPCR4, as the losses experienced in the final year, excluding any corrections to prior years, but with subsequent settlement corrections to the final year added in (including provision account adjustments to provide the actual final year losses). We will also determine  $LUD_{2009/10}$  as the units distributed in the last year of DPCR4 excluding any corrections to prior years, but with subsequent settlement corrections to the final year added in.

Adjustment arising from the new methodology

4.22. In Chapter 6 we have detailed our proposals for a new reporting methodology for losses, and the fact that the DPCR5 targets will be set according to this new methodology. This means that the starting losses position for DPCR5 may be different to the reported losses for DPCR4 ( $ACL_{2009/10}$ ) described in 4.21 above.

4.23. We do not want to reward or penalise DNOs for changes in losses that arise from the change in reporting methodology. We therefore need to adjust the net LRRM incentive accordingly.

4.24. If  $ACL_{2009/10}$  is the losses for 2009-10 re-reported using the DPCR5 common reporting methodology<sup>12</sup>, then the corrected net incentive under the LRRM ('corrected net LRRM incentive') is calculated as follows:

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<sup>12</sup> i.e. the same as  $RL_t$  used in the DPCR5 target setting calculation

corrected net LRRM incentive

$$\begin{aligned} &= 5 \times IR \times (TL_{2009/10} - ACL_{2009/10}) - 5 \times IR \times (TL_{DPCR5} - ACL_{2009/10}) \\ &= 5 \times IR \times (TL_{2009/10} - TL_{DPCR5} - (ACL_{2009/10} - ACL_{2009/10})) \end{aligned}$$

Adjustment arising from the DPCR5 targets

4.25. As explained in section 4.6 onwards above, the DPCR5 target will be adjusted to exclude any electricity usage in substations that was recorded as losses in DPCR4. This is because during DPCR5, the substation electricity usage will be paid for by the DNO. If this adjustment was not made to the DPCR5 targets, a DNO that had reported substation electricity as losses in DPCR4 would have an immediate reduction of losses in DPCR5. However, in calculating the LRRM this adjustment is not appropriate. The losses for the final year of DPCR4 will still include the substation energy, and it is this value that should be reflected in the LRRM. If the LRRM is calculated as five times the difference between the DPCR4 and DPCR5 targets the DNOs will be over rewarded by a value of five times the DPCR5 target adjustment for substation electricity. Therefore we will add the substation electricity adjustment back into the DPCR5 target for the purposes of the LRRM calculation.

$$TL_{DPCR5} = (ALP_{DPCR5} \times UD_{2009/10}) + S$$

where

UD is the units distributed (GWh) re-calculated using the DPCR5 common losses reporting methodology

S is the forecast DPCR5 annual level of substation electricity usage previously reported as losses in DPCR4 (GWh).

Close out calculation

4.26. In calculating the remaining amount owed to/by the DNOs (the 'close out' amount) we will then subtract the loss incentive amounts already included in the DPCR4 allowed revenues:

$$\text{close out} = \text{corrected net LRRM incentive} - \Sigma \text{incentive over DPCR4}$$

where

$\Sigma$ incentive over DPCR4 is the sum of 'Incentive for Units distributed after 1.4.2005' from 2005-06 to 2009-10 as reported in the DPCR4 revenue returns.

## DPCR5 LRRM

4.27. This section uses the same terminology as described in the previous section.

4.28. The purpose of the LRRM is to ensure that sustainable loss reductions are rewarded for a five year period irrespective of when in the price control period the loss reductions occur.

4.29. For DPCR4 this is achieved by setting the outturn in the final year equal to the change in targets between DPCR4 and DPCR5 (with corrections for changes between DPCR4 and DPCR5 reporting methods).

4.30. There may be a similar interaction in DPCR5 since, depending on the losses incentive framework for DPCR6 and the DPCR6 losses target, a DNO may retain the difference between its end position in DPCR5 and the target over DPCR6. Therefore, when determining how we calculate the net LRRM incentive for DPCR5, we will have to consider how the DPCR6 LRRM and targets for DPCR6 impact upon the retention of benefits beyond DPCR5.

4.31. At present, we do not know the nature of the DPCR6 losses incentive mechanism or how targets for DPCR6 will be set. This means that we cannot currently determine how to calculate the DPCR5 net LRRM incentive. However, in calculating the net LRRM incentive for DPCR5 we will keep to the principle that we will reward sustainable loss reductions for a five year period, regardless of when in the price control period the loss reductions took place.

4.32. As stated in paragraph 4.4 we are proposing that when calculating the net LRRM incentive, we will adjust the losses performance in the final year of DPCR5 based on the forecast loss reductions from allowed discretionary low loss expenditure. Table 4.2 below contains the total forecast loss reductions from allowed discretionary low loss expenditure over DPCR5.

**Table 4.2 – Adjustment for loss reduction from allowed discretionary expenditure**

	Adjustment for low loss expenditure (GWh)
CN West	13.88
CN East	8.95
ENW	3.98
CE NEDL	-
CE YEDL	-
WPD S Wales	-
WPD S West	-
EDFE LPN	-
EDFE SPN	-
EDFE EPN	-
SP Distribution	4.35
SP Manweb	4.07
SSE Hydro	2.50
SSE Southern	8.20



### **Overall cap and collar and close out**

4.33. The net LRRM incentive will be capped or collared based on the revenue limits set out in Chapter 6.

4.34. If the net LRRM incentive lies outside of the cap or collar, it will be adjusted to the cap/collar levels. We will refer to this term as the capped/collared net LRRM incentive.

4.35. We will then calculate the 'close-out' payment by subtracting the loss incentive amounts already included in the DPCR5 allowed revenues from the net LRRM incentive.

### **Spreadsheet example**

4.36. The spreadsheet example in Figure 4.1 below illustrates how the annual thresholds will work, how the rolling retention mechanism will be calculated, and how the overall cap and collar will be applied<sup>13</sup>. It sets the recorded loss rate (%) in the final year of DPCR5 equal to the average unadjusted target rate (%) for DPCR6. However, for the avoidance of doubt, this is only illustrative. As we have already stated in paragraph 4.31, we do not know what the losses incentive mechanism may be or how any target may be set for DPCR6. Therefore the spreadsheet should not be taken as giving any indication of how the net LRRM incentive will be calculated for DPCR5 or how targets will be set for DPCR6.

4.37. The allowed losses are determined by the units distributed multiplied by the target loss percentage. Comparing this value to the recorded losses determines the outturn. The unsmoothed incentive payment is then calculated by applying the incentive rate to the outturn.

4.38. The spreadsheet shows the unsmoothed losses incentive payment outside the range established by the annual thresholds. This results in incentive payments being carried over into the next regulatory year. For example, in regulatory year 2010-11, the unsmoothed incentive payment is -90, which lies below the lower threshold of -60. Therefore, the smoothed payment in 2010-11 is -60 with -30 being carried over into the next regulatory year. It should be noted that it is unlikely that a company would hit the annual threshold every year in this way.

4.39. The net LRRM incentive is determined by five times the outturn in the final year of DPCR5, which in this example is 600. However, the net LRRM incentive is subject to the overall cap and collar. In this example, the net LRRM incentive has been adjusted downwards to 300 to prevent the net LRRM incentive from exceeding the overall cap of 300. The close-out payment will be equal to the cap/collared net LRRM incentive of 300 minus the sum of all smoothed payments that have already occurred over DPCR5, which equals 180.

4.40. In this example we have assumed that the reporting methodology will be the same in DPCR6 as in DPCR5. As a consequence, no corrections are required to the net LRRM incentive. This is for illustrative purposes only, and should not be taken as giving any indication of what the reporting methodology will be for DPCR6.

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<sup>13</sup> This example does not include adjustments due to allowed discretionary low loss expenditure.

4.41. The reporting of losses data will be lagged by two years. Therefore, the actual incentive payments will occur two years later than suggested in the spreadsheet example. This is not reflected in the figure below.

**Figure 4.1 – Spreadsheet example of the losses incentive framework operation**

Incentive rate = 60 per unit										
2010-11 prices	DPCR5					DPCR6				
	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Units distributed	100	100	100	100	100					
Target loss percentage	4%	4%	4%	4%	4%	2%	2%	2%	2%	2%
Allowed Losses (AL)	4	4	4	4	4					
Recorded	5.5	2	2	3	2					
Outperformance (allowed losses-recorded)	-1.5	2	2	1	2					
Incremental change (2010-11)	-1.5	-1.5	-1.5	-1.5	-1.5	3.5				
Incremental change (2011-12)		3.5	3.5	3.5	3.5	0	0			
Incremental change (2012-13)			0	0	0	-1	-1	-1		
Incremental change (2013-14)				-1	-1	1	1	1	1	
Incremental change (2014-15)					1					1
Net change	-1.5	2	2	1	2	3.5	0	0	1	
Unsmoothed incentive payment	-90	120	120	60	120					
Carry-over from previous regulatory year	0	-30	30	90	90					
Unsmoothed incentive payment + excess	-90	90	150	150	210					
Upper annual threshold	60	60	60	60	60					
Lower annual threshold	-60	-60	-60	-60	-60					
Smoothed payment	-60	60	60	60	60					
Carry-over	-30	30	90	90	150					

  

Net LRRM incentive	600
Excess outside of overall cap and collar	300
<b>Cap/collared net LRRM incentive</b>	<b>300</b>
Sum of smoothed payments	180
<b>Close-out payment</b>	<b>120</b>

  

Overall cap	300
Overall collar	-300

  

Upper annual threshold	60
Lower annual threshold	-60

## 5. Distributed generation incentive framework

5.1. Our proposed distributed generation (DG) incentive framework is described in Chapter 3 of the Final Proposals Incentives and Obligations document. This chapter describes the proposed framework in more detail, with particular focus on the cap and collar mechanism.

5.2. Our proposal is that the framework will be broadly unchanged from the DPCR4 framework. We propose that 80 per cent of the cost of use of system connection assets incurred to connect DG in DPCR5 will be passed through and remunerated through a revenue entitlement over the following 15 years. In addition, distribution companies will be entitled to a DG incentive with a value of £1.00/kW pre-tax of DG connected in DPCR5. It is intended that for each vintage of generating capacity connecting in the period 2010-15 this value is fixed for 15 years.

5.3. We propose to retain a current cap and collar on DNO returns, arising from the DG incentive rate and the pass-through mechanism, to protect both the DNO and consumers against cost uncertainty. The operating and maintenance (O&M) allowance will not be included in the revenues that are subject to the cap and collar. As for DPCR4, we intend that these arrangements will be applied by projecting revenues arising in relation to assets installed over the period 2010 to 2015 (using projections for years where data is not available when the calculation is performed) over the full life of those assets to determine the internal rate of return (IRR). The cap and collar are defined in terms of IRR, with the cap maintained at twice the pre-tax WACC (giving a value of 11.2 per cent pre tax for DPCR5), and the collar maintained at the assumed cost of debt (giving a value of 3.6 per cent pre-tax). The cap and collar will be applied at the end of DPCR5.

5.4. It should be noted that, as stated in Chapter 3 if there are no use of system connection assets required to connect DG over DPCR5, the DNO's DG incentive income over DPCR5 and beyond (for DG connected in the DPCR5 period) will be capped at £0.

5.5. There are two scenarios of how the DG incentive revenues earned from DG connecting in DPCR5 could exceed the cap and collar, which each require a different treatment at the end of DPCR5 in order to calculate the capped/collared amounts:

- The DG incentive revenue stream projected up to 2030 has an IRR which exceeds the cap or collar. In such a case we would apply an adjustment factor to all revenues post DPCR5 (2015-16 to 2029-30), such that the resultant IRR equals the cap/collar. The adjustment factor has to be set using an iterative procedure, such as Excel's Goal Seek function.
- The DG incentive revenue stream by the end of DPCR5 already has an IRR which exceeds the cap. The DNO would be required to repay an amount in 2015-16, calculated such that the IRR of the revenue stream over DPCR5 is reduced to the level of the cap. Where no costs have been incurred in DPCR5 in relation to use of system connection assets in DPCR5, the DNO will be required to repay the total DG incentive revenue received for DPCR5 connected DG. In both these cases there would be no further revenue entitlement from the DG connected in DPCR5.

5.6. We propose to calculate the cap and collar at the end of DPCR5 using projections for years where the data is not available when the calculation is performed.

## 6. Transmission connection point charges

6.1. Our proposed hybrid framework for the regulatory treatment of transmission connection point charges is set out in Chapter 5 of the Final Proposals Incentives and Obligations document. This chapter provides an example of how the incentive will be applied.

6.2. DNOs will be allowed to pass through those elements of transmission connection point charges that are outside their control. The defined elements that a DNO can influence will be incentivised against an ex ante allowance. The DNOs will be allowed to recover an amount of revenue equal to the actual annual expenditure for incentivised transmission connection point charges with an adjustment for the difference between actual and allowed charges in that year. An incentive strength of 20 per cent will be applied to the difference between the allowance for that year and the actual expenditure.

Allowed revenue from incentivised transmission connection point charges = Actual transmission connection point charges + 20 per cent \* ( Transmission incentivised transmission connection point charges allowance - Actual incentivised transmission connection point charges)

6.3. We demonstrate how allowed revenue will be calculated in the example shown in Figure 6.1 below.

**Figure 6.1: Worked example of the transmission connection point charges incentive mechanism**

Sharing factor	20%					
	2010/11	2011/12	2012/13	2013/14	2014/15	Total
Incentivised connection charges allowance	3	4	3	5	4	19
Actual incentivised connection charges	4	3	2	4	2	15
Allowed incentivised connection charges	3.80	3.20	2.20	4.20	2.40	15.80

## 7. Worst served customers and undergrounding

7.1. Our proposed allowances for the undergrounding mechanism and worst served customers are set out in Chapters 9 and 15 of the Final Proposals Incentives and Obligations document. In this chapter we provide further details of how these mechanisms will be applied.

### Revenue adjustment from logged up expenditure

7.2. Revenue adjustments for the worst served customers and undergrounding mechanisms will follow the process for logged up expenditure set out in Chapter 2 of this document. We will calculate the adjustment in the following manner:

- Modelling of the allowances for DPCR5 that would have resulted had we set our baselines to include the value of logged up costs that are allowed.
- Modelling of the actual revenue stream for the DPCR5 period.

7.3. Calculating the NPV difference between the two revenue streams above. This difference will form the basis of our revenue adjustment which will be funded according to the regulatory treatment of the expenditure. Worst served customers and undergrounding will be treated as equalised incentive expenditure items and 85 per cent will be capitalised and 15 per cent will be treated as fast money. The RAV will be updated to reflect the impact of outturn expenditure less depreciation like any other costs. The "fast" element of such expenditure plus financing costs and lost depreciation will be funded as fast money after the adjustment, i.e. these elements will not feed into RAV.

7.4. The incentive strengths that apply to the expenditure will be preserved. This means that any adjustments we make will take into account the impact of any over-spends against our baselines, having adjusted those baselines as described above. Given the "use it or lose it" nature of these mechanisms it is not possible to underspend but the IQI incentive strength will apply to the over-spends.

7.5. The worked example in Chapter 2 Figure 2.2 illustrates the calculation adjustment that we will make for an equalised incentive expenditure item where the assessment is made at DPCR6.

7.6. As both of these logging mechanisms run for the entire DPCR5 period we propose to add forecast DPCR5 expenditure into the modelling of logged up costs, where this expenditure is forecast to occur in DPCR5 but after the point at which we have collected actual logged up expenditure to date. We will recover any over-funding from DNOs in DPCR6 if the actual outturn expenditure is materially different from that included in the revenue adjustments made for the worst served customers and undergrounding mechanisms.

### Logged up costs that are allowed

7.7. As set out in Chapter 9 of the Final Proposals Incentives and Obligations document DNOs will be able to log up expenditure on undergrounding schemes up to a specified cap. Expenditure up to the cap that meets the requirements set out in Chapter 9 will be allowed and treated under the process outlined above. There will be no scaling back of allowed costs to reflect the proportion of actual lengths of overhead line removed. As discussed in our Initial Proposals we have removed the voltage caps and it is only

expenditure above the cap or not according to the specified requirements that will not be fully funded.

7.8. Chapter 15 of the Final Proposals Incentives and Obligations document sets out the individual allowances provided for DNOs under the worst served customers mechanism. The chapter also sets out the criteria for expenditure to be eligible for being logged up. Part of the mechanism includes monitoring the performance of circuits/customers that have been targeted by expenditure under the worst served customer scheme. We will monitor the completed projects to understand the success of the mechanism and to gain a better appreciation of the actual costs for remedial projects and the associated performance improvements. We recognise that the actual performance of circuits is subject to many variables and the period immediately following the completion of works may not, in practice, deliver the minimum required level of improvement. However, it is important that DNOs are not compensated for work that does not deliver the benefits that they forecast. In such circumstances if they are not able to demonstrate to Ofgem's satisfaction that the work carried out will deliver at least the minimum required improvement level in the longer term, they will not be able to recover all of their costs.

7.9. Throughout DPCR5 Ofgem will be using the additional information to test the appropriateness of incorporating or moving toward a performance-based incentive scheme for DPCR6.

7.10. Ofgem also plans to review the overall performance of the scheme after four years with a view to considering whether the scheme should continue beyond 2015.

## 8. Sole use connections

8.1. As explained in Chapter 2 all expenditure and contributions relating to sole use connections will sit outside the price control. In updating the RAV we will only take account of net expenditure associated with shared use connections work (i.e. after deducting the customer contributions associated with this work).

8.2. Where the entire income on sole use connections completed in a given year is less than the entire expenditure on sole use connections completed in that same year, the DNO will be exposed to the full difference.

8.3. Where the entire income on sole use connections completed in a given year exceeds the entire expenditure on sole use connections in that same year, by a tolerance band to be determined following a review of the returns for the given year, above the regulated margin, then Ofgem will use its powers under the relevant charge restriction condition and Electricity Act 1989 as appropriate to recover the additional income such that the DNO only recovers its expenditure plus the relevant<sup>14</sup> regulated margin. Ofgem will evaluate each market segment separately.

8.4. Where a connection is quoted after 31 March 2010 ("DPCR5 connections"), we will use the approach set out above in evaluating compliance with the regulated margins. This will be based on a review of the expenditure and income of connections completed in a given year.

8.5. Where a connection is quoted before 1 April 2010 ("DPCR4 connections"), it will be treated as being eligible for zero margin, regardless of when it is completed.

8.6. Where the DNO is allowed to levy an unregulated margin then the DNO will be exposed to the full difference between income and expenditure in either direction. Absent any breach of the relevant charge restriction condition on connection margins the DNO will be able to retain all income in excess of expenditure.

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<sup>14</sup> For domestic LV work and one-off industrial and commercial work up to and including three-phase whole current metering the relevant margin is zero throughout DPCR5.

## 9. Tax trigger

### Tax trigger mechanism

9.1. The trigger mechanism will be symmetrical and changes must be readily measurable and fulfil the following key criteria, in that it:

- protects DNOs from material effects on their cashflows of legislative changes,
- is unambiguously clear when a trigger event has occurred,
- is symmetric for both DNOs and consumers,
- 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)); and
- is simple and transparent to apply.

9.2. Changes will be calculated by re-running the DPCR5 financial model to assess the impact on the tax allowance component of revenues on the basis of 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.

9.3. In accordance with our tax methodology, the distribution business is modelled for price control purposes as a standalone entity. All expenditure is treated as if it is incurred directly in the distribution business. Thus, the trigger is only applicable to the tax burden related to the regulated distribution business, for which we set base revenue, e.g. sole use assets and self-financing excluded services, distributed generation, metering or de minimis activities are outside the scope of the price control and the trigger.

9.4. The trigger will specifically include effects arising from:

- A. changes in the relevant legislation whether introduced in a finance act, other act of parliament, statutory instrument or other legislative instrument, or
- B. changes in, or clarifications to, HMRC interpretation of legislation, or
- C. new precedents set under case law, or
- D. any changes in accounting standards that have a knock-on effect on the quantum or timing of taxation.

9.5. The trigger will specifically exclude effects arising from any changes that alter the cash tax charge for the DNO that arise specifically because the DNO is a member of a group of companies. That is, the tax legislation will be applied as if the DNO were a standalone entity. For example, the potential restriction of interest as deductible as a consequence of the licensee being a member of any group of companies or partnerships will not be a trigger event.



*Trigger point*

9.6. The trigger point is a change or changes that yield a greater than 0.33 per cent increase or decrease in the total base revenue of an individual DNO, on the basis of the aggregate effect over the remainder of the price control period.

9.7. Consequent upon the prescribed legislative changes above, the DPCR5 model would be re-run to calculate whether the new outcomes activate the trigger. No adjustment will be made to any other assumptions used in the model. This is to ensure that any adjustment is calculated on a like-for-like basis.

9.8. The trigger point is set at 0.33 per cent of total base revenue (as shown at row 10 on the "NotesToFinreps\_select" tab in the Financial Model). The measurement of this will be the aggregate effect on the tax charge (as shown on row 201 on the "NotesToFinreps\_select" tab in the Financial Model) of an individual DNO of all legislative changes at A above within a regulatory year; and whether these in total breach the trigger. The adjustment will be on the excess over the trigger point.

9.9. The changes at B, C and D above are not considered to be easily measurable by Ofgem without recourse to DNOs. As such, the outcome cannot be accurately quantified by either the DNO or Ofgem, until (a) the DNO has prepared and submitted its annual corporation tax return to HMRC, and (b) that return has been agreed by HMRC. The quantum of the effects at B, C and D will be agreed with Ofgem and, if necessary, be certified by an appropriate auditor<sup>15</sup>. Trigger events at B, C and D which have not been notified in writing prior to the end of DPCR5 will be ignored. The annual aggregate amount of these items will be logged up to be adjusted at a subsequent price control once the tax return has been agreed and closed by HMRC. At that point, the DPCR5 financial model will be re-run as above. This will include the effects arising at A above to re-measure the total of effects. All ex post adjustments will be NPV neutral. Where the effect of changes in B, C and D can be easily measured they will be dealt with when known, or as if they were a change defined in A above. We will deal with these on a case-by-case basis and DNOs may apply for these items to be adjusted in the period and will need to:

- demonstrate that the effects of the changes are quantifiable, and
- provide evidence that the treatment has been agreed by HMRC or, in the case of items at E above, their appropriate auditor.

*Timing of revised revenues*

9.10. When the trigger is activated, changes to DNOs' revenues from A will take effect from the regulatory year subsequent to that in which the trigger event or events occurred. Those from B, C and D as ex post adjustments as and when determined (as above) in the subsequent price control period(s). The additional revenue will be grossed up at the applicable rate of corporation tax for each year so that DNOs do not suffer tax on tax and obtain the net additional tax burden or, if a reduction in the tax charge, the benefit to consumers is net of the tax saved.

9.11. The two following tables illustrate the activation of the trigger and the timing of revised revenues, firstly for the adjustment of A effects (as described above), and

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<sup>15</sup> "Appropriate auditor" will be as defined in the standard electricity distribution licence condition 44 *Regulatory Accounts*.

secondly for the ex post adjustment where B, C or D effects cannot be quantified until tax submissions are agreed with HMRC.

**Table 9.1: Example of trigger in-period straight forward from A effects**

<b>Trigger with restriction to adjust only the excess over the trigger point</b>							
<b>2007/08 prices</b>		<b>DPCR5</b>					<b>DPCR6</b>
		<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>
		<b>£m</b>	<b>£m</b>	<b>£m</b>	<b>£m</b>	<b>£m</b>	<b>£m</b>
Impact of tax legislation on accounting tax charge:							
Year 1		6.0	6.0	6.0	6.0	6.0	
Year 2			(3.0)	(3.0)	(3.0)	(3.0)	
Year 3				3.0	3.0	3.0	
Year 4					2.0	2.0	
Year 5						10.0	
Sub total		6.0	3.0	6.0	8.0	18.0	
Adjustment for base amount		(3.3)	(3.0)	(3.3)	(3.3)	(3.3)	
Impact		2.7	0.0	2.7	4.7	14.7	
Additional tax on additional revenue		0.8	0.0	0.8	1.3	4.1	
Impact on subsequent year's revenue		3.5	0.0	3.5	6.0	18.8	
Trigger at	0.33%	3.3	3.3	3.3	3.3	3.3	
Trigger exceeded		YES	NO	YES	YES	YES	
		<b>DPCR5</b>					<b>DPCR6</b>
		<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>
		<b>£m</b>	<b>£m</b>	<b>£m</b>	<b>£m</b>	<b>£m</b>	<b>£m</b>
Modelled Base Revenue		1000.0	1000.0	1000.0	1000.0	1000.0	
Impact on revenues			3.5	0.0	3.5	6.0	18.8
Total adjusted Base Revenue		1000.0	1003.5	1000.0	1003.5	1006.0	18.8

**Table 9.2 Example of trigger to show the ex post adjustment working**

Trigger with restriction to adjust only the excess over the trigger point Settlement in DPCR6										
2007/08 prices	DPCR5					DPCR6				
	Year 1 £m	Year 2 £m	Year 3 £m	Year 4 £m	Year 5 £m	Year 6 £m	Year 7 £m	Year 8 £m	Year 9 £m	Year 10 £m
Impact of tax legislation on accounting tax charge:										
Year 1	20.0	20.0	20.0	20.0	20.0					
Year 2		(3.0)	(3.0)	(3.0)	(3.0)					
Year 3			4.0	4.0	4.0					
Year 4				2.0	2.0					
Year 5					16.0					
DPCR6 settled	0.0	0.0	25.0	50.0	50.0					
Sub total	20.0	17.0	46.0	73.0	89.0	0.0	0.0	0.0	0.0	0.0
Adjustment for base amount	(3.3)	(3.4)	(3.4)	(3.5)	(3.6)	0.0	0.0	0.0	0.0	0.0
Impact	16.7	13.6	42.6	69.5	85.4	0.0	0.0	0.0	0.0	0.0
Additional tax on additional revenue	4.7	3.8	11.9	19.5	23.9					
Total impact on base revenue	21.4	17.4	54.6	89.0	109.3					
DPCR6 settlement (Value of total less amount settled in following year)			25.0	50.0	50.0					
Years to settlement			5	5	5					
DPCR6 settlement (NPV at Cost of Capital)			31.5	62.9	62.9					
Trigger at	0.33%	3.3	3.4	3.4	3.5	3.6				
Trigger exceeded		YES	YES	YES	YES	YES				
Revised Revenue										
Base Revenue	DPCR5					DPCR6				
	Year 1 £m	Year 2 £m	Year 3 £m	Year 4 £m	Year 5 £m	Year 6 £m	Year 7 £m	Year 8 £m	Year 9 £m	Year 10 £m
Base Revenue	1000.0	1000.0	1000.0	1000.0	1000.0					
Impacts of change from:										
Year 1		20.0	20.0	20.0	20.0	20.0				
Year 2			(3.0)	(3.0)	(3.0)	(3.0)				
Year 3				4.0	4.0	4.0				
Year 4					2.0	2.0				
Year 5						16.0				
DPCR6 settled		0.0	0.0	25.0	50.0					
Adjustment for base amount		(3.3)	(3.4)	(3.4)	(3.5)	(3.6)				
Tax on tax impact		4.7	3.8	11.9	19.5	23.9				
Total adjusted revenue for calculating trigger	1000.0	1021.4	1017.4	1054.6	1089.0	59.3				
Actual phasing of adjusted base revenues:	1000.0	1016.7	1013.6	1017.6	1019.5	35.4		31.5	62.9	62.9
Tax on tax allowed								8.8	17.6	17.6
Total DPCR6								40.3	80.5	80.5

9.12. In the example in table 9.2, tax computations are agreed in years 8, 9 and 10 with settlement made for each of the three years in years - 8, 9 and 10. The amount settled is the calculated additional (or less) tax effect plus any change that this would make to the trigger, adjusted to be NPV-neutral to the year of settlement (using for illustrative purposes only the DPCR4 cost of capital).

## 10. Pension methodology

### Scope

10.1. We set out the pension methodology we have applied for DPCR5 Final Proposals and both the DPCR4 and DPCR5 ex post true up adjustments. These methodologies cover:

- DPCR4 pension ex post true up adjustment,
- Ex ante allowances for deficit funding,
- Regulatory fraction
- Early retirement deficiency contributions,
- DPCR5 pension deficit true up, and
- DPCR5 true up for normal ongoing pension service costs

### DPCR4 Pensions true up

10.2. As proposed at DPCR4, we have made a calculation to restore companies to the position they would have achieved if their actual pension payments had been forecast perfectly in the last price review. A revenue adjustment is made in DPCR5 for this true up. The calculation is made on the basic building blocks used with the approach being simplified as far as possible. The amounts have been updated from Initial Proposals following changes to the regulatory fraction for some DNOs where there were structural changes in the scheme during DPCR4 and for amended data from the latest forecast 2009-10 submissions and the 2008-09 actual cost reporting returns. The cash amount of the true up has been added to revenues in DPCR5.

10.3. The calculation takes the actual (including 2009-10 forecast) numbers for DPCR4 and compares them to the allowed funding (all in constant prices). The actual numbers include payments relating to the Pension Protection Fund (PPF) levy (fixed and risk based) and are those used to populate the RAV additions table. Note: if collected through an addition to the normal pension costs these are already within the actual cash payments; and if the PPF levy has been paid directly by the DNO (and reported in Human Resources and Non-operational training) these have been added to actual pension costs.

10.4. The difference between actual and allowed funding is then treated as it would have been for DPCR4 funding, i.e. 57.7 per cent is treated as an addition to RAV and the remainder is treated as opex.

10.5. The RAV additions are then used to calculate the missing return on RAV that would have been received if allowances had been perfect and the appropriate depreciation allowance is recalculated.

10.6. The missing RAV return and depreciation are then used together with the opex element, with an offset for tax allowances (at 30 per cent as modelled) that would have been gained to show the cash position that would have occurred.

10.7. A return (at the cost of capital allowed in DPCR4) is then allowed each year on the value of the cash to bring the total to the March 2010 position. This is then added into the financial model to be additional revenue in DPCR5.

10.8. The amount in the RAV will be funded in future years by way of regulatory depreciation and continue to earn a return equal to the allowed WACC for each review. To the extent that regulatory depreciation was foregone in DPCR4, we allow additional revenue in DPCR5, with a present value adjustment to reflect the delay in revenues. The same approach is taken in respect of the 42.3 per cent expensed. These are both funded in DPCR5 in year one and are calculated net of corporation tax at 30 per cent, being the amount applicable when the DPCR4 allowances were set.

10.9. The true up is based on four years actual expenditure and a forecast for 2009-10. In the event that actual costs in 2009-10 turn out to be materially different to the estimate, we would expect to alter revenue in DPCR5. Unless the difference was due to genuine efficiencies that were reasonably foreseeable at the time the forecast was provided, there will be a claw back of the benefits of any under-spend relative to the estimate used in these proposals and alteration to revenue in DPCR6.

10.10. See table 10.1 below.

**Table 10.1 Example of pension true up calculation: £3.2m (in 2007-08 prices) to be added as revenue in the financial model; £4.3m residual in RAV**

£m 2002/03 prices						Notes
DPCR4 allowance	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Total</b>
Capex	28.9	24.2	25.4	26.0	27.7	132.1
Opex	21.2	17.8	18.6	19.0	20.3	96.9
	<u>50.0</u>	<u>42.0</u>	<u>44.0</u>	<u>45.0</u>	<u>48.0</u>	229.0
						Allowance per FP
Actual pension spend	Nominal prices					
Normal	17.0	17.0	17.5	18.0	19.0	88.5
PPF Levy	0.0	0.0	0.1	0.2	0.2	0.5
Deficit	40.0	37.0	35.0	36.0	36.0	184.0
	<u>57.0</u>	<u>54.0</u>	<u>52.6</u>	<u>54.2</u>	<u>55.2</u>	273.0
						Total spend
£m 2002/03 prices						
Actual pension spend						
Normal	15.6	15.1	15.0	15.0	16.2	76.9
Deficit	36.8	32.8	29.9	29.9	30.5	159.9
	<u>52.4</u>	<u>47.9</u>	<u>44.8</u>	<u>45.0</u>	<u>46.7</u>	236.8
						Rebase to 2002/03
Capex /opex split DPCR4 basis						
Capex	30.2	27.6	25.9	25.9	27.0	136.6
Opex	22.2	20.2	19.0	19.0	19.8	100.2
	<u>52.4</u>	<u>47.9</u>	<u>44.8</u>	<u>45.0</u>	<u>46.7</u>	236.8
						Split per DPCR4 assumption
£m 2002/03 prices						
Difference						
Capex	1.4	3.4	0.5	(0.0)	(0.7)	4.5
Opex	1.0	2.5	0.4	(0.0)	(0.5)	3.3
	<u>2.4</u>	<u>5.9</u>	<u>0.8</u>	<u>(0.0)</u>	<u>(1.3)</u>	7.8
						Difference to be addressed
RAV impact						
Opening	0.0	1.4	4.7	4.9	4.7	
Additions	1.4	3.4	0.5	(0.0)	(0.7)	
Depreciation	0.0	(0.1)	(0.2)	(0.3)	(0.3)	
Closing	1.4	4.7	4.9	4.7	3.7	
						Capex from above Over 20 years
Depreciation period	20					
Additional tax saving	0.7	1.8	0.3	(0.0)	(0.4)	
Tax rate	30%	30%	30%	30%	30%	
						100% allowances As modelled
£m 2002/03 prices						
<b>Amounts to be adjusted</b>						<b>Total</b>
RAV return 5.545%	0.0	0.2	0.3	0.3	0.2	1.0
Opex	1.0	2.5	0.4	(0.0)	(0.5)	3.3
Depreciation	0.0	0.1	0.2	0.3	0.3	0.8
Tax benefit	(0.7)	(1.8)	(0.3)	0.0	0.4	(2.3)
					<u>2.8</u>	
Remaining RAV						3.7
Remaining in RAV (2007/08 prices)						4.3
						3.7 4.3 Already added to RAV
To be funded as revenue:						
£m 2007/08 prices						<b>Total</b>
RAV return	0.0	0.2	0.3	0.3	0.3	1.1
Opex	1.2	2.9	0.4	(0.0)	(0.6)	3.9
Depreciation	0.0	0.1	0.3	0.3	0.3	1.0
Tax benefit	(0.8)	(2.1)	(0.3)	0.0	0.5	(2.7)
	<u>0.4</u>	<u>1.1</u>	<u>0.7</u>	<u>0.6</u>	<u>0.4</u>	3.2
Cash funding	0.4	1.1	0.7	0.6	0.4	3.2
Time value of cash	0.4	1.1	0.7	0.6	0.4	3.2

## DPCR5 Ex ante allowances for deficit funding

10.11. The allowances are based on the latest updated valuations, which show for each scheme the deficits as at 30 September 2009. It is assumed that these valuations are effectively March 2010 prices.

10.12. The scheme valuations are in nominal prices and the deficit is therefore rebased to 2007-08 prices used in setting DPCR5 allowances by the relevant year average RPI factors.

10.13. The regulatory fraction (see below) is then applied to give the distribution element of the deficit that is to be funded by demand revenue customers.

10.14. This deficit is then funded over the 15 year notional deficit funding period by applying a flat profile over the deficit funding period allowing a rate of return at 2.6 per cent.

10.15. The difference in the deficit between the 30 September 2009 updated valuations (used to set allowances) and that shown by either a full triennial valuation at 31 March 2010, or updated valuations at that date (for those with an earlier full valuation date) will be adjusted in revenue allowances at the next price control and be NPV neutral. This difference will be spread over the remaining 10 years of the 15 year notional funding period.

## Regulatory fraction

10.16. The regulatory fraction represents the element of licensee's pension deficits which relates solely to the activity of the distribution business (i.e. the licensed business) and which, ultimately, under the pension principles, is funded by customers.

**Table 10.2 DPCR5 regulatory fractions**

	DR4 Basic	Percentage of total scheme			Group schemes
		DPCR5 base	ERDC adj	Total	
CN West	80%	11.9%	-1.1%	<b>10.9%</b>	Combined 26.3% of total EON scheme
CN East	80%	15.9%	-0.5%	<b>15.4%</b>	
ENW	80%	100.0%	0.0%	<b>100.0%</b>	
CE NEDL	80%	58.7%	-2.5%	<b>56.3%</b>	Combined 83.3% of total NE scheme
CE YEDL	100%	27.4%	-0.4%	<b>27.0%</b>	
WPD SWales	80%	31.3%	-3.8%	<b>27.5%</b>	Combined 76.3% of total WPD scheme
WPD SWest	80%	49.1%	-0.2%	<b>48.8%</b>	
EDFE LPN	80%	36.3%	-0.7%	<b>35.6%</b>	Combined 75.2% of total EDFE scheme
EDFE SPN	80%	30.9%	-1.6%	<b>29.3%</b>	
EDFE EPN	100%	10.3%	0.0%	<b>10.3%</b>	
SP Dist	0%	57.4%	0.0%	<b>57.4%</b>	
SP Manweb	80%	80.0%	-0.3%	<b>79.7%</b>	
SSE Hydro	0%	57.0%	0.0%	<b>57.0%</b>	
SSE Southern	80%	65.9%	-1.3%	<b>64.6%</b>	

10.17. In principle, we are retaining the DPCR4 opening position of an 80 per cent allowed proportion (except for EDFE EPN and CE YEDL which were set at 100 per cent as they only had members engaged in distribution business) of each scheme for which the DNO is a sponsoring employer as a starting point, and will not re-open that settlement. This starting point was a pragmatic view of the proportions relating historically to members engaged in the distribution business compared to unregulated non-distribution activities, since many companies were unable to identify which activities scheme members (including pensioners and deferred members) had been employed in since 1990.

10.18. The DNOs' submissions, any structural changes that occurred in DPCR4 and movements in unfunded early retirement deficiency contributions (ERDCs) are reviewed to determine the allowed proportion (regulatory fraction) of each company's pension costs applicable in DPCR5. In DPCR4, these were set out as a percentage of the deficit costs attributable to each DNO irrespective of whether that DNO was part of a larger scheme. In DPCR5, we have calculated the allowed proportion as a percentage of the wider scheme to which each DNO is a sponsoring employer. Adjustments are made to that starting point to take account of scheme restructuring (mergers, and bulk transfers in and out) in the price control period to arrive at a new fraction.

10.19. For schemes which had no allowed proportion in DPCR4, the appropriate fraction has been determined from data provided by the DNO and as at DPCR4 based on the liabilities of differing groups of members. These are agreed with individual licensees. The revised regulatory fractions applicable to each year of DPCR5 are set out in chapter 5 of the Final Proposals - Allowed Revenues and Financial Issues document.

10.20. Where, during DPCR4, schemes have merged or been restructured the regulatory fraction was shown as a percentage of the deficit attributable to each DNO. For DPCR5, the regulatory fraction is shown as a percentage of the scheme total. This will mean that it is not possible to directly compare the DPCR4 percentage with that for DPCR5.

10.21. In assessing the regulatory fraction, the non-regulated component of pension liabilities should logically reduce over time in a closed pension scheme for a predominantly wires or pipes only business. Thus, the allowed regulated fraction should increase. This is calculated by determining the liabilities attributed to the active scheme members in the regulated business and the movement from the position determined at the previous price control. For DNOs this will, over time, move the fraction to their actual attribution (where supported by the necessary records) from the 80:20 pragmatic split applied at DPCR4. We have, therefore, further reviewed the regulatory fraction to reflect this. The revised fractions are calculated by determining the liabilities attributed to the active scheme members in the regulated business and the movement from the position determined at the previous price control.

10.22. An example of the calculation is shown below. This takes the 80:20 split of liabilities at DPCR4, as known or implied from the 80:20 start point, and using the current split of total liabilities and the current split of active members calculates the updated fraction for DPCR5.



**Table 10.3: Movements in regulated fraction in closed wires only schemes**

<b>Pension liabilities</b>						
	DPCR4		DPCR5			
	2004 £m	2004 %	2010 £m	2010 %		
Actives (plus retirees from actives after 2004)	150	21.4%	250	25.0%		
Pensioners & deferreds (less retirees from actives since 2004)	550	78.6%	750	75.0%		
<b>Total liabilities</b>	<b>700</b>		<b>1000</b>			
<b>At DPCR4 split 80/20 attributable as follo</b>	DPCR4		DPCR5			
Actives - allowed	90%	135	19.3%	92%	230	23.0%
Actives - disallowed	10%	15	2.1%	8%	20	2.0%
Pensioners & deferreds-allowed	77%	425	60.7%		580	58.0%
Pensioners & deferreds-disallowed	23%	125	17.9%		170	17.0%
		700	100.0%		1000	100.0%
<b>Regulatory fraction:</b>						
Allowed		560	80%		810	81.0%
Disallowed		140	20%		190	19.0%

10.23. To the new percentage will be deducted the residual balance on the unfunded ERDCs from pre 1 April 2004 (see below) which value will be expressed as a percentage of the total scheme deficit.

### Early Retirement Deficiency Contributions (ERDCs)

10.24. In DPCR4, attribution of an element of the pension deficits for employees who had been allowed to retire early (but for which funding had not made into the scheme to cover the future cost of these pensions) was settled on a pragmatic basis.

10.25. These unfunded ERDCs theoretically still exist for DPCR5 in most cases but will reduce over time as payments are made to fund these from the balance of DNO funding payments in excess of the regulatory fraction. We accept that where schemes have subsequently been taken over and scheme deficits paid off in full at that time this may also include the ERDCs, and we review these on a case-by-case basis.

10.26. To arrive at the closing unfunded ERDCs we:

1. Take the DPCR4 position and rebase using RPI to prices at the beginning of the control (i.e. 2005-06).
2. An adjustment is then made for companies where the scheme deficit has been cleared, by for example a take-over and subsequent funding in total of the deficit.
3. The revised sum is then rolled forward each year to create a forecast position at the end of the price control by:
  - adding expected returns (using the cost of capital for DPCR4 as a proxy for the nominal return that might have been expected). The expected return is used (rather than actual returns) since this is the figure on which the original ERDC valuation was based.
  - deducting the proportion of the deficit payments (in nominal prices) that were disallowed in DPCR4 and assumed to, in part, fund the ERDCs initially unfunded.

- The resulting values of ERDCs at 2010 (in nominal prices) are compared to the deficits that are being used as the March 2010 position (again in nominal prices) and converted to a percentage of the total scheme deficit. This is then used to reduce the regulatory fraction.

**Table 10.4 ERDC reduction calculation**

ERDC reduction calculation:

£m	2005-06	2006-07	2007-08	2008-09	2009-10
B fwd	60.0	53.3	47.3	43.9	40.3
Return	3.3	3.0	2.6	2.4	2.2
Payments	(10.0)	(9.0)	(6.0)	(6.0)	(6.0)
C fwd	53.3	47.3	43.9	40.3	36.6

Deficit assumed at 31 March 2010 £m	Reduction in Regulatory Fraction
1214	3.0%

## Allowances for normal ongoing service pension contributions

10.27. These are based on the DNO forecast submissions, from which expenditure not attributable to distribution business is excluded (i.e. excluded services, metering, distributed generation, de minimis).

- From the total ongoing pension cost forecast submission the pension element of business support costs is deducted and computed separately.
- The pension costs identified as atypical, non-distribution business (including de minimis costs), non relevant excluded services and sole use connections are all excluded from the level of future funding.
- An adjustment is made for reconciling items where the company has not been able to explain satisfactorily why the pensions table should show costs that vary from those identified in the main FBPQ tables.
- Some companies have included RPE factors as an uplift to their pension costs. These are allowed pro rata to the value allowed into totex (i.e. the element that applies to non-allowed items is disallowed) and this value forms part of the adjustment shown in 3 above.
- The PPF levy and administration costs are subject to review against comparators and in DPCR5 are allowed subject to an annual cap on the fixed rate element at £0.1m and for the risk based levy at £0.4m per DNO. In general, it is difficult to forecast the likely movements in the PPF levy and determine a reasonable level of allowance across DNOs. We have also considered whether DNOs' Dun & Bradstreet Failure Scores are low, indicating perhaps that a company has not done all it could to mitigate the levy and have capped its forecast.
- The total PPF and administration fee costs is allowed pro rata to the ratio of normal allowed ongoing pension costs for the distribution business. For the purpose of attribution to RAV additions these costs are split between totex and business support costs.
- Business support pension costs are calculated by taking the forecast DNO submissions and adding the Business Support element of the PPF levy and administration costs.

**Table 10.5: Allowances for normal ongoing service pension contributions**

Example	2010-11	2011-12	2012-13	2013-14	2014-15	Total
	£m	£m	£m	£m	£m	£m
<b>Total ongoing pension costs</b>	16.0	16.2	16.4	16.3	16.0	80.9
Less:						
Business support	(1.2)	(1.2)	(1.2)	(1.1)	(1.1)	(5.8)
Non-relevant excluded services	(1.5)	(1.5)	(1.6)	(1.5)	(1.4)	(7.5)
Non-distribution (inc de minimis)	(0.2)	(0.2)	(0.3)	(0.3)	(0.3)	(1.3)
Sole use connections	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)	(1.5)
Atypical	0.0	0.0	0.0	0.0	0.0	0.0
Less PPF and admin costs adjustment	(0.6)	(0.6)	(0.6)	(0.6)	(0.6)	(3.0)
Less adjustment for reconciling items	(1.3)	(1.3)	(1.2)	(1.4)	(1.5)	(6.7)
<b>Totex</b>	<b>10.9</b>	<b>11.1</b>	<b>11.2</b>	<b>11.1</b>	<b>10.8</b>	<b>55.1</b>
PPF & Admin costs allowed	0.4	0.4	0.4	0.4	0.4	2.0
<b>Total totex to be funded</b>	<b>11.3</b>	<b>11.5</b>	<b>11.6</b>	<b>11.5</b>	<b>11.2</b>	<b>57.1</b>
<b>Business Support</b>	1.1	1.1	1.0	1.0	1.0	5.9

## DPCR5 Pensions deficit true up

10.28. The following methodology is subject to the true up of funding to the 31 March 2010 final valuation, i.e. the difference in the deficit between the 30 September 2009 valuations (used to set allowances) and that shown by either a full triennial valuation at 31 March 2010, or updated valuations (for those with an earlier valuation date) will be adjusted in revenue allowances at the next price control and be NPV neutral.

10.29. There will be a trigger for a full efficiency review of historic pension liability costs ex post, where a review and report by Government Actuary's Department (GAD), albeit with different terms of reference to the previous review undertaken, indicates in our view that the scheme is operating outside of a reasonable set of parameters. The framing and terms of reference for the review will be determined after Final Proposals and separately for each price control.

10.30. Our first, third and fifth principles will be applied at this review, which are:

- 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,
- 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, and
- 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.

10.31. At the end of the control period, or in any case no longer than five years after the initial allowance was set, this review will be used to determine whether a company's pension costs are efficient so that the network company can recover its economic and efficient pension costs irrespective of the allowance set at the start of the control. Where that review indicates that the company's pension costs may be inefficient this may trigger a further examination to determine whether the company should retain any, or a proportion of, the efficiency savings if outturn costs are lower than the allowances. Similarly, a review may be triggered to determine the level of any additional funding if either the outturn costs are higher than the allowances or where the deficit has increased and either are demonstrably due to inefficiencies.

10.32. At the commencement of each subsequent price control, deficit funding allowances will be reset based on the methodologies set out above. Any under or over recovery of efficient pension costs against the allowance in the previous price control as determined above, will be adjusted in future revenues over the remaining 10 years of the initial notional 15 year funding period and be NPV neutral. The companies will be exposed only to funding the timing difference between allowances and their actual deficit repair payments determined between themselves and trustees.

10.33. The examples below are given to help illustrate how we would deal with the element of the deficit which relates to distribution activities:

**Table 10.6** shows the impact of a company choosing to repair the deficit over a shorter period than the 15 years over which the price control funding has been set. In this example the company has chosen 10 years as an appropriate repair period and, subject to the "economic and efficient" test, the accelerated repair payments will be funded (including the time value of money) over the remaining 10 year period. As shown in the example this means the £250m additional payment in Period 1 is funded over 10 years (£125m per five year period). The deficit at Period 2 is then funded over 10 years and the accelerated payments for this period are subject to true up in Period 3 (the remaining five years of the original funding period).

**Table 10.6: Assuming full true up as adjudged efficient**

Different repair period				
	Period 1	Period 2	Period 3	Total
Actual deficit	(1,500)	(750)	0	
Actual repair	750	750	0	1,500
Future funding:				
Deficit	500	375	0	875
True up P1		125	125	250
True up P2			375	375
Total funding	500	500	500	1,500

**Table 10.7** illustrates the two possible outcomes if the GAD review triggers an efficiency review. If deemed efficient the funding would continue as shown. If judged inefficient there would be a reduction in the funding for Periods 2 and 3 as shown. In this example 50 per cent of the difference is considered inefficient and is therefore clawed back over 10 years (together with the time value of money). The performance in period three is not subject to adjustment since the deficit has moved in line with the implied deficit (both reduced by 50 per cent).

**Table 10.7: Assuming efficiency review is triggered**

<b>Efficiency review suggests a lower deficit</b>				
	Period 1	Period 2	Period 3	Total
Actual deficit	(1,500)	(1,000)	(500)	
Actual repair	500	500	500	1,500
Implied deficit - efficiency review		(800)	(400)	
Future funding (if efficient):				
Deficit	500	500	500	1,500
True up P1		0	0	0
True up P2			0	0
Total funding	500	500	500	1,500
Future funding (if inefficient):				
Deficit	500	500	500	1,500
True up P1		0	0	0
True up P2			0	0
Efficiency		(50)	(50)	(100)
Total funding	500	450	450	1,400

10.34. Whilst normal contribution rates are set at a level to secure future liabilities, it is likely that new deficits will arise for many different reasons. In this eventuality we will look to fund this new deficit in accordance with the established pension principles.

### **DPCR5 true up for normal ongoing service pension contributions**

10.35. A specific sharing mechanism will apply to ongoing pension costs for DPCR5. The sharing mechanism is applicable to the normal ongoing contributions of both DNOs' DB and DC schemes (and, where appropriate, employer contributions to Personal Accounts<sup>16</sup>) 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.

<sup>16</sup> Personal Accounts for employees introduced by the Pension Act 2008 being phased-in in stages from 2012.

10.36. It is recognised that the DNOs have limited flexibility over protected persons' costs. The sharing will be asymmetric to reflect this. The DNO share of downside risk is 20 per cent and the upside incentive rate is 50 per cent to provide an incentive for any creative approaches on pensions.

10.37. The incentive rate will be applied to the difference between DNOs' 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 DNOs will receive a true up of 80 per cent of that difference in their revenue allowances at the subsequent control on an NPV neutral basis. Shareholders will therefore bear 20 per cent of the difference. If the difference is an underspend against the allowance, DNOs will retain 50 per cent of it and the other 50 per cent will be adjusted by reducing revenue allowances in DPCR6 on a NPV neutral basis.

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

10.39. The difference between actual and allowed is then adjusted to reflect the sharing factor. The overspend will be allowed as 80 per cent of the difference, whilst any underspend will be disallowed at 50 per cent of the difference.

10.40. The actual spend is then adjusted for the sharing impact; that is the actual spend is adjusted in line with the ratio of actual elements of the spend.

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

10.42. A revised calculation is then made for the elements of fast money and this is compared to the original calculation. The difference is then adjusted for the time value of money (at DPCR5 cost of capital).

10.43. This figure is then adjusted for tax and will be allowed as a revenue adjustment in DPCR6.

10.44. The difference between the revised RAV and the RAV based on actual spend is then adjusted to the opening RAV for DPCR6.

10.45. The true up will be calculated over the complete price control as shown in the attached example.

**Table 10.8: DPCR5 Ongoing pensions service cost true up**

		All in £m 2007-08 prices except where shown						
		2011	2012	2013	2014	2015	Total	Notes
<b>DPCR5 allowance</b>								
Totex - slow money	85%	30.0	30.0	30.0	30.0	30.0	150.00	
Totex - fast money	15%	5.3	5.3	5.3	5.3	5.3	26.47	
Business Support	100%	4.0	4.0	4.0	4.0	4.0	20.00	
	(a)	<u>39.3</u>	<u>39.3</u>	<u>39.3</u>	<u>39.3</u>	<u>39.3</u>	<u>196.47</u>	Allowance per FP
<b>RAV impact (allowances)</b>								
Opening		0.0	30.0	58.5	85.5	111.0		
Additions		30.0	30.0	30.0	30.0	30.0		
Depreciation		0.0	(1.5)	(3.0)	(4.5)	(6.0)		
Closing	(b)	<u>30.0</u>	<u>58.5</u>	<u>85.5</u>	<u>111.0</u>	<u>135.0</u>		
Depreciation period	20							
RAV return	4.7%	0.7	2.1	3.4	4.6	5.8		
Total fast money	(c)	10.0	12.9	15.7	18.4	21.1	78.04	
<b>Actual pension spend</b>								
Totex - slow money	85%	32.3	32.3	32.3	32.3	32.3	161.50	£m Nominal
Totex - fast money	15%	5.7	5.7	5.7	5.7	5.7	28.50	£m Nominal
Business Support	100%	5.0	5.0	5.0	5.0	5.0	25.00	£m Nominal
	(d)	<u>43.0</u>	<u>43.0</u>	<u>43.0</u>	<u>43.0</u>	<u>43.0</u>	<u>215.00</u>	Total spend
<b>Actual pension spend</b>								
Totex - slow money	85%	31.2	30.5	29.7	29.0	28.3	148.71	Rebase to 2007/08
Totex - fast money	15%	5.5	5.4	5.2	5.1	5.0	26.24	Rebase to 2007/08
Business Support	100%	4.8	4.7	4.6	4.5	4.4	23.02	Rebase to 2007/08
	(e)	<u>41.6</u>	<u>40.6</u>	<u>39.6</u>	<u>38.6</u>	<u>37.7</u>	<u>197.97</u>	
<b>Sharing factors</b>								
Overspend	80%							
Underspend	50%							
Change in Expenditure	(f)						1.50	(a) less (e)
Change Post sharing	(g)						1.20	(f) at 80% (or 50% for underspend)
<b>Actual Spend post sharing</b>								
Totex - slow money	85%	30.2	30.2	30.2	30.2	30.2	150.90	Actual spend reduced by value of
Totex - fast money	15%	5.3	5.3	5.3	5.3	5.3	26.63	over/ underspend
Business Support	100%	4.0	4.0	4.0	4.0	4.0	20.14	
		<u>39.5</u>	<u>39.5</u>	<u>39.5</u>	<u>39.5</u>	<u>39.5</u>	<u>197.67</u>	
<b>RAV impact (actuals post sharing)</b>								
Opening		0.0	30.2	58.9	86.0	111.7		RAV calculated on spend with
Additions (adjusted for sharing)		30.2	30.2	30.2	30.2	30.2		sharing factor
Depreciation	(k)	0.0	(1.5)	(3.0)	(4.5)	(6.0)		
Closing	(l)	<u>30.2</u>	<u>58.9</u>	<u>86.0</u>	<u>111.7</u>	<u>135.8</u>		
Depreciation period	20							
Return	(m)	0.7	2.1	3.4	4.6	5.8		
Total fast money	(n)	10.1	13.0	15.8	18.5	21.2	78.53	(i)+(j)+(m) less(l)
Change in fast money		0.07	0.08	0.10	0.11	0.13		(n) less (c)
<b>Difference in fast money</b>								
Uplift for RoR		0.1	0.1	0.1	0.1	0.1		
NPV							0.6	
Tax	28%						(0.2)	Tax impact
Net NPV adjustment in DPCR6							0.4	Allowed as Revenue adjustment
Adjustment to opening RAV in DPCR6							0.8	Closing (l) less closing (b)

## 11. Statement of tax methodology

### Tax methodology

11.1. We set out in this appendix the methodology applied in the financial modelling for Final Proposals.

11.2. The distribution business is modelled for price control purposes as a standalone entity. All expenditure is treated as if it is incurred directly by the distribution business.

### Applicable tax regime

11.3. We apply the UK standard tax rules that have passed into legislation by the time of the Final Proposals. These Final Proposals reflect the current legislative position.

11.4. All capital allowances are assumed to be claimed at rates in line with applicable legislation and claimed in the year the expenditure is incurred.

### Tax losses

11.5. If tax losses were to arise we would not give affected DNOs negative tax allowances, but we will log up 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.

### Modelling of capital allowances

11.6. For DPCR5, we apply a common approach to allocate allowed expenditure to capital allowance pools. This relies on an 'average' actual allocation based on the information we have received from the DNOs with limited moderation based on our view of where capex should go according to the standard tax rules.

11.7. 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, and
- one for the two DNOs that were not party to that agreement and who do not allocate any expenditure to this pool.

11.8. We use four main capital allowance pools – General, Long Life, Industrial Buildings Allowance (IBA) and Deferred Revenue - and the relevant rates of annual writing down allowance. These reflect the relevant legislation in place at the DPCR5 review and take into account the legislative changes to the capital allowances regime since DPCR4. We have reflected the phasing out of IBAs. We also allow for expenditure that is identified as non-qualifying for capital allowances, principally easements, being interests in land.

11.9. Where identified expenditure qualifies for either Research & Development allowances or as environmentally beneficial technologies it will be allowed at the



enhanced rates. There has been no expenditure by DNOs which would qualify for environmental remediation allowances. Accordingly, these have not been modelled.

11.10. All other expenditure not qualifying for capital allowances nor treated as non-qualifying will attract a 100 per cent deduction.

11.11. The annual allowance for deferred revenue will be two per cent straight-line, based on the average economic lives of all DNOs' relevant assets at 51 years.

11.12. Cost allocation to capital allowance 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 11.1 below:

**Table 11.1 – Cost allocation to capital allowance pools**

	General pool	Longlife	IBA	Deferred Revenue	Revenue	Non-Qualifying
<b>DNOs party to non-load agreement</b>						
Load Related	0.9%	91.3%	3.9%	3.1%	0.0%	0.8%
Asset replacement	0.0%	19.0%	3.0%	78.0%	0.0%	0.0%
Other Non-Load Related	19.6%	33.3%	8.7%	38.3%	0.0%	0.0%
Other Network operating costs (inc I&M)	0.0%	3.7%	0.0%	7.4%	88.8%	0.0%
Fault repairs and restoration	0.0%	3.2%	0.0%	63.0%	33.8%	0.0%
Tree cutting	0.0%	18.3%	0.0%	13.8%	67.8%	0.0%
Non Operational Capex	90.1%	2.3%	0.7%	0.1%	0.0%	6.8%
Easements	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
<b>DNOs not party to non-load agreement</b>						
Load Related	0.0%	98.1%	1.9%	0.0%	0.0%	0.0%
Asset replacement	0.0%	93.2%	6.8%	0.0%	0.0%	0.0%
Other Non-Load Related	10.0%	80.8%	9.2%	0.0%	0.0%	0.0%
Other Network operating costs (inc I&M)	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
Fault repairs and restoration	0.0%	75.2%	0.0%	0.0%	24.8%	0.0%
Tree cutting	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
Non Operational Capex	85.6%	0.0%	0.0%	0.0%	0.0%	14.4%
Easements	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%

### Opening capital allowance pool balances

11.13. We use the forecast opening capital allowance pool balances brought forward at 31 March 2010 provided by DNOs. These have been calculated based on the DNOs' own accounting policies / tax allocation rules without adjustment.

### Capitalised indirect costs

11.14. We use individual DNO-specific capitalisation policies to determine the treatment of indirect costs and to these we apply the attribution rates to capital allowance pools set out in the table above.

### Modelling the tax deductibility of pension costs

11.15. The cash payments made by the DNO into a pension scheme are 100 per cent deductible in the year incurred, except where there are large irregular payments. The

latter should be spread over the current and up to three future years in accordance with the legislation, dependent on their magnitude.

11.16. For modelling and allowance setting, we assume that all pension payments attributable to the distribution business (including that related to relevant excluded services, but not necessarily non-relevant excluded services, distributed generation or metering) are paid in the year in which the allowance is given (to take account of the spreading of deficit repair costs). Ex post pension adjustments relating to DPCR4 have been computed net of tax and will not attract any further tax relief.

### **Modelling cash flows of Corporation Tax (CT) payments**

11.17. All DNOs are large companies under tax legislation and are required to pay their tax liabilities for any given year in instalments commencing in the current year. We will assume that half the annual charge to CT is paid in the regulatory year, and half in the subsequent year, regardless of the actual timing of payments by DNOs (which could be affected by a statutory year end different from the regulatory year end of 31 March, for example) and ignore subventions for surrendered tax losses. We take no account of additional payments (or receipts) from settling earlier years' tax liabilities. For the first year of the price control, we include 50 per cent of the DNO's estimated tax liability for the previous year, which has been the subject of a review for reasonableness.

### **Interest (payable and receivable)**

11.18. Interest receivable/payable is modelled 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. Interest is treated for tax purposes as fully deductible / taxable in the period in which it arises, subject to the tax clawback.

### **Tax treatment of incentives**

11.19. All incentive revenues or penalties are on a pre-tax basis (i.e. it is not intended that they give rise to further revenues in respect of the tax charge in the revenues). This includes adjustments in respect of capital expenditure incentives.

### **Treatment of excluded services**

11.20. No allowance or relief for tax is given 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.

## 12. Broad measure of customer satisfaction

### **Worked examples for the customer satisfaction survey and complaints metric**

12.1. Chapter 13 of the Incentives and Obligations document sets out the components, focus, target customers, return on regulatory equity RORE basis points and average annual revenue for the three elements of the broad measure of customer satisfaction. We have provided worked examples for the customer satisfaction survey, the complaints metric and the stakeholder engagement elements of the broad measure in excel on our website. The examples apply fictional data to the incentive scheme structure set out in Chapter 13 of the Incentives and Obligations document. The precise terms and their meaning will be defined in the relevant licence condition, a draft of which has already been circulated to DNOs, along with an earlier version of these examples.