ELECTRICITY DISTRIBUTION PRICE CONTROL REVIEW:

METHODOLOGY AND INITIAL RESULTS PAPER

THE RESPONSE FROM CE ELECTRIC UK FUNDING COMPANY, NORTHERN ELECTRIC DISTRIBUTION LIMITED AND YORKSHIRE ELECTRICITY DISTRIBUTION PLC

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SUMMARY

In this section we have summarised the key points that are more fully set out in the pages that follow. We have grouped this summary around the themes of each of the chapters set out in Ofgem's *Methodology and Initial Results paper* (the *Methodology paper*).

INTRODUCTION AND OVERVIEW

- The forecasts submitted by CE Electric UK Funding Company (CE) are robust and challenging.
- An increase in allowed revenues is necessary to meet the outputs required by stakeholders.
- CE's forecast capital investment increases are consistent with those of other distribution network operators (DNOs), whilst our operational costs are projected to fall in real terms.
- Some uncertain costs should be excluded from the cost assessment exercise and dealt with by a reopener condition.
- Our plans reflect stakeholder input and establish a clear link to well-defined outputs.

OPERATING COST ASSESSMENT AND OVERVIEW

- Different sets of costs can be subject to benchmarking with more confidence than others.
- Boundary issues can be minimised and the validity of the regressions improved by assessing competing costs together.
- Total operating costs should be split into three categories, i.e. network operating costs, marginal indirect costs and business support costs. These three cost groupings have different levels of modelling accuracy.
- Regressions of network operating costs give the least reliable results, but could be used to support further investigation of asset related expenditure as in the core network investment workstream.
- Ofgem's assumption on related-party margins, severe weather and singletons is correct, but the case for other regional adjustments and special factors is not made.
- The cost drivers identified by Ofgem for network operating costs do not adequately capture the underlying drivers of cost.

- The costs transferred to Network Investment should be excluded from the regressions, but the costs being reviewed by the IT and property consultants should be included in the regressions, as should atypical costs.
- The costs considered unsuitable for comparative benchmarking should be treated on a case-by-case basis.
- Benchmarking can help to inform the setting of allowances but other evidence also needs to be given appropriate weight and Ofgem should avoid an upper quartile efficiency frontier in order to avoid interpreting measurement error as efficiency.
- Proper consideration should be given to DNOs' forward plans.

METHODOLOGY – CORE NETWORK INVESTMENT

- We support Ofgem's approach to assessing core network investment but Ofgem's models cannot be used to determine capital investment needs.
- We have concerns with the possible use of Ofgem's unit cost benchmarks.
- We are broadly satisfied with Ofgem's approach for the three reinforcement categories and with Ofgem's approach to asset replacement assessment. However, the modelling must be used to inform the debate rather than to determine allowances.
- The process for developing the initial proposals with respect to core network investment is appropriate but Ofgem should consider how superior performance should be recognised and incentivised.

NETWORK INVESTMENT - ENVIRONMENT

- We broadly agree with Ofgem's approach to forecasts for distributed generation.
- CE made no forecasts for discretionary expenditure in its forecast business plan questionnaire because we were unable to identify any such schemes that gave customers value for money.
- Hot spots on the network may emerge in the DPCR5 period because of increases driven by changes in usage, but Ofgem's proposals for dealing with this eventuality to date are insufficient. Effective revenue drivers for demand-related costs and an effective DG hybrid funding scheme are necessary.
- The treatment of losses requires further thought. An output-based incentive at DPCR5 is hard to reconcile with the reality of settlements-system volatility. Volatility has increased in the DPCR4 period.

- Customers should pay only for the losses improvement that is delivered by a DNO. Less than 10% of the change in reported losses performance relates to a reduction in genuine engineering losses.
- The hybrid incentive proposed by DNOs offers the best solution for DPCR5.
- Transitional arrangements are needed to move to a common measurement approach for losses.
- The DPCR4 rolling incentive for losses has unintended properties.
- Variations in DNOs' reporting mechanisms make the rolling incentive potentially discriminatory and the assumption that volatility would subside has been shown to be invalid.
- The problem of the DPCR4 rolling incentive is best solved by requiring DNOs to buyin or buy-out of the incentive subject to protections to ensure that this does not give rise to windfall gains.

ONGOING EFFICIENCIES AND INPUT PRICES

- Ofgem has identified the most relevant unit cost and productivity measures, but future cost trends cannot be inferred from a historical analysis.
- Productivity gains in the DPCR5 period should not be assumed in setting allowances because future productivity gains offset the cost risk borne by DNOs in the forthcoming period.
- The relevant comparator sectors should be chosen from those that face a similar input cost environment and, to the extent that it is relevant at all, long-run data should be used to assess trends.
- The analysis undertaken by CEPA and First Economics provides useful background but other factors need to be given due weight.
- Future productivity gains will have to be paid for in higher input prices and the gap between real wages and productivity is widening.
- The scarcity of skilled labour puts wages under upward pressure.
- The presentation of forecast real price effects (RPE) in the *Methodology paper* may be misleading. The RPEs experienced in the DPCR4 period need to be recognised in setting allowances for the DPCR5 period.
- A DNO's input costs will not track the retail prices index, but, if the input price assumptions are reasonable and reflect DPCR4 RPEs DNOs can be left to bear most of the uncertainties of the DPCR5 period.

• The labour component of input costs should not be subject to any insurance mechanism, but changes in materials input prices may need a trigger mechanism.

CUSTOMERS

- The mechanism proposed by Ofgem is unlikely to improve the service provided to worst-served customers and we recommend that no cap on expenditure per benefiting worst-served customer should be set during the DPCR5 period.
- Some aspects of the approach for setting targets for customer interruptions (CI) and customer minutes lost (CML) need changing and we make detailed proposals for improving this.
- The benchmarking for HV is inappropriate.

NETWORK OUTPUT MEASURES

- Overall we agree with Ofgem's approach to general reinforcement and asset replacement outputs.
- For asset replacement we support the use of health indices but we advise caution with respect to fault rates because allowed revenues should not vary as a result of short term statistical fluctuations that are not indicative of a DNO's performance.
- The common methodology should include a strategic-level measurement of the overall health of the network.
- Outputs should be treated as a set of indicators rather than as mechanistic revenue drivers. Any out-performance rewards under the IQI would be contingent upon a DNO having broadly met the outputs.
- Output measures should be sufficient protection for customers, but a wider range of information will provide a more complete view that would inform any *ex post* assessment of a DNO's performance where outputs have not been met.
- The volume of physical units of investment delivered by investment should not be part of any additional protection mechanism.

COST INCENTIVES

- Efficiency incentives for capital and operating costs should be equalised, with direct asset related costs falling within the information quality incentive (IQI) mechanism.
- Business support costs should fall outside the IQI and receive a different incentive rate.
- The overall 'speed of money' at DPCR5 should be the same as at DPCR4.
- The timing of the recovery of pension costs merits special treatment

• The proposals for IQI are inadequate to reward and incentivise good behaviour and the IQI matrix should be modified to reward more highly the companies that produce the more challenging forecasts.

MANAGING UNCERTAINTY

- Use should be made of mechanisms to manage uncertainty. In such mechanisms effectiveness is more valuable than simplicity.
- Some approaches under consideration would simply turn a business risk into a regulatory risk rather than reduce the overall risk borne by the shareholders.
- Wherever possible an uncertainty mechanism should lead to an adjustment within the DPCR5 period.
- An appropriate revenue driver will mitigate some risks and the DPCR4 reopener condition is the appropriate model for dealing with material cost uncertainties arising from changes to the requirements placed on DNOs.

TAX METHODOLOGY

- Tax charges should be computed on a company-specific basis.
- The present proposals result in customers benefitting more than once from tax allowances that can only ever be claimed once by the DNO. This is not acceptable and must be properly addressed.
- DNOs should be able to recover the full amount of any adverse changes in tax law and HMRC guidance.

OTHER ISSUES

- The treatment of excluded services in the *Methodology paper* should be developed to recognise different solutions for different services.
- Transmission exit charges are already appropriately regulated and incentivised.

INTRODUCTION

- 1 CE Electric UK Funding Company (CE) is the UK-based parent company of the electricity distribution licence holders Northern Electric Distribution Limited (NEDL) and Yorkshire Electricity Distribution plc (YEDL). This paper is the response of CE, NEDL and YEDL to Ofgem's *Methodology and Initial Results paper* (the *Methodology paper*).
- 2 In preparing this response we have chosen to follow the order of the *Methodology paper* and to provide answers to the numbered questions set out in each chapter.

OVERVIEW

- 3 In this response we provide answers to the questions set out in the *Methodology paper*. Since the response is based around the questions posed in the *Methodology paper*, we thought it appropriate to preface this with an overview of how we think the price control review is shaping up.
- 4 Based on the information provided in the *Methodology paper* and other discussions with Ofgem we conclude that there is still a significant amount of work to be done to arrive at a properly balanced outcome for CE at the price control review (DPCR5).
- 5 For each of the key areas of the price control review we have arrived at a current indication of the progress made and the steps that need to be taken before a satisfactory outcome can be reached. We recognise that in introducing such an assessment we are making a judgement at a point in time about where Ofgem appears to be heading on matters about which it is still consulting and upon which its mind must still be open. However, it would be remiss of us not to point out where we see difficulties with the way things appear to be shaping up for the initial proposals. Our assessment across each of the broad headings is set out in summary form below.

Determination of the base allowance on which the revenue indexation acts

6 The lack of recognition of the mismatch between a falling retail prices index (RPI) and the actual costs that a distribution network operator (DNO) will incur is likely to leave even a well-run, efficient company with a shortfall between its income and its costs. The *Initial proposals* must take account of this.

Incentives

7 With respect to losses, the proposed incentive scheme for the DPCR5 period appears to us to be heading towards becoming a high-stakes lottery where companies will be rewarded or penalised on the basis of targets that may be set on data taken from a short period of time where the reported outturn is subject to random fluctuations. Performance against these inappropriately-set targets in the DPCR5 period may equally be subject to the randomness of the data reported through the settlements system.

- 8 With respect to the interruptions incentive scheme (IIS) for the DPCR5 period, we recognise that the approach outlined in the *Methodology paper* is a significant improvement upon previous approaches, but it still imposes an unjustified double penalty on CE.
- 9 The distributed generation funding proposals set out in the *Methodology paper* would penalise us for connecting our customers and represent an inadequate policy response to the environmental imperatives, which we believe require a loosening of the constraints on scale and scope that are part of the DPCR4 innovation funding initiative (IFI).

Operating expenditures

- 10 Ofgem's method, properly applied, seems to confirm that CE is the most efficient company on the acid test of business overheads, yet the inappropriate inclusion of a narrow slice of asset-related direct costs creates a very different impression.
- 11 Ofgem's approach to boundary definition for the purposes of cost assessment cancels out the good work done during the DPCR4 period on cost allocation and reporting and will perpetuate the distortion of input choices about the relative merits of opex and capex solutions.
- 12 The equalisation of incentives and associated speed of money commitments are heading in a sensible direction as long as the overall strength of the incentives package is maintained and the cost assessment is consistent with that treatment.

Capital expenditure

- 13 Although Ofgem's modelling assumptions systematically under-forecast a DNO's required investment we recognise that Ofgem is receptive to dialogue on the appropriateness of our forecast plans.
- 14 We are pleased that our outputs have been received favourably but we need to agree proportionate licence conditions to give effect to these within the information quality incentive (IQI) framework.
- 15 We are disappointed that Ofgem has adopted the gas distribution price control review (GDPCR) calibration, passing up the opportunity to improve the incentive properties of the IQI and this short-changes innovative companies like CE that have delivered in the DPCR4 period and have sought out and provided Ofgem with challenging forecasts that

will benefit customers (potentially throughout Great Britain). This is particularly valuable, given the underlying demand for an increased level of investment.

16 In its December policy paper, Ofgem raised its significant concerns with the DPCR4 IQI arrangements. We believe that this will have had a significant impact on DNOs' forecasts for DPCR5. If Ofgem now fails to act to address the concerns that it raised this would send a very bad signal to the industry.

Cost of capital and regulatory asset value (RAV)

17 Empirical evidence confirms that the cost of debt and cost of equity have shifted markedly. A significant shift in the cost of capital from DPCR4 to DPCR5 will involve greater movement in the allowed weighted average cost of capital (WACC) than has typically been recorded between reviews. This has not yet been recognised by Ofgem and the risk reduction mechanisms being contemplated appear likely merely to turn business risks into regulatory risks.

Pensions

18 We note the slippage in the timetable on the important issue of pensions. This means that the *Initial proposals* in July will include a placeholder value for this set of costs. We do not expect Ofgem to be contemplating any departure from the way in which it applied its pensions principles in the DPCR4 settlement. This needs to be reaffirmed promptly so that consideration can be given to identifying the size of the distribution business pension deficit and the timing of the necessary repair payments. The creation of regulatory uncertainty over this issue could well result in costly reactions from both the capital markets and scheme trustees.

Taxation

19 Ofgem's theoretical 'one size fits all' approach does not fund CE's tax bills and unreasonably allows customers to benefit twice from this disparity.

Future work

20 We believe that progress can be made on all these issues before the *Initial proposals* are published in July and we look forward to working with Ofgem in the coming weeks to facilitate this.

CHAPTER TWO – OVERVIEW OF FBPQ FORECASTS

Question 1: What are your views on the DNO cost forecasts presented in this chapter?

The forecasts submitted by CE are robust and challenging.

21 The forecasts submitted by the CE-owned distribution licensees for the final two years of the DPCR4 period and the five years of the DPCR5 period are consistent with our internal plans that we agree each year with our shareholder. Achieving the outputs in the plans for the costs set out will represent a significant challenge for CE's management and carries a significant element of cost risk.

An increase in allowed revenues is necessary to meet the outputs required by stakeholders.

22 We recognise that the operating costs and capital investments in our plan imply an increase in allowed revenues of 19% for NEDL and 18% for YEDL, comparing the DPCR5 period with the DPCR4 period and holding other parameters – in particular pensions and cost of capital – at the DPCR4 levels. These increases (expressed in outturn prices) are necessary to fund the increases in the capital and operating cost expenditures that will be incurred by NEDL and YEDL.

CE forecast capital investment increases are consistent with other DNOs'...

At an overall investment level we are forecasting an increase in total investment (i.e. capital and operating costs) of 20.5% in both NEDL and YEDL (comparing the DPCR5 period with the DPCR4 period and exclusive of real price effects).

...whilst our operational costs are projected to fall in real terms.

- 24 With respect to operational activities we forecast:
 - a decrease of 14.5% and 6.7% in Network Operating Costs in 2007/08 prices in NEDL and YEDL respectively (comparing the DPCR5 period with the DPCR4 period) against an average forecast increase of 3.0% across all DNOs;
 - an increase of 4.4% and 3.4% in Indirect Costs in 2007/08 prices in NEDL and YEDL respectively (comparing the DPCR5 period with the DPCR4 period) against an average forecast increase across all DNOs of 5.5%; and
 - an increase of 4.0% and 27.3% in Non-operational Capex in 2007/08 prices in NEDL and YEDL respectively (comparing the DPCR5 period with the DPCR4 period), compared with an average forecast increase of 8.7% across all DNOs.

Some uncertain costs should be excluded and dealt with by a reopener condition.

- 25 As proponents of the IQI we are conscious of the importance of these detailed plans and the need to identify clearly areas of uncertainty. We propose that defined areas of uncertainty are excluded from the assessment conducted to confirm the validity of each DNO's forecast. Outlined below are the areas of uncertainty for which a mechanism may be required to manage them effectively in the DPCR5 period.
- 26 The uncertainties included within our FBPQ are as follows:
 - flooding resilience of major substation sites;
 - new communication circuits (BT 21st century network); and
 - work force renewal (internal work force).
- 27 The uncertainties excluded from our FBPQ are as follows:
 - city-centre reinforcement for high-impact, low-probability (HILP) events;
 - work force renewal (external contractor costs); and
 - workplace parking levy (WPL).
- 28 The tax, indirect and pension costs in our FBPQ are sized to match these direct costs included in our forecast.

Our plans reflect stakeholder input and establish a clear link to well-defined outputs.

29 Our plans provide a progressive response to the needs of the asset base, support the connection of increased levels of distributed generation and make provision for improvements in customer service. Our plans have been set following consultation with our regional stakeholders and customers and we have responded to the clear message to minimise cost increases wherever possible. This has been reflected both in the scope of our network investment plans and in the realistic levels of cost risk that we have shown our preparedness to bear. We recognise the significant development of DPCR5 that is the submission of forecast plans linked to specific outputs. In common with the financial elements of our plans, the outputs we have presented to Ofgem are derived from our internal business plans. Our FBPQ plans represent a balanced set of proposals that will enable us to meet the needs of our key stakeholders during the next five years and beyond.

CHAPTER THREE – OPERATING COST ASSESSMENT METHODOLOGY AND RESULTS

Question 1: Have we exposed the correct costs to comparative benchmarking?

Different sets of costs can be subject to benchmarking with more confidence than others.

- 30 We believe that the cost assessment activity being carried out by Ofgem is going in the right direction but there are some improvements that could and should be made to improve this.
- 31 The question asks whether the right costs have been exposed to comparative benchmarking and we give some detailed comments on this below. Perhaps more important is the need to recognise that different sets of costs can be subjected to benchmarking with varying degrees of confidence in the robustness of the results. Moreover, consideration of the categories of costs that are to be included within any benchmarking exercise should take account of the consequences for incentives of the boundary issues that arise from the choices being made. Boundary issues are not all resolved by equalising incentives. Distortions can also arise from the choice of boundaries if this results in a different likelihood of disallowance if one set of costs is assessed in one way and another competing set of costs is assessed in another way.

Boundary issues can be minimised...

32 We believe there are some simple, straightforward adjustments that should be made to the way in which the overall efficiency assessment is being conducted. These changes would have the positive effect of eradicating some unhelpful boundary issues and would substantially improve the rationality, consistency and robustness of Ofgem's assessment of the efficiency and the plans of DNOs. An important practical consideration is that the improvements we have identified would allow Ofgem to continue to make use of nearly all of the existing panel data assessments and our proposals are consistent with the fundamental principles being applied by Ofgem. Implementation of these proposals would not require any additional data to be collected, neither does it require a different form of analysis to be conducted.

... and the validity of the regressions improved by assessing competing costs together.

33 The econometric quality, and therefore validity, of the regressions would be enhanced by appropriate treatment of the cost boundaries such that competing costs are kept together and the results for each competing group reported separately. We do not believe that our proposed approach is fundamentally different from the approach mapped out in the *Methodology paper*. However, it does require that Ofgem:

- properly includes all of the support costs (including IT and property) in the analyses;
- ensures that evaluation of benchmark costs for all asset-related direct expenditures should be done in a consistent manner;
- recognises that indirect overheads are the most meaningful group of costs that can be aggregated to represent a view of what are traditionally described as 'operating costs'; and
- corrects some detailed errors that we have pointed out in the work to date.
- 34 We develop these points further below.

Total operating costs should be split into three categories, i.e. network operating costs, marginal indirect costs and business support costs.

35 In the *Methodology paper*, Ofgem sets out a multi-layered approach to regression analysis of operational costs. We agree that the lowest disaggregated level contains sensible bundles of activities and their associated costs. It is the manner in which these are then aggregated and the results reported where we believe that Ofgem should improve its approach. We propose that total operational costs be split into three separate categories. These are network operating costs, marginal indirect costs and business support costs. We discuss below how each of these categories should be analysed and how that analysis should be most appropriately used to inform allowances.

The three cost groupings have different levels of modelling accuracy.

36 Importantly, each of the three categories we propose has a different level of inherent modelling accuracy. Confidence in regression is not merely a question satisfying statistical tests (such as the 't test' or maximising the r squared coefficient), it also derives from the plausibility and the explanatory power of the hypothesis that indicates which costs should be grouped together and the choice of cost driver. Bearing these considerations in mind, Ofgem may rely more fully on the output from the business support costs regression analysis since it is econometrically more robust. Conversely, for the network operating costs (asset-related direct costs), the underlying plausibility and validity of the approach and initial results are substantially worse. This arises since, while the DNO networks exhibit a high degree of heterogeneity across a number of important dimensions (e.g. network scale and spatial variation), the small sample size restricts the sophistication of the econometric model that Ofgem is able to employ. Moreover, network operating costs compete with network investments and any analysis of one element of this group of costs is likely to be confounded by potentially rational and efficient allocation and policy choices. As a result of both of these concerns the

residuals resulting from Ofgem's econometric analysis of network operating costs cannot be regarded as arising from relative efficiency alone, but will also reflect a range of other factors not captured by Ofgem's modelling approach. This means that more work is required before it can be validly concluded that the differences between companies are indeed signs of inefficiency rather than the consequence of either cost allocation or the differing needs of disparate asset bases. For the third category of marginal indirect costs the robustness of the results is somewhere between the other two groups. The setting of allowances in these three groups needs to recognise the differing degrees of confidence in the output of the regressions. By reporting at either a higher level (total operational cost), or at a lower disaggregated level, Ofgem is unnecessarily confusing the picture and corrupting the output of the inherently higher-quality analysis (that comes from the purer overhead cost groups).

Regressions of network operating costs give the least reliable results.

- 37 The regressions in respect of network operating costs have been shown to give the least reliable results. This supports our view that the concerns we have raised over the validity of Ofgem's analysis of network operating costs are material in practice. It is therefore right that Ofgem is open to arguments that explain the reasons for apparently poor scores in the subsidiary activities (e.g. faults, tree trimming and inspection and maintenance).
- 38 In summary, the following discrete actions are necessary to improve the robustness of the cost assessment outcome:
 - align indirect cost groupings to the incentive regime and explicitly recognise the differing level of robustness associated with each grouping by presenting and evaluating the regression results in the three distinct cost groupings of network operating costs, marginal indirect costs and business support costs;
 - for network operating costs, where the regression analysis is inherently less robust, identify where companies benchmark poorly to provide an opportunity for explanation and consideration alongside competing costs;
 - include the IT and telecoms and property costs in the regression of business support costs; and
 - demonstrate the validity of the adjustments to regressions for regional labour and contractor indirect costs or remove them from the analysis.

Question 2: Do you agree with the assumptions we have made for our core analysis?

39 We have not found it easy to replicate the assessments carried out by Ofgem in the *Methodology paper*. During the period in which the consultation has been open we have received further information from Ofgem. In some cases we have been able to notify Ofgem of errors in the data and in the application of the models. We trust this has been useful.

Ofgem's assumption on related party margins, severe weather and singletons is correct....

- 40 We agree with Ofgem's assumptions for the core analysis with respect to:
 - the inclusion of related party margins;
 - the inclusion of severe weather atypical events;
 - the exclusion of pensions costs, although we agree that it is sensible to model an alternative scenario including a normalised contribution rate to test the impact on results; and
 - the absence of any singleton adjustment.

... but the case for other regional adjustments and special factors is not made.

- 41 We believe there is no requirement for a general regional labour adjustment and that any recognition of the additional costs of operating in London should be made outside the base regression models. Moreover, the EDFE LPN adjustment of £7.2m in 2007/08 is based on Office of National Statistics (ONS) data, on which we have carried out a critique of the assumptions and provided this to Ofgem. Our analysis concludes that:
 - Ofgem's approach is flawed as it is reliant on relatively few items of data, which exhibit a level of volatility between 2006 and 2008, suggesting data quality issues. Even if this volatility were genuine, it invalidates the use of data from a single year in any such calculation;
 - although use of a more industry-specific four-digit code would be inappropriate, as it would be unduly influenced by data from DNOs themselves, use of the three-digit code incorporates irrelevant occupations, which may introduce variations in data that are not reflective of overall regional earnings trends; and
 - use of the mean, rather than the median, as the measure of average introduces more risk that data has been unduly influenced by outlying high values within the

Annual Survey of Hours and Earnings (ASHE) responses. However, adequate data does not appear to be available for the median level of earnings.

- 42 We conclude that Ofgem should not apply unrepresentative and unreliable adjustments to validated regulatory reporting pack (RRP) data in order to carry out the comparative efficiency assessment.
- 43 With respect to alliance contracting we are unable to provide comment on the exclusion of these costs where the contractor has an 'open book' arrangement (such that the costs would be reported as Indirect costs rather than as Network Investment or Network Operating Costs until we know more about the costs at issue. In particular, Ofgem has indicated that it is in the process of sharing the information submitted by EDFE and we would welcome the opportunity to review the assumptions and request that Ofgem demonstrates appropriate validation of the costs at issue.
- 44 Finally, Ofgem should not attempt to recognise other 'special factors' in the regressions. All DNOs are able to claim their own special factors. These tend to cancel out and it would be inappropriate to recognise some but not others. In particular, the suggested further adjustments for urbanity, sparsity and interconnected networks should be rejected for base regressions. There is no RRP cost category for these factors and so any adjustment would be subjective. It is not possible to capture these differences through the creation of intricate cost drivers within the modelling.

Question 3: What are the appropriate cost drivers for each of the cost groupings?

The cost drivers identified by Ofgem for network operating costs do not adequately capture the underlying drivers of cost.

- 45 As explained above, our main concern relates to the inclusion of network operating costs in the top-down analysis and the exclusion of IT, telecoms and property. However, cost drivers selected by Ofgem for each of the cost groupings give rise to a number of concerns and provide a further indication that regression analysis alone should not be relied upon to determine allowances.
- We do not believe that the cost drivers Ofgem has identified for network operating costs are capable of capturing the underlying drivers of cost. This is illustrated by the claims made by some DNOs for special recognition of their particular special factors. For example, while it is clear that expenditure on faults will be driven in part by the volume of faults, an analysis of fault cost against number of faults alone will take no account of the severity of faults to be addressed or of the mix of HV and LV faults (which have significant unit cost differences). For certain categories of indirect cost,

Ofgem intends to use another cost to explain those costs. In those cases Ofgem's chosen driver will not reflect the underlying driver of cost and risks thereby creating a perverse incentive. While Ofgem's aggregate cost driver for its top-down analysis, which uses a weighted geometric average of the individual drivers, results in regressions that appear to satisfy the usual econometric tests and metrics, we can see no underpinning regulatory or business rationale to explain the use of this construction. As a consequence we regard the resulting regression as largely spurious.

Question 4: How should we determine baselines for the costs excluded from comparative benchmarking?

47 As we understand it, a number of costs have been excluded from the comparative benchmarking exercise and we comment on each in turn.

We agree that the costs transferred to Network Investment should be excluded from the regressions.

- 48 The following costs have been excluded from the comparative benchmarking because they have been transferred to Network Investment:
 - a proportion of vehicles and transport costs;
 - a proportion of small tools and instrument costs; and
 - a proportion of plant and machinery costs.
- 49 We agree that the costs transferred to Network Investment should be excluded; these costs should be assessed along with the associated direct activities to which they have been added. However, we have no visibility of this step being added into the process.

The costs being reviewed by the IT and property consultants should be included in the regressions.

- 50 The following costs have been excluded from the comparative benchmarking because they are being reviewed by the IT and property consultants:
 - IT and Telecoms;
 - Non-operational capex IT;
 - Property management;
 - Non-operational office equipment; and

- Non-operational property.
- 51 In our view there is no rationale for excluding IT, telecoms and property costs from any top-down, total-indirect-cost or business-support cost regressions that are carried out. Ofgem should use all relevant information to conduct its cost assessment exercise. The fact that certain indirect costs are being separately reviewed is no reason to exclude them from the benchmarking exercise. If these significant amounts of indirect costs are excluded from the benchmarking exercise totalling over £200m (31%) per annum an important source of efficiency information is being ignored. The expert reviews of these cost categories may provide valuable information about these costs that can help to confirm the overall efficiency assessment.
- 52 We have conducted efficiency analysis replicating Ofgem's approach, which excludes IT, telecoms and property costs from any indirect efficiency modelling, and compared this with our recommended approach. The results of our analysis indicate significant shifts in the efficiency scores and rankings across the DNOs. Our view is that Ofgem must include IT, telecoms and property in its efficiency modelling and use the consultant reviews to validate the results and provide further relevant information.
- 53 In addition, we have communicated our concerns to Ofgem that the property consultants have not discussed associated capital costs with us, so their assessment would not encompass the total costs reported within the annual RRP return for this activity. We also note that the IT consultants requested a set of disaggregated data and we are not aware of a reconciliation being completed to determine the value of costs excluded from their review.

The costs considered unsuitable for comparative benchmarking should be treated on a case-by-case basis.

- 54 The following categories have been excluded from the comparative benchmarking because they are considered unsuitable:
 - low-volume/high-cost faults;
 - wayleaves;
 - insurance;
 - road costs;
 - submarine cables;
 - remote location generation; and

- unmetered electricity.
- 55 In our view, low-volume/high-cost faults should form part of the network investment assessment along with low-volume, low-value Inspection and Maintenance activities, which have been included neither in the benchmarking assessment nor in the list of exclusions. For the remainder of the items considered unsuitable for comparative benchmarking, we suggest that historical trends should be compared with DNOs' forecasts to determine the reasonableness of the forecasts. Companies should provide explanations for any material movement between historical and forecast costs and the robustness of these explanations should be considered when setting allowances.
- 56 Wayleave costs should be an exception as Ofgem has acknowledged that nationally-set rates determine the level of expenditure.

In addition, we assume that costs related to distributed generation (DG) and IFI are being assessed outside this process.

Question 5: How should we treat atypical costs in the price control settlement?

Atypical costs should be included.

57 There remains inconsistent reporting across DNOs in relation to atypical costs, so only the inclusion of these costs in the regressions will provide assurance of a more complete and accurate picture of relative efficiency. The use of panel data covering a number of years makes this less problematic than at previous price control reviews, which were reliant upon one year's data in the regressions.

Question 6: What weight should be given to the benchmarking relative to other considerations?

Benchmarking can help to inform the setting of allowances...

- 58 The simple answer to this question is that the better the benchmarking, the greater the reliance that can be placed upon it. However, we repeat our view that benchmarking can help to inform a price control review provided all of the following criteria are met:
 - the data on which the benchmarking is based is truly comparable;
 - the firms that have the lowest, or the lower, costs must be worthy of emulation (bearing in mind that lowest cost is not necessarily best); and

• the specification of the benchmarking model must accurately capture the factors that drive the costs that are subject of the analysis.

Moreover, Ofgem must avoid:

- assuming that fundamentally different networks can be meaningfully compared in this way;
- using benchmark comparisons to compare DNOs' forecasts;
- cherry picking what might appear to be best practice in individual areas;
- interpreting measurement error as efficiency through the use of a quartile frontier; and
- using the outputs of crude forecasting models to determine the efficiency of DNOs' plans.

... but other evidence, including each DNO's forecast, also needs to be given appropriate weight.

- 59 We are pleased to see that Ofgem's process for setting baseline allowances now includes a step to consider other evidence. Our view is that the following should also be taken into account:
 - the reasonableness of forward forecasts on operational expenditure and the related outputs. The price control review needs to focus on funding a DNO's efficient *future* operating costs, not its past costs from the previous period;
 - overall performance in the DPCR4 period;
 - the quality of RRP returns and supporting information;
 - the robustness of responses to questions raised by Ofgem before, during and after the annual cost-review meetings; and
 - the expert reviews from information technology and technology (IT&T) and property consultants.
- 60 As set out in answer to Question 1 above, we have recommended to Ofgem alternative groupings of costs that would enable Ofgem to place more reliance on the most robust regressions, whilst still using benchmarking to inform the analysis by which other costs that are less susceptible to benchmarking will be determined. The proposed cost groupings are also aligned more consistently with the proposed incentive regime.

61 The schematic below sets out how Ofgem's principles should be applied to deliver a more rational, and technically more robust, result:

	Network investment		Indirect costs	
	Capex investment	Network operating costs	Marginal indirects	Business support
Example costs	Asset replacement, connections and reinforcement	Tree trimming, inspections and maintenance and faults costs	Network design, project and engineering management, system mapping, stores, health and safety, control and call centres	IT/telecoms, property, network policy, HR, finance, regulation and CEO
Assessing cost	Bottom-up engineering assessment - modelling, unit costs and outputs		Top-down benchmarking informs assessment and allowances	Top-down benchmarking could better inform allowances, with expert sense-check
Incentive	Common incentive rate in IQI			Opex incentive
Funding	Given the costs put into the IQI, determine proportion to RAV and proportion expensed to promote price signals, credibility and financeability			Expensed (fast money)

CHAPTER FOUR – METHODOLOGY - CORE NETWORK INVESTMENT

Question 1: Do you agree with Ofgem's approach to assessing core network investment allowances based on the wide range of evidence detailed in the chapter?

We support Ofgem's approach to assessing core network investment...

62 In general we support Ofgem's methodology for assessing core network investment, principally because the proposed method does not rely on the top-down application of a mathematically modelled answer, but on a thorough bottom-up assessment of our investment plan. We do not believe the models being employed are capable of adequately capturing all the drivers and intelligence that are incorporated in our planning process, but as long as these models are used by Ofgem simply to generate a reference point for the bottom-up assessment then we have no material objection to their use. We are supportive of the development and use of outputs and other supporting evidence in this assessment and we are also encouraged by Ofgem's consideration of other factors such as past performance, evidence from RRP visits and the quality of supporting output measures, scheme papers and investment plan documentation.

... but Ofgem's models cannot be used to determine capital investment needs.

- 63 Specifically, our concerns should Ofgem depart from the currently signalled application of its methodology and either partially or wholly impose model outputs would be that:
 - the asset replacement model generates an unsustainable baseline of investment; and
 - within the general reinforcement model, the use of industry averages of ratios that vary massively between individual projects would be inappropriate to judge what are in reality sensible investment proposals.
- 64 However, our discussions with Ofgem's network investment team at the bilateral meeting on 21 May 2009 were reassuring in terms of the potential concerns with using modelled answers and we were pleased to be able to discuss and present the engineering aspects of our investment forecast to further justify our forecast to Ofgem. At this stage of the process we are satisfied that Ofgem is upholding the approach described within the *Methodology paper* and is focusing on the evidence provided by CE in support of our forecast. Nevertheless, we remain uncertain about where Ofgem will view us in terms of core network investment within the proposals in July.
- 65 Therefore we support Ofgem's approach but we need to see how it translates into business plan impact. We remain confident that our plan is robust and transparent and that we have demonstrated this through our submission and subsequent timely responses to Ofgem's supplementary questions.
- 66 In terms of Ofgem's analytical approach that focuses upon each building block, we understand why Ofgem's initial focus has been on general reinforcement and asset replacement due to their higher materiality. However, we are concerned that Ofgem's view of baseline investment for the other building block categories will not be declared until the initial proposals are published. However, we understand the reasons for, and are supportive of Ofgem's proposed further consultation approach to, analysing these elements.

We have concerns with the possible use of Ofgem's unit cost benchmarks.

67 With regard to the assessment of unit costs, we are concerned with the potential use of hypothetical benchmarks derived from inconsistently defined units across DNOs. We have reconciled our costs with our plan and Ofgem's unit definitions and have provided this detailed analysis to Ofgem to facilitate further discussion on this matter. We note that Ofgem has recently circulated PB Power's assessment of unit costs and we welcome the establishment of a 'scope of work' for each asset category, against which we shall (in line with Ofgem's request) perform a 'gap analysis' to assist Ofgem's assessment.

Question 2: Do you agree with the primary network general reinforcement modelling methodology that Ofgem has adopted for DPCR5?

We are broadly satisfied with Ofgem's approach for the three reinforcement categories.

- 68 Ofgem proposes a different approach for the three reinforcement categories and we are broadly comfortable with all three:
 - We are supportive of the individual scheme assessment approach for N 2 (or second-circuit outage) driven schemes;
 - We should bear in mind that the EHV and 132kV reinforcement investment benchmark model addresses only the efficiency of investment at a macro level, and does not consider whether investment was needed at all. Ofgem considers only the efficiency of investment once the decision to invest is made. We believe that, via the composite risk index and individual EHV scheme assessment, a more robust forecast can be provided.
 - For HV and LV we agree with Ofgem's statement that units distributed and customers connected are poor indicators of reinforcement requirements and that historical run-rate and identified work are better indicators of HV and LV reinforcement requirement, provided these are adequately substantiated and transparently executed. With regard to CE's forecast, we can already identify the majority of our DPCR5 HV and LV investment requirement and would therefore prefer discussions to be based on that. We also note that load transfers that relieve the EHV network can be an efficient reinforcement strategy. However, at present both the Ofgem EHV model and the HV sanity check proposed would penalise this strategy.
- 69 Again we are reassured by the fact that, so far, Ofgem is applying these models to provide a reference point for discussion and we note Ofgem has subsequently assessed each scheme that constitutes CE's general reinforcement expenditure at EHV and 132kV for DPCR5 and (for all but one scheme, for which we have provided additional supporting evidence) has provided verbal indication (at the 21 May, 2009 bilateral meeting) that our evidence supports the need for the investment identified.
- 70 In summary, we are generally supportive of Ofgem's approach to the assessment of general reinforcement, and we are particularly encouraged by Ofgem's willingness to assess our plans from a 'bottom-up' perspective and we have already provided detailed information to Ofgem in this regard.

71 We remain confident that our plan represents the correct levels of investment and that Ofgem's ultimate assessment of it will confirm this view.

Question 3: Do you agree with the asset replacement modelling methodology that Ofgem has adopted for DPCR5?

We are broadly satisfied with Ofgem's approach to asset replacement assessment...

- 72 CE recognises that asset replacement models can be effectively utilised in strategic long-term investment planning to determine baseline forecasts for decision-support purposes. We believe the survivor model employed by Ofgem can be appropriate for asset replacement modelling and, although we do not utilise it, we are aware of its application within the DNO community. However, the success of any strategic model lies in the quality of the input parameters and the manner in which the outputs are applied.
- 73 We have analysed Ofgem's methodology, built our own model and replicated Ofgem's results to ensure we understand how the results have been derived. We note again that Ofgem has indicated that it does not intend to rely solely on the model to assess forecasts and we are reassured by that approach. Specifically, we would be worried about the imposition of model-generated levels of investment in this area due to the following concerns:
 - the utilisation of the Poisson distribution as an approximation for an expected life distribution, which we do not believe to be the most reflective model of asset replacement profiles in practice;
 - the adoption of implied asset lives using a methodology that finds an average removal age to fit the assumed modelled distribution, as we do not believe that actual replacement of assets follows such a distribution. Given that the inferred asset life is dependent on the underlying age profile shape, as well as on the population scale, even an asset category with a similar underlying failure rate in two DNOs would result in different asset lives;
 - the application of an aggregate 'industry' life from individual DNO installation profiles that subsequently determines individual DNO volumes, which may not reconcile to the individual DNOs' installation profiles used to calculate the aggregate; and
 - the smoothing that is inherent to the survivor modelling approach which does not represent practical asset replacement experience and may actually disadvantage

forecast replacement of older assets in favour of replacement of younger assets where larger populations were installed.

...but the modelling must be used to inform the debate rather than to determine allowances.

74 We conclude that Ofgem's approach to asset replacement modelling should be used with caution and only to inform investment decisions rather than to determine them. Again, we are encouraged by Ofgem's pragmatic approach as demonstrated at the recent bilateral meeting with the Ofgem network investment team, in which discussions centred on the justification of CE's forecast via engineering discussion. In line with these discussions we continue to provide further justification of our forecast as and when requested by Ofgem.

Question 4: Is the outlined process for developing Initial Proposals suitable?

The process for developing the initial proposals with respect to core network investment is appropriate...

75 We are broadly in support of Ofgem's approach to developing the initial proposals and we are appreciative of Ofgem's recognition of the quality of supporting material we continue to provide in support of this process. We anticipate this evidence being appropriately factored into the initial proposals.

...but Ofgem should consider how superior performance should be recognised and incentivised.

76 In relation to the third step in this process, i.e. accounting for more general, wider evidence, we are yet to fully understand how the mechanics of this inform the baseline within the initial proposals. We hope that Ofgem will consider carefully how it intends to recognise and incentivise superior performance in this important area.

CHAPTER FIVE – NETWORK INVESTMENT - ENVIRONMENT

Question 1: Do you agree with our approach to assessing the forecasts of distributed generation, discretionary expenditure and losses and are there any other factors you think we need to take into consideration?

77 Our views on each of the components of this question are given below.

We broadly agree with Ofgem's approach to forecasts for distributed generation.

- 78 We agree with the broad thrust of Ofgem's approach to the 'use of system' costs of connecting distributed generation, of looking beyond average central-case forecast expenditure. We welcome Ofgem's recognition of the uncertainty and potential volatility of these costs, and the indication given to the Environmental Working Group that funding will not be directly linked to central-case forecast figures.
- 79 We support the approach Ofgem has outlined at that working group and in the bilateral meeting, of examining the distribution of costs in order better to understand how individual schemes affect the overall average, and of also considering the impact of the sensitivity analysis provided in the FBPQ.
- 80 We suggest that Ofgem should also examine historical schemes. Table 5.1 of the *Methodology paper* suggests that some distributors have incurred significant use of system costs in connecting relatively small volumes of generation. We expect that such analysis would further illuminate the risks in this area.
- 81 The challenge for DG funding remains that of balancing the interests of customers and companies within the context of continued uncertainty in volumes, mix and unit costs of distributed generation. Basing the hybrid scheme on too high an average unit cost risks asking customers to pay too much; using too low a value risks not funding DNOs' efficiently-incurred costs.
- 82 As a bare minimum, we expect our average central-case forecast unit costs to be fully funded under the DPCR5 scheme. There is no logical argument for a common rate to be applied across all DNOs', particularly within the context of wide variations between licensees in both historical and forecast unit costs.
- Further, the DPCR5 scheme can be de-risked for both customers and companies by increasing the pass-through element to (say) 90%. Ofgem may find it informative to calculate how much this would have saved customers over the DPCR4 period.

CE made no forecasts for discretionary expenditure in its FBPQs.

- As we have previously discussed, we have submitted no forecast 'discretionary' expenditure within our FBPQs, as we have been unable to identify schemes that, in our opinion, would deliver value for money to customers. Our analysis of other DNOs' proposals at the headline level presented in table 5.3 of the *Methodology paper* gives us no reason to change our views.
- 85 Should Ofgem deem that any given scheme, for example the metering of main power flows at secondary substations as proposed by WPD, merits wider application, then full funding of efficiently-incurred costs must be provided for all licensees.

Hot spots on the network may emerge in the DPCR5 period because of increases driven by changes in usage...

- A related issue that has not received much attention recently is funding for emerging network needs that arise during the DPCR5 period. There is a credible opportunity for hot spots to emerge driven by electric vehicles, heat pumps, micro-generation or other changes to production and consumption that we cannot currently predict.
- 87 Effective revenue drivers for demand-related costs and an effective DG hybrid funding scheme are a partial solution. All output measures tend to lag what they track, so something else will be required to bring forward anticipatory investment that might better facilitate the transition to a low-carbon economy.

...but Ofgem's proposals to date are insufficient.

- 88 The proposals in the December *Policy paper* are insufficient. They hold out the promise of cost recovery at best, with a significant threat of disallowing reasonably-incurred investment. This risk of disallowance means that some guaranteed and enhanced return is required for distributors to invest ahead of absolute necessity.
- 89 This has been recognised by, for example the Federal Energy Regulatory Commission (FERC) in allowing a premium of up 250 basis points for this kind of facilitative investment. Note that this is a different case from Transmission Investment for Renewable Generation (TIRG), as there is no queue of schemes awaiting connection.

The treatment of losses requires further thought.

- 90 As we have previously discussed, we have submitted no forecast for expenditure specifically to reduce losses, as we have been unable to identify schemes that, in our opinion, delivered value for money to customers. We would be interested to see some details of other DNOs' proposals, to understand whether any of the measures listed in table 5.4 of the *Methodology paper* would offer something to the customers of NEDL and YEDL.
- 91 The proper treatment of the incentives relating to losses at this price control review can be considered as having five components, namely:
 - the year-on-year losses incentive set out in the current special condition of the licence;
 - the transition from a variety of DNO methods by which losses are measured to a common measurement approach;
 - the expressed intention in the DPCR4 *Final proposals* to introduce a five-year rolling incentive at DPCR5 with respect to performance in the DPCR4 period;

- the basis of measurement for any DPCR5 losses incentive; and
- the setting of any targets for the DPCR5 losses incentive.
- 92 With respect to the DPCR5 losses incentive we note Ofgem's preference for an outputrelated measure. In general we agree with output-based measures in regulatory incentives, but in this case we urge caution to ensure that incentives to invest in lossesreducing projects and data quality are appropriately maintained. In our view Ofgem should be bold and implement a losses regime that reflects a DNO's ability to influence the outcome, whilst serving as a true incentive to reduce carbon.
- 93 With respect to the rolling incentive, careful thought must be given to resolving the issues associated with the DPCR4 losses rolling incentive. The expression of Ofgem's intent in the DPCR4 *Final proposals* now seems clearly not to be what was originally intended during the development of policy at DPCR4.
- 94 Our views on these issues are set out in more detail below.

An output-based incentive at DPCR5 is hard to reconcile with the reality of settlements system volatility.

- 95 We cannot square the circle between:
 - Ofgem's preference for an output-based losses incentive;
 - asking customers to pay for what is delivered; and
 - encouraging DNOs to minimise losses so far as it is efficient to do so.
- 96 It seems to us that:
 - what matters is minimising losses, not measuring them; and
 - therefore, DNOs need a marginal incentive rate that reflects the full value of losses to be able to make balanced decisions;
- 97 We support output measures in general, but the output of settlements is too volatile to form the basis of a losses incentive. Ofgem's proposed incentive acts on movements in apparent losses (where the movement is measured relative to a target level) rather than upon the total level of losses. Movements in losses from year to year are dominated by data issues. This makes an incentive based on an output measure problematic.

Customers should pay only for what is delivered by a DNO.

98 Ofgem should not ask customers to pay out according to the wholesale price of electricity and the shadow price of carbon unless it can prove that its proposed measure

of losses relates directly to fewer units generated and entering the distribution system. It follows that, if the incentive scheme is to be driven by the output of settlements, which cannot be related directly to fewer units generated, the marginal incentive rate must be relatively low, reflecting the value of data cleansing only. However, the consequence of this is that DNOs will not be able to build the full value of losses into their decisions as they can reflect only this lower marginal rate. Losses will therefore be higher than they might otherwise be. For these reasons the hybrid scheme proposed by the DNOs has some merit as it allows DNOs to build the full value of losses into their decisions without asking customers to pay for a reduction in units generated that has not actually occurred.

- 99 This analysis is developed more fully below.
- 100 The primary purpose of a losses incentive is to encourage DNOs to minimise losses so far as it is efficient to do so. No measurement system has a value in and of itself: it exists only as a tool to facilitate this higher purpose. Ofgem should ignore the question of whether a measurement system, or even an incentive scheme, appears to be an elegant solution as a theoretical construct or as a licence condition. What matters is whether the incentive scheme asks customers to pay out, and allows companies to receive, an appropriate value for genuine reductions in losses that result from the activities of the companies.

Incentives, rather than targets, drive investment.

- 101 Encouraging distributors to minimise losses so far as it is efficient to do so requires an incentive scheme with the right marginal rate. Targets are irrelevant here: appraising the value of an incremental decision requires only that we build in the marginal incentive rate. As we consider only one decision at a time within the larger portfolio, we do not consider whether the portfolio as a whole will satisfy the targets. Instead, we look at the incremental contribution of each individual decision, which requires only that we consider the marginal rate. Clearly, the higher the incentive rate, the easier it becomes for distributors to justify lower-loss solutions, and the lower that losses will become.
- 102 In general we support the use of output measures in regulatory arrangements. The most sustainable regulation is based upon a clear link between the benefits customers enjoy and the payments customers make. Using the output of settlements as a basis for a losses incentive, although superficially attractive, fails this test. In 2004, because of the confusion created by the 'overbilling' issue, the true scale of residual errors in settlement outputs had not been appreciated. Since then, the truth has become all too clear. We have demonstrated at Ofgem's Environmental Working Group, and Engage

have confirmed, that there is significant volatility in the output of the settlement process.

Settlement system volatility has increased in the DPCR4 period.

103 Settlements volatility has increased during the current price control period, as shown in the chart below (based on CE's agreed approach of billing on unadjusted settlement data received in the regulatory year):



104 We can also see that volatility between settlements runs is increasing.

- 105 Ofgem has proposed, Engage's analysis confirms, and we support a suite of measures to improve the reliability of the output of settlements. This focuses upon using unadjusted settlement data, in a manner very close to our current process, and waiting for settlements reconciliation runs to unwind themselves. This is a necessary step to understanding the output of settlements but it is insufficient to resolve the issues that prevent settlements output from being the basis of a robust losses incentive scheme.
- 106 We can illustrate the impact of the proposed improvements to reporting measures by taking data that corrects for late meter readings and profiling issues. The graph below shows that, even after these measures, the output of settlements is still unduly and increasingly volatile:

CE apparent losses



107 We have also demonstrated to the Environmental Working Group, and it has not been refuted, that there are sources of error and volatility in the source data used by settlements that are consistent with these observations.

Less than 10% of the change in reported losses performance relates to a reduction in genuine engineering losses.

- 108 While the bulk (perhaps 95%) of apparent losses relates to genuine losses and unrecorded abstraction, this is not the value that Ofgem's proposed losses incentive acts upon. That incentive acts on movements in losses relative to a target. Year-on-year movements in genuine engineering losses are very small: our FBPQ submission suggests that the most that we could move losses is by 0.03% of sales. In practice, the amount they actually are moved will be less, as that 0.03% represents the total impact of our total business as usual investment that affects losses. We would have to increase reinforcement spend by around one-third to change losses by 0.01%. The graph above shows that annual volatility in the output of settlements is an order of magnitude greater than the potential annual change in engineering losses, at around 0.2% and rising. Therefore, at least 90% of the *movement* in apparent losses is driven by data issues, rather than by a genuine reduction in losses.
- 109 If less than 10% of the apparent movement in losses relates to a genuine reduction in engineering losses and therefore to a genuine reduction in the number of units generated and entering the system, it is hard to ask customers to pay out on that measure at more than 10% of the value of a genuine reduction in the number of units generated, i.e. the wholesale cost of electricity and of the shadow price of carbon. This implies a marginal incentive rate below £10/MWh.

110 The noise in apparent losses from using the outputs of settlement does not itself fundamentally change the value that distributors can place on their actions. As the relevant factor is the incremental impact of any given action, decisions can be made blind to the impact on the overall target. Only if targets did matter to investment decisions would the noise in apparent losses become a barrier to effective decision-making. In contrast, because the noise in apparent losses reduces the value that customers can properly be asked to pay out, a lower marginal incentive rate will affect the outcome of distributors' appraisals.

The hybrid incentive proposed by DNOs offers the best solution for DPCR5.

- 111 For DNOs to make the right decision, the marginal incentive rate should reflect the value of reduced volumes of generation. The maximum possible value is the sum of the wholesale price of electricity and the shadow price of carbon. As we cannot ask customers to pay out at that rate on the output of settlements, an alternative approach is required. Reluctantly, as we generally prefer output measures, we concede that the best approach may be the hybrid approach espoused by the DNOs.
- 112 The key principles for such a mechanism are:
 - a focus on reducing actual losses and theft;
 - a robust and transparent approach that restores the link between what customers pay for and what is delivered. Rewards should be driven by an auditable assessment of the reduction in losses due to identifiable actions of the licensee; and
 - a simple approach with a minimal reporting burden for licensees and Ofgem.
- 113 For this approach a clearly defined method of assessing changes in losses needs to be applied by all distributors: we suggest an update to the existing Engineering Recommendation T8 (The Cost of Losses for Transformers used on Distribution Systems). This approach would then be applied to the investment decisions made by each licensee each year, and reported in a simple, fully auditable RRP table. Such a mechanism would better reflect a distributor's ability to influence the outcome, whilst serving as a true incentive to reduce carbon.
- 114 To reflect other movements in apparent losses, it could still be appropriate to retain an incentive based upon the output of settlements. As previously noted, the greatest marginal rate that could be applied to such a scheme would be £10/MWh. We recognise that Ofgem has faced challenges in defining target losses. As it is the marginal incentive rate that drives decision making, we recommend a return to the kind of rolling

incentive used before 2005, which defines its own targets and thereby avoids windfall gains and losses.

115 As we stated at the outset of this section, what matters is that DNOs minimise losses so far as it is efficient to do so. This suggests a marginal incentive rate approaching the order of the sum of the wholesale price of electricity and the shadow price of carbon. Movements in the output of settlements are dominated by data issues, not the genuine reduction in units generated that would justify asking customers to pay out at such a rate. Therefore, incentives based upon the output of settlements cannot deliver the outcome customers deserve. This leads us, reluctantly, to conclude that the best approach may be the hybrid approach espoused by the distributor community.

Transitional arrangements are needed to move to a common measurement approach.

- 116 The first part of the DPCR4 losses incentive, i.e. the year-by-year reward for beating a pre-determined target, acts upon a measure of losses unique to (but, one hopes, consistent over the period within) each licensee. If we are to move to a new measure, some appropriate transitional arrangements are needed.
- 117 We can see two grounds for concern:
 - the process fails to allow reconciliations to flow through where each licensee's agreed method requires it; or
 - the agreed method allows for adjustments to settlements reports that are so great that reported losses are no longer true or fair.
- 118 The first can be addressed by appropriate transitional arrangements. Only Ofgem can address the second, by taking appropriate action with the relevant licensees.
- 119 According to Ofgem's understanding of licensees' reporting, as presented at the seventh meeting of Ofgem's Environmental Working Group:
 - SSE model losses, so presumably they have no provisions or reconciliation;
 - CE, WPD and ENW all use unadjusted settlement data: presumably, these companies would therefore need to wait until the 'dispute final' settlements run to reach a definitive view of sales (and hence losses). Even though these firms bill the movement in the year it is reported, rather than formally release a provision in respect of the year of consumption, the practical effect is the same as a provision;
 - SP use a moving average to adjust/estimate non-half hourly (NHH) data prior to final settlement and, presumably, reconcile back according to final settlement;

- EDFE make an unspecified estimate of consumption and then reconcile back according to final settlement; and
- CN adjust NHH units for losses and group correction factor (GCF). Provisions are released between three and four years later, once settlement is finalised. Half-hourly (HH) sales (at LV & HV) are deemed rather than measured and, presumably, are subject to the same kind of movement in provision as affects the NHH sales from which they are deemed.
- 120 Ofgem can ensure the provisions for SP, EDFE and CN NHH are released by allowing settlements to run its course, then checking that they each follow their agreed method and release the provision. We assume that this will also unwind CN's HH reporting.
- 121 Similarly, allowing settlements to run its course should also ensure that CE, WPD and ENW all report the definitive view of sales in the DPCR4 period. As previously noted, the practical effect is the same as a provision.
- 122 Therefore, so long as Ofgem allows settlements to run its course and requires all licensees to process reconciliations and release provisions, each according to its agreed method, then all losses for the DPCR4 period will be reported. There will probably be a need for a placeholder as part of the DPCR5 settlement, but true-up can be achieved in 2013.

The DPCR4 rolling incentive for losses has unintended properties.

- 123 Careful thought needs to be applied to resolving the issues caused by the proposed DPCR4 losses rolling incentive mechanism.
- 124 Our view is that Ofgem should look for a managed close-out of the DPCR4 losses rolling incentive mechanism. We do not believe that Ofgem can have intended that the outcome of the rolling incentive as expressed in the DPCR4 *Final proposals*, working in combination with the annual incentive, would lead to an outcome where rewards and penalties from the losses performance in the entire DPCR4 period depend solely on the reported performance in the fifth year of the review.

Variations in DNOs' reporting mechanism make the rolling incentive potentially discriminatory...

125 Moreover, we surmise that Ofgem could not have realised that, given the variations in DNO reporting methods, an unintended property of the mechanism (because of the over-reliance on the fifth year) was to discriminate between DNOs in the risks to which they were exposed where this discrimination arises from the freedom to influence the final year that some DNO measurement methodologies permit.

... and the assumption that volatility would subside has been shown to be invalid.

- 126 It is clear that Ofgem's underlying assumption during the development of the DPCR4 proposals for the rolling incentive that settlements volatility would reduce has proven not to be true. This volatility, in conjunction with the importance of the fifth year, confers random rewards and penalties on DNOs.
- 127 These two factors suggest that giving effect to the rolling incentive as expressed in the DPCR4 *Final proposals* is not an option for Ofgem and that a pragmatic solution to a problem that was not anticipated when the policy intent was expressed will need to be delivered as part of the DPCR5 settlement. We have given some thought to how a managed close-out could be implemented.
- 128 It is clear that Ofgem made some assumptions in setting up the DPCR4 rolling incentive that have been shown not to hold true.

A buy-in/buy-out option for managed close-down may be the best solution to the problem of the DPCR4 rolling incentive.

- 129 The original intent of the rolling incentive mechanism was to reward DNOs for investing in losses-reducing equipment (or actions), with the consequential performance benefit being carried forward for five years. We do not believe it is acceptable that a DNO's reporting method should determine its exposure under the rolling incentive. Even if in the long run a DNO will have to recognise the losses implied by settlement system data, some DNOs' measurement methods enable the DNO to influence the level of losses in any particular year. This could enable it to gain substantially from the rolling incentive mechanism in year five. This seems to suggest that the best means to address the issue is to find an appropriate way to disapply the mechanism on the grounds that the assumptions on which it was based have not held up. This suggests that the best way forward is a buy-in/buy-out process where DNOs would be required to buy-in or buy-out of the rolling incentive now, before the sign and scale of potential rewards or penalties are known. It may be appropriate to attach conditions to the buy-in and to the buy-out.
- 130 We understand that some DNOs may consider that they have a strong case to retain the benefits of the DPCR4 rolling incentive mechanism, since this was the subject of an expressed intent given in the DPCR4 *Final proposals*. A possible solution is an buy-in/buy-out process where;
 - for those that buy-out now, the rolling incentive would be disapplied or dampened. An buy-out must not confer a benefit on any DNO that uses a provision approach to losses measurement.

- for those DNOs that buy-in now, the rolling incentive would apply but rewards above a given level would be contingent upon a demonstration that the DNO had improved its network commensurate with the rewards.
- 131 We intend to bring forward a more considered proposal to Ofgem in the near future. For the moment we wish to record that this is a significant issue for all stakeholders.

CHAPTER SIX – ONGOING EFFICIENCIES AND INPUT PRICES

Question 1: Have we identified the most relevant unit cost and productivity measures from other sectors to help inform our ongoing efficiency assumption for DPCR5?

Ofgem has identified the most relevant unit cost and productivity measures...

132 We agree that there is a link between unit costs, productivity and input prices, as set out in qualitative terms in paragraph 6.7 of the *Methodology paper*, which can be expressed more formally as.

Unit labour cost = $P_{LABOUR} - RPI - PROD_{LABOUR}$

133 Where P_{LABOUR} is wage inflation faced by the DNOs, $PROD_{LABOUR}$ is expected labour productivity and RPI is retail prices inflation. More generally, this relationship also holds for unit costs that cover a wider set of factors of production than just labour.

... but future cost trends cannot be inferred from an analysis.

134 In this sense, therefore, Ofgem has identified the appropriate components of the efficiency target, although, as we discuss in our responses to the questions below, we question how the historical analysis that has been undertaken can be applied with any great weight in determining future efficiency trends.

Productivity gains in the DPCR5 period should not be assumed in setting allowances.

135 Chapter six of the *Methodology paper* opens with the categorical statement:

'The allowances that Ofgem will set as part of DPCR5 for network operating costs, business support and other indirect activities will include assumptions for productivity/efficiency improvements and for changes in input prices. The assumption for the trend in industry-wide productivity/ efficiency improvements will reflect both expected catch-up by the relatively high-cost DNOs and ongoing efficiency improvements that would be expected to be made by the industry as a whole'

- 136 In our view this starting assumption is flawed. Productivity improvements should be expected in the DPCR5 period but these should not be anticipated in the allowances that are set.
- 137 After nearly twenty years of incentive regulation it is no longer reasonable to anticipate cost efficiencies unless they are obvious. An example would be our own faults costs, where we have projected reductions of 27% from the 2007/08 level. In the absence of clear and unambiguous evidence of potential efficiencies, Ofgem should allow the incentive arrangements to do their work; these are designed to benefit future customers. Notwithstanding the allowances set, DNOs will strive to outperform both the productivity gains in the wider economy and those achieved by other DNOs.

Future productivity gains offset the cost risk borne by DNOs in the forthcoming period.

- 138 Another reason why Ofgem should not anticipate as yet unidentified efficiencies is that no provision is made for cost shocks in the setting of allowances. Anticipating the upside, but not the downside, without any compensating adjustment unbalances the overall settlement. Moreover, it is clear that such shocks do occur. Shocks that we have experienced over the DPCR4 period include:
 - floods £6m;
 - severe weather and escalated incidents £3m;
 - industrial action £8m;
 - copper theft and associated enhanced site security £3m; and
 - clarification of cost reporting rules RAV loss of £5m per annum.

These shocks are in addition to the very significant input price changes in relation to raw materials and exchange rates.

139 A well managed company will seek to trade off unidentified efficiencies against cost shocks. DNOs would face an asymmetrical risk if future efficiency is anticipated in *ex ante* allowances but provision for future cost shocks is excluded.

Question 2: When calculating these measures, which comparator sectors and time periods should we focus on?

The relevant comparator sectors should be selected from those that face a similar input cost environment...

- 140 The link between productivity and input prices is a more fundamental one than a simple identity that derives a unit cost estimate. In competitive markets, real input price inflation should reflect productivity improvements. Moreover, even if the market is competitive, the firms in those markets must buy their inputs from supply markets where the input may be used for a wider set of purposes than as an input to the provision of electricity distribution services in the UK. For example, some labour could be transferable across different sectors; and many materials (such as copper) can be used for a wide variety of purposes. In these situations, input prices can move independently of the productivity of the input that the DNOs (or firms in other sectors) are able to achieve, simply because of demand or supply fluctuations in other sectors or countries.
- 141 Consequently, it is sensible to choose a group of sectors that face a similar environment when sourcing and purchasing their inputs.

... and, to the extent that it is relevant at all, long-run data should be used to assess trends.

142 As far as the time period for the analysis is concerned, from a research perspective, to the extent that historical trends have any relevance to this exercise, it is preferable to use a long run of data to enable evaluation of the trend movements in unit costs. For the purposes of setting future price controls, other factors should have a greater influence on Ofgem's thinking, as we discuss in our response to the next question.

Question 3: What weight should we give to this analysis relative to other information?

The analysis undertaken by CEPA and First Economics provides useful background...

- 143 The analysis undertaken by CEPA and First Economics is useful background research for Ofgem. However, there are two reasons why the results should be treated with a high degree of caution in setting future efficiency targets.
- 144 First, the analysis estimates the long-run trends over a 35-year period. Even if the trends will repeat in future, there is no guarantee they will repeat over the next five years. These trends are likely to cycle in response to industry-specific and macro-economic factors, which suggests a greater emphasis needs to be placed on

understanding the present pressures on input prices and productivity. CEPA has wisely indicated in its report that 'forecasts based on long-term trends are not reliable' for the purpose of setting future input price assumptions. The same is also true for forecasting productivity assumptions and, since both feed into the calculation of real unit cost targets, these targets cannot be set exclusively on this basis.

145 Second, the results are sensitive to the specific choice of comparator sectors. For example, focusing on labour productivity, it appears that real unit costs have risen over time for the five sectors used at the GDPCR; whilst an unweighted average that includes the two additional sectors that Ofgem suggests may also be relevant implies that the real unit costs have fallen over time; whilst the trend values of productivity in the sectors used by First Economics seem to imply that real unit costs have risen over time in those sectors. The spread on these averages does not appear to be large – between +0.5% and -0.3% on an unweighted basis, which tends to support the proposition that in those sectors productivity gains have tended to be paid for in higher input prices. However, given that such a spread exists, it is important to give further thought to how the target should reasonably be set.

...but other factors need to be given due weight.

146 We would argue that Ofgem needs to go beyond the historical analysis and, in our view, this requires addressing the following questions.

Future productivity gains will have to be paid for in higher input prices...

147 First, for those inputs over which the DNOs do have control, the opportunities for catch-up have been diminished in the case of almost all DNOs, and it is likely that future productivity gains will have to be paid for in higher input prices. This is not to deny that unit costs could increase by less than in other comparable sectors of the economy, but this needs to be discovered by innovative management, not anticipated by regulators. In this respect it is important to recognise that ongoing efficiencies beyond any measurable efficiency catch-up do not simply materialise out of thin air, but arise as a consequence of managerial innovation, and this can be promoted through a soundly-based incentive regime.

... and the gap between real wages and productivity is widening.

148 Second, in the present deflationary environment, there is likely to be a widening gap between real wages and productivity performance due to the fact that the RPI is falling, and may continue to fall in future, and wages are nominally sticky. The reasons for nominally sticky wages are well explored by CEPA on page 24 of their report.

The scarcity of skilled labour puts wages under upward pressure.

149 Third, there is an ongoing scarcity of skilled labour in the DNOs, which implies that wages will come under upward pressure. The relevant counter is that, if higher input prices were not paid for these scarce resources, productivity would definitely be lower in the longer term, and could potentially compromise delivery of outputs.

DPCR5 efficiency targets cannot assume real unit-cost reductions.

150 In our view these arguments point firmly towards rejecting ongoing efficiency targets based on an expectation of real unit-cost reductions over the course of the price control. The risks clearly lie with real unit costs rising as a consequence of the DNOs having already eliminated inefficiency from the pre-privatisation era, the impact of falling RPI and the scarcity of specialist labour. That the historical data analysis also lends support to unit costs rising in real terms provides further justification for such a conclusion.

The presentation of forecast real price effects in the Methodology paper may be misleading.

- 151 The *Methodology paper* makes references to studies published by consultants and to variances between DNOs in their assessment of the real price effects (RPEs) to which they may become subject in the DPCR5 period. This subject merits further consideration as some (but not all) of the differences may result from differing approaches to the guidance and the FBPQ pro forma issued by Ofgem.
- 152 In summary, the differences in the projected RPEs set out in DNOs' FBPQs may really be about a difference between a DNO's view and Ofgem's view of the future path of the Retail Prices Index (RPI) rather than a difference of view about what Ofgem terms RPE. Since Ofgem prescribed a forecast of RPI of 2.5% for the completion of the relevant table, a DNO that had a given view of its future costs but a different view of RPI faced a dilemma as to whether to present the difference between its own view of its outturn costs and *Ofgem's* view of RPI as the RPE, or whether to present the difference between its own view of outturn costs and *its own* view of RPI as the RPE. A company that followed Ofgem's guidance on RPI, but adhered to its own view of outturn costs, would project apparently high RPEs. Thus, Ofgem's presentation of the variation in the forecasts in the *Methodology paper* is unhelpful.
- 153 We did our best to follow Ofgem's guidance but we contend that there is not a fixed relationship between inflation as measured by the RPI and the inflation to which a DNO is subject that can be characterised as simply as 'RPI plus (or minus) a given number of basis points'. The relationship between our input-cost inflation and RPI will vary over time, particularly when RPI is volatile.

A DNO's input costs will not track the RPI.

- 154 Our input costs will not match RPI, especially in a period of deflation (on the RPI measure). Care needs to be taken to ensure that RPE in the DPCR4 period should not be transferred into a DPCR5 risk. In completing the February FBPQ, we utilised the First Economics report, which provided estimates of DNO input price inflation for the DPCR5 period. We utilised these as the overall DNO inflation number and subtracted the Ofgem forecast RPI. Since the Ofgem RPI forecast was different from First Economics' RPI forecast, this approach leads to different views of RPEs being presented.
- 155 Recognition is also required in the near-term deflationary period that our internal labour pay deals and external contracts are complete and we can calculate these RPEs with more certainty from a base assumed RPI. At a price control review it is important to be clear who holds a particular risk. The DNOs took the cost risk in DPCR4 and CE is prepared to take the cost risk in DPCR5, which arises from RPEs resulting from inflation in the DPCR4 period, provided that the risk is recognised in the package. Equally, we are prepared to work on a materials index in an attempt to hedge the future input price uncertainty. However, the introduction of a trigger and indexation mechanisms cannot be assumed to reduce risk irrespective of their design characteristics. Some triggers and indexation mechanisms could increase risk since:
 - the choice of index is not straightforward and may be a poor proxy for tracking a DNO's costs; and
 - the potential compensating upside windfall opportunity is removed.
- 156 We appreciate that Ofgem recognises that our input prices will not track the basket of prices that makes up the RPI and we intend to develop proposals for handling this in the setting of DPCR5 allowances and/or the choice of the revenue driver.

Question 4: What method should we use for setting our input price assumptions for DPCR5?

If the input price assumptions are reasonable, DNOs can be left to bear most of the uncertainties of the DPCR5 period.

157 The analysis undertaken by CEPA suggests significant uncertainty in future input price trends, for both labour and non-labour inputs. Consequently, it is difficult for us to suggest the method that should be used for setting input prices for the period of the price control in isolation from the choice of mechanism for dealing with this uncertainty.

- 158 However, as a general point, the more comprehensive the mechanism, such that unanticipated increases in prices are passed through, the more Ofgem can afford to use its mean expected values for input prices as the starting point for the review. On the other hand, if there are no mechanisms to insure DNOs from unexpected input price changes, then higher allowances will need to be made to enable DNOs effectively to manage uncertainty.
- 159 CE's view is that DNOs should be capable of handling the more uncertain and risky environment that will prevail over the duration of the price control period without the need for additional regulatory insurance mechanisms, provided that the input price assumptions and/or other elements of the allowable revenue building blocks recognise this extra risk bearing. The reason is straightforward: as a commercial entity we can more efficiently manage the risk of unanticipated price movements than a regulatory mechanism would be able to. This is because as CEPA recognise in their report there is some element of controllability of costs or activities at the margin that can accommodate or offset input price movements up to some particular level, through the reoptimisation of business plans. Furthermore, the danger of introducing new insurance arrangements into the price control is that they can encourage gaming and inefficiency.
- 160 However, we do recognise that uncertainty has increased, relative to previous price controls, and that the quantum of activities that need to be undertaken against the backdrop of increased input price uncertainty has also increased (i.e. rising investment needs). To the extent that Ofgem is minded to introduce insurance mechanisms in the price control, we would argue that these should go no further than addressing the increased level of risk that now exists, rather than attempting to de-risk the industry from factors and events it has always been exposed to, since this would fundamentally undermine the incentive character of the regulatory regime that has applied since DPCR1.
- 161 To this end, we would recommend the following treatment of input costs.

The labour component of input costs should not be subject to any insurance mechanism...

162 In line with Ofgem's current thinking, the labour component of costs should not be subject to a regulatory insurance mechanism. However, the expectation of those costs should be set on the basis that the risks clearly point to real unit labour costs rising throughout DPRC5, for the reasons given in our answer to question 3 above.

... but changes in materials input prices may need a trigger mechanism.

163 As far as materials prices are concerned, in line with Ofgem's thinking at paragraph 10.30 of the *Methodology paper*, we would support the indexation of tariffs by the RPI (as at present), but, if an index of relevant materials input prices rose beyond a certain

threshold, then tariffs would be indexed by a weighted average of the RPI and the input price index. For the purposes of setting the baseline levels of the input prices, we would recommend using the prevailing forward prices for those components of the index, where these are available, supplemented by specialist forecasts of the period of the price control where no reliable forward prices exist.

164 For uncertain costs of significant materiality we favour a reopener condition along the same lines as the present condition.

CHAPTER SEVEN – CUSTOMERS

Question 1: Do you agree with the proposed mechanism (in full) for worst served customers?

Question 3: Do you think that we should set a cap on the cost per benefiting customers within the worst served customers mechanism and if so what level should this be set at?

The mechanism proposed by Ofgem is unlikely to improve the service provided to worstserved customers.

- 165 We agree that the current IIS mechanism does not adequately protect worst-served customers and DNOs should be encouraged to improve the areas where the worst performance is occurring. However, we are concerned that the mechanism proposed by Ofgem is unlikely to result in any investments to improve the position of the affected customers. The key problem with the mechanism is that, for DNOs to be sure of recompense for the costs of the improvements, there has to have been an actual improvement of at least 25% in the performance of the area concerned. Whereas DNOs can design a system that will deliver the required improvement in underlying performance, actual reported performance is subject to a huge range of random factors. In effect, for DNOs, it would be a lottery as to whether they received recompense in a reasonable timeframe or not.
- 166 To avoid this problem we would propose that, where actual performance has not moved by the required amount, a DNO should have the opportunity to demonstrate that the work it has done would be expected to deliver the required level of improvements in the longer term. Provided DNOs can demonstrate this, expenditure should still be allowed.

No cap on expenditure per benefiting customer should be set during the DPCR5 period.

167 As this mechanism is at an early stage of development, it is difficult to determine the level of a possible cap on expenditure per benefiting customer. The evidence that is available suggests that only small numbers of customers are at the extreme end of the performance range and hence costs per benefiting customer are likely to be very high.

For instance, all CE's potential schemes evaluated for the FBPQ fell well outside the then suggested cap of £1,000 per benefiting customer. There is also the issue that a higher cap might be applicable at the very worst end of the performance spectrum compared with areas that only just creep into the more broadly defined worst-served band. We suggest that, given the relatively small allowances that Ofgem is proposing, no cap should be set for the DPCR5 period but that data should be collected during this period on the type and cost of schemes being implemented, to inform the position for DPCR6.

Question 2: Do you agree with the proposed approach (in full) for setting unplanned targets for customer interruptions and customer minutes lost?

Some aspects of the approach for setting targets for CI and CML need changing.

- 168 In summary, whilst we believe that some aspects of the approach proposed are sound, we do not support the proposed approach in its entirety. In particular, we are pleased to see that IIS now appears to be moving towards a purer incentive scheme with:
 - Customer interruptions (CI) targets that are set relative to a DNO's own current performance;
 - incentive rates that are based on a long-term view of customers' willingness to pay for improvements; and
 - no capex or opex allowances the incentive rates alone are intended to drive any improvement.
- 169 However, there are still shortcomings with the proposal in the *Methodology paper*, namely that:
 - the restoration speed component of the customer minutes lost (CML) targets is still set on an inappropriate benchmarked basis. In particular there is no recognition of the costs of gap closure;
 - no consideration has been given to the relationship between the IIS and the other related incentives proposed for the DPCR5 package. In particular, there is no proposed longer-term methodology that would match IIS with the opex and capex rolling incentive mechanisms; and
 - further work is needed to determine the appropriate view of current performance.

The benchmarking for HV is inappropriate.

- 170 One of our major concerns is the appropriateness of the benchmarking system Ofgem has proposed for the HV component of performance. HV typically accounts for 70% of annual IIS CI performance and is consequently the most important factor to get right. In particular, we have pointed out the shortcomings of the present length correction and the fact that many of the topological differences in circuits, which have a major effect on performance, are not taken into account. Furthermore, no recognition is given to the different level of investments (both opex and capex) that have been historically made by different DNOs. Ofgem is proposing some small changes to the benchmarking system but it is not addressing these fundamental major factors. The consequence of this is that the present benchmarking system does not provide any strong evidence to help in determining the level of CI performance that an efficient DNO could deliver in a cost-effective manner with the HV network that it has at its disposal. In the face of the evidence we have provided we cannot see how Ofgem can describe its proposed benchmarking methodology as sound and robust.
- 171 That said, what really matters is how the benchmarks are used for target setting. We are pleased to note that Ofgem is now proposing a hybrid approach that takes into account not only the benchmarks but also current performance and the ability of DNOs to close the gap with this benchmark.
- 172 In this respect the proposed approach to CI target setting appears to us to have the potential to form the basis of an acceptable settlement based on the following principles:
 - for DNOs whose current CI performance (or base-case forecast) is already better than the 2014/15 benchmark flat targets should be set at the lower of current performance or base-case forecast;
 - for DNOs whose current CI performance (or base-case forecast) is within 0.5% per annum of the 2014/15 benchmark the targets should be set at the 2014/15 benchmark with evenly-spaced intervening targets; and
 - for DNOs outside the above the targets should be set at the level of current CI performance with a 0.5% per annum improvement factor.

The draft CI targets in the Methodology paper are unacceptable.

173 However, although we consider the principles to be acceptable the draft targets published in the *Methodology paper* would not be acceptable as we have material concerns over how 'current performance' has been calculated. Ofgem has indicated an intention to apply different averaging periods dependent upon trends in levels of reported performance. This places some DNOs, including ourselves, in a double-

jeopardy position. If a DNO is reporting levels of performance that appear worse than the levels reported in DPCR3 (and therefore used to benchmark targets for DPCR4), then a longer period is proposed for assessing current performance.

- 174 It is crucial to recognise that a DNO whose reported performance in DPCR3 included even relatively short runs of exceptionally good (and hence unsustainable in the medium to long term) performance will have been set a target in DPCR4 that was unsustainable and will have suffered financially as a result. We should remember that the DPCR4 targets were set in the main by reference to a very small data sample, effectively two years of reported performance (2002/03 and 2003/04), making it all the more likely that this effect has indeed featured for at least some DNOs during the DPCR4 period. We should also bear in mind that much work has been done on definitional issues and reporting quality of the IIS scheme in general and this has the potential to compound the situation.
- 175 In addition to being penalised in this way, those DNOs adversely impacted will have reported performance during DPCR4 that will by definition have moved adversely, relative to the unsustainable targets set for them. To suggest that under these circumstances we should include the very period that placed the DNO in jeopardy in DPCR4 in the target setting for DPCR5 is to penalise that DNO twice for what was an unsustainable target in the first place. This is wholly inappropriate.

The draft CML targets are also flawed.

- 176 In addition we have material concerns over the proposed method for setting CML targets. Clearly, as CML is the product of CI and restoration speed, some of our concerns are common to those we have already expressed. However, in addition to those we have a material concern about the way in which restoration speed is being benchmarked for setting CML targets.
- 177 HV performance is also the dominant factor for most DNOs' CML performance and is therefore crucial in determining benchmarks and realistic targets. The current HV restoration speed benchmarks are based on upper-quartile performance in each of 22 sub-groups of HV circuits. This process suffers from two direct problems. Firstly, there is a clear risk of a 'best-of-the-best' result from using such an exacting benchmark in each of many sub-groups. Secondly, performance is an aggregate of what are essentially random events. The smaller the sample size - which inevitably results from taking smaller and smaller sub-groups - the bigger the risk of random factors significantly distorting the results.
- 178 The draft CML targets published in the *Methodology paper* reflect the above position and meeting these would require a huge range of restoration speed changes from the

DNOs over the DPCR5 period. These range from a targeted 3% deterioration in restoration speed for one DNO to a massive 27% improvement by another.

- 179 Using such a benchmark directly to set targets, without consideration of gap closure, is incompatible with the way Ofgem is now driving IIS. In fact, to be consistent with a 'no catch-up allowances' scenario for IIS, any set targets for restoration speed should be broadly at current performance except where demonstrable inefficiency is evident.
- 180 The evidence from DPCR4 so far is that all DNOs have been trying to improve HV restoration speed and most have been successful. Despite this, an analysis of available DPCR4 data still shows that the HV restoration speeds of all DNOs fall into three distinct groups, namely a 'high-speed' group consisting of two DNOs, a 'slow' group consisting of a further two, and a third middle group consisting of all the other DNOs occupying a narrow spread of restoration-speed performance.
- 181 The leading group has already been handsomely rewarded for its high-speed restoration in both DPCR3 and DPCR4. Despite this example, the middle group of 10 DNOs have not been able significantly to close the gap with the leaders over the DPCR4 period. This suggests that other fundamental network and operational factors not covered by the benchmarking are responsible for the differences in performance. We would conclude that it is inconceivable that all of these middle-band DNOs are inefficient and we would contend that this group actually represents the efficient norm for restoration performance. The restoration speed element of their targets should therefore be based on their own current performance, with demonstrably cost-effective improvement plans taken into account.
- 182 In CE, the main factors in our HV restoration speed improvement have been more distributed remote control (mainly capex) and sending additional staff to faults (opex). We are now at a position where we have already utilised the most cost-effective locations for remote control and we already utilise all available operational staff on a 24/7 basis for restoration switching. This position is reflected in our FBPQ submission (table NL5 in the February submission), which reflects our view that we do not believe there are any more cost-effective options (relative to the DPCR4 levels of incentive rates) available to improve restoration speed.
- 183 Overall, we believe that we are already close to the most cost-effective level for restoration speed that is applicable to CE's distribution services areas. We remain convinced that, unless there is clear evidence of inefficiency, in a zero-allowance scenario, restoration-speed targets, and hence CML targets, should be set relative to current performance, taking account of planned improvements in the next period.

- 184 In conclusion, whilst we believe that the broad principles have been established for a reasonable IIS and associated targets for DPCR5, we are concerned about how some of those principles have been applied to propose targets. We believe strongly that Ofgem should also include a bottom-up assessment of DNOs' plans for the DPCR5 period. We have demonstrated that, at the underlying level, we have implemented the investments planned during the DPCR4 period and that those investments have demonstrably delivered the anticipated benefits to customers. We are prepared to substantiate our plan for network performance improvement in DPCR5. We believe that we have planned for all reasonable and cost-effective improvements in fault rates, customers per fault and restoration times in the forthcoming period and that our assessment of what this can reasonably be expected to deliver at the headline level should be taken into account in setting targets for DPCR5.
- 185 We still remain concerned over the potential adverse effects that the resilience treecutting work we shall be undertaking in DPCR5 will have on IIS performance. Though this work will reduce the impact of major storms on the distribution network, it is likely that the IIS effects of some storms that would otherwise have been fully exempt will move to fully counting with the mechanism. We still believe that the sliding-scale type of exemption we have previously proposed would solve this.

CHAPTER EIGHT – NETWORK OUTPUT MEASURES

Question 1: Is Ofgem's proposed methodology for general reinforcement and asset replacement outputs appropriate?

Overall we agree with Ofgem's approach to general reinforcement and asset replacement outputs.

- 186 Overall, we are supportive of the proposed methodology for general reinforcement and asset replacement outputs. We believe that the methodology should allow for the continued development of outputs over the DPCR5 period and we are encouraged that Ofgem recognises the use of company-specific outputs above a common prescription.
- 187 For general reinforcement, we believe that the load index being proposed should not use a mixture of actual and forecast data in order to provide a view of current network health. The load index should be capable of using current measured data only to establish the current position, and separately it should be capable of using a DNO's load forecast data to establish future positions during the DPCR5 period. We agree with the reporting of future positions, showing those with and without investment. The existing information reported through RRP and FBPQ would satisfy the requirements of this load index.

188 We intend to supplement the common reporting of the load index with the reporting of our Composite Risk Index (CRI) for general reinforcement, as this is a measure that we use in our planning process.

For asset replacement we support the use of health indices...

- 189 For asset replacement, we support the use of asset health indices and believe that methodology should not stifle the development of these indices during DPCR5. The process for annual reporting during the DPCR5 period will need to allow DNOs to modify the health indices on an auditable basis via documented descriptions of the index mechanics. The drivers on modifications will be:
 - development of new indices themselves for example a shift from residual lifebased to condition-based;
 - incorporation of new condition data from DNOs' operational processes;
 - development of innovative condition assessment techniques; and
 - increasing knowledge on degradation mechanisms, with the associated impact on the mechanics used within the indices.

... but we advise caution with respect to fault rates.

190 We would advise caution in the application of fault rates in support of health indices for asset replacement. Clearly fault rates are an important piece of information, but we believe their interpretation (rather than their calculation) to be subject to significant subjectivity when it comes to distinguishing between short-term statistical fluctuations and genuine, meaningful shifts in asset reliability. Ofgem has indicated that it recognises the volatility inherent in the use of fault rates and we will not support any proposal whereby our allowed revenues are reduced as a result of fluctuations in fault rates. The existing medium-term performance (MTP) reporting provides a good framework for assessing fault rates and we do not believe any further development to be necessary.

The common methodology should include a strategic-level measurement of the overall health of the network.

191 We believe it would be wise, in addition to the proposed common methodology, to provide some more strategic-level measurement that would consider the overall state of the asset base rather than just the health of individual assets and asset classes. Therefore, we shall be providing our service life extension (SLE) metric used in our planning process. The SLE models the extent to which a 'vanilla' nominal service life replacement policy is outperformed by the combination of our various asset management policies. It is designed to show the effects of our expenditure plans

assuming that we continue to perform at our current level and that we achieve the assumed synergies. We believe that the SLE measures provide a good view of the medium- to long-term risk being managed via asset replacement by making an assessment of the magnitude of financial risk associated with outperformance.

Question 2: Is Ofgem's proposed approach for other areas of investment appropriate?

192 We support the Ofgem proposal for no formal output measures and believe that these investment areas can be adequately assessed using the Tier 3 outputs as described in the *Methodology paper*. The level of discretion a DNO has in these areas is limited compared with the core investment areas and sufficient protection can be provided for customers via the monitoring of input measures. Additionally we would argue that the cost of deriving more complex output measures for these areas is disproportionate to the value obtained.

Question 3: What approach should be taken if a DNO fails to deliver the agreed outputs i.e. how could the incentives be adjusted?

Outputs should be treated as a set of indicators rather than as mechanistic revenue drivers.

- 193 In our view it is neither appropriate nor necessary to devise mechanistic revenue drivers for each output with the exception of the quality of service measures for CI and CML. The output measures themselves will enable Ofgem to confirm the effectiveness of the implemented investment provided that potential changes in the output measure mechanics and valid reasons for variances in performance such as new risks over the period are adequately captured. In this manner the most appropriate use of outputs is as a set of indicators to establish whether or not the DNO has delivered on the broad range of operational commitments on which the allowances were predicated. We believe that an updated IQI mechanism is the appropriate route for incentivising delivery and that outputs should be used as part of the assessment within that context.
- 194 A DNO that had materially failed to meet its outputs should forfeit its right to automatic retention of the out-performance rewards specified in the IQI mechanism. A DNO that had over-spent relative to the capex assumption but still failed to deliver its outputs should be the subject of further investigation and a judgement reached about whether any penalty should be applied in the next period. It will already have suffered some penalty under the IQI mechanism, but analysis will be necessary to ascertain whether this penalty is commensurate with the under-performance with respect to its outputs.

Question 4: Do you consider that the output measures proposed provide sufficient protection in their own right or is it appropriate to have some form of additional safety net in the DPCR5 settlement for example through monitoring investment volumes?

Output measures should be sufficient protection, but a wider range of information will provide a more complete view that would inform any ex post assessment of a DNO's performance.

- 195 We consider that output measures do provide sufficient protection in their own right but that Ofgem should continue to use a wide range of information to provide a better view of a DNO's performance. The multi-stage process adopted by Ofgem during this review holds many merits and a similar approach should be taken in assessing DNOs' performance during the DPCR5 period. The factors to be considered in an *ex post* review would be:
 - variance explanations from DNOs with regard to delivery performance against DPCR5 forecasts, with some consideration of the quality of DNOs' forecasts at DPCR5;
 - performance in accordance with additional output measures that may be specific to individual DNOs. For example there may be output measures linked to a particular investment that would provide the context of any variances in core output measures;
 - quality of RRP submissions during DPCR5; and
 - quality and clarity of DNOs' investment planning and asset management processes, with specific reference to quality of scheme papers.

The volume of units of investment delivered should not be part of any additional protection mechanism.

196 We would, however, caution against using volume delivery as part of a formal protection mechanism. Since DNOs will adjust volumes between categories for legitimate reasons, the holding of DNOs to those volumes would lead to inefficiency in decision making.

Question 5: Should there be an obligation on DNOs to further develop output measures during DPCR5?

197 DNOs have responded to the challenge to develop appropriate output measures during the price control review process and Ofgem has recognised this substantial progress in developing adequate output measures in the *Methodology paper*. The output measures replicate our own existing internal measures that have been developed independently from any Ofgem requirement. Since these stemmed from our desire to improve the management of our assets, we see no reason for Ofgem to introduce the potential complexity of formally prescribed obligations to develop further output measures during the DPCR5 period.

Question 6: We seek views from stakeholders on the role that outputs should play in DPCR5 and particularly how they can best be implemented and used.

198 We believe that Ofgem should obtain views from appropriate stakeholders on the adequacy of Tier 3-type measures (i.e. input measures) for compliance-driven investment activity.

CHAPTER NINE – COST INCENTIVES

Question 1: Do you agree with our proposed approach to equalising incentives?

Efficiency incentives for capital and operating costs should be equalised...

199 We agree with Ofgem's proposed approach to equalising incentives. Different incentives for competing costs have the potential to distort investment decisions. Specifically, we favour the second of the options outlined in Ofgem's December consultation, namely to treat all direct costs, engineering indirect costs, network investment support costs and any constraint payments (e.g. demand-side management (DSM) or payments to DG) in the same way. We agree that a fixed proportion of all such costs should be allocated to the RAV, with business support costs being fully expensed. We agree with Ofgem that such a treatment captures the key economic trade-offs and has the potential to significantly reduce boundary issues, provided competing costs are assessed together using the most appropriate mechanism for such costs.

Question 2: Have we identified the most appropriate costs to be within the equalised incentive and the IQI?

... with most costs falling within the IQI mechanism.

200 We agree that the following costs should fall within the IQI mechanism:

• load-related investment (including shared-asset connections expenditure);

- asset replacement investment;
- flooding expenditure;
- quality of service expenditure;
- network operating costs;
- indirects driven by both network investment and network operating costs;
- network investment-driven indirects;
- non-relevant DG expenditure;
- sub-station electricity;
- island generation;
- wayleaves; and
- underwater cables.
- 201 We also agree that the following costs should fall outside the IQI mechanism but be subject to equalised incentives:
 - HILP investment;
 - BT 21st century expenditure;
 - discretionary investment; and
 - Traffic Management Act (TMA) costs.

Some cost categories should fall outside the IQI and receive a different incentive rate.

- 202 We agree that the following costs should fall outside the IQI and should not be subject to equalised incentives:
 - relevant DG expenditure;
 - business support costs;
 - sole-use connections expenditure; and
 - pensions.

Question 3: How should we set the 'RAV additions percentage' that will determine the split between 'slow' and 'fast' money?

The overall 'speed of money' at DPCR5 should be the same as at DPCR4.

- 203 Our views on the speed of money have been set out in detail in a paper that we prepared with Frontier Economics entitled 'Cost boundaries and the speed of cost recovery'. In summary we support the proposal to maintain the same proportions of slow and fast money as in the DPCR4 period (excluding pensions costs). Such a treatment provides:
 - the price signals that customers should be exposed to in order to encourage efficient location and consumption decisions;
 - the impact of the speed of cost recovery on the commitment regulators are able to provide to enable businesses to recover efficiently incurred costs;
 - the impact of the speed of cost recovery on regulatory discipline and accountability; and
 - the impact of the speed of cost recovery on the financeability of the businesses.

The timing of the recovery of pension costs merits special treatment.

204 We believe the funding of pension costs should be considered separately due to the significance of deficit repair costs and their impact on cash flows. We have submitted a separate paper on this issue and will make further representations before Ofgem's promised pensions consultation appears in July.

The proposals for IQI are inadequate to reward and incentivise good behaviour.

- 205 We continue to support the development and application of the IQI to as wide a range of costs as possible. We have some concerns over Ofgem's current proposals, including:
 - calibration to GDPCR payback rather than DPCR4 payback is inappropriate, and fails to recognise the good work done by Ofgem and electricity distributors in establishing a much firmer benchmark for cost assessment than was the case in gas distribution; and
 - both GDPCR and DPCR4 matrices fail adequately to differentiate between:
 - i. those companies with robust plans and/or prepared to take on higher risk; and
 - ii. those whose plans are less well founded and/or seek insurance.

206 The GDPCR Initial Proposals (paragraph 6.11, page 67) stated

'Unlike the matrix used in DPCR4 we are not proposing to give GDNs a 5% uplift to their allowances for agreeing with the consultants' forecast. This is because in DPCR4 the consultant's forecasts were based on a base case scenario rather than the companies' view of their requirements. The ratio is therefore a ratio of the GDNs forecast to our forecast rather than to our consultant's forecast due to the adjustments we have made. We have retained the same incentive rates as DPCR4. We have also used the same additional income as DPCR4, although in that case it was presented as an additional return on RAV.'

- 207 As the DPCR5 process for cost assessment is, if anything, tougher than at DPCR4, then by Ofgem's own logic the starting point for the IQI matrix should be set at DPCR4, not GDPCR, levels.
- 208 Our key concern over the evolution of the IQI is that the DPCR4 and GDPCR models make cheap insurance against overspend readily available and provide a limited upside to those willing to bear cost risk by actively seeking out and submitting challenging forecasts. The *Methodology paper* claims partly to have addressed the issue of risk aversion, but only by providing further insurance against certain external cost risks. This does not stop distributors increasing their insurance by also still submitting riskaverse forecasts, because the paper makes no proposals to encourage distributors to submit lean projections.

The IQI matrix should be modified to reward more challenging forecasts.

- 209 We have previously explained how these shortcomings can be addressed only by increasing the impact of moving between columns on the IQI matrix and how, given the need to retain 'incentive compatibility', this requires either:
 - increasing the rewards for submitting a challenging forecast;
 - decreasing the rewards for submitting an unchallenging, 'high' forecast; or
 - increasing the gaps between columns 'where it matters most' by adopting a bespoke calibration.
- 210 Ofgem has previously shown little appetite for the first two options, so we commissioned Frontier Economics to develop a matrix for the third. This matrix is simple to apply, being only a look-up table We recognise that it departs from the formulaic approach adopted at DPCR4 but it has the merit of Ofgem directly setting the pay offs for challenging forecasts and the rewards for any ongoing efficiency improvements. It would therefore deliver better results for customers.

- 211 We accept that the *precise* incentive rates facing expenditure would not be known until the end of the price control period and in principle this would affect the provisioning of efficiency gains, the calibration of other incentive mechanisms which rely on these rates and potentially the business case for an investment decision. We reject the criticism that this will have a material impact on these decisions as, within the degree of control available, the incentive rate will vary only fractionally (perhaps between 39% and 41% under our preferred bespoke calibration). In particular, if investment decisions stand or fall on such fractional variations in the incentive rates, we suggest their business case is questionable.
- 212 Similarly, we see no practical issues over applying the matrix to each year's costs. The practicalities of delivering large investment programmes give little room to move expenditure between years. Again, the fractional difference in incentive rates will be outweighed by practical matters.
- 213 Should Ofgem continue to recognise these arguments but still wish to develop an alternative to the Frontier Economics matrix, it would need instead to modify the DPCR4 matrix to:
 - increase the rewards for submitting a challenging forecast; and/or
 - decrease the rewards for submitting an unchallenging, 'high' forecast.
- 214 In its December policy paper, Ofgem raised its significant concerns with the DPCR4 IQI arrangements. We believe that this will have had a significant impact on DNOs' forecasts for DPCR5. If Ofgem now fails to act to address the concerns that it raised this would send a very bad signal to the industry.
- 215 Finally, just as the fast/slow money split should create an overall cash flow position similar to the DPCR4 settlement, the retention rate applied to the common incentive should create a similar overall position to the DPCR4 settlement. This requires a rate of around 55% rather than the 40% proposed to be carried over from the capex incentive regime.

Question 1: What balance should we adopt between mechanisms to manage specific risks (such as input price uncertainty) and a more general type of reopener to manage a wider basket of risks?

Use should be made of mechanisms to manage uncertainty...

216 The *Methodology paper* sets out Ofgem's view of the benefits and drawbacks associated with mechanisms that manage specific risks. We agree that there is something to be said for simplicity and that it would be undesirable to introduce an unnecessarily large number of mechanisms to mitigate different risks. We therefore support Ofgem's preference for a limited number of symmetric mechanisms to manage uncertainty of the key risks.

... and effectiveness is more valuable than simplicity.

217 However, we are concerned that Ofgem may attach rather too much importance to simplicity. Complexity that achieves its purpose is preferable to simplicity that does not. Moreover, the *Methodology paper* does not recognise the additional benefits that flow from mechanisms that are automatic and where the resulting adjustments occur within the price control period, compared with mechanisms that require a further regulatory judgement to be made or where another price control review occurs between the event that gave rise to the adjustment and the triggering of the entitlement to the additional income.

Some approaches under consideration would turn a business risk into a regulatory risk.

218 We believe these two distinctions are very important. The principal risk faced by a network business is ultimately regulatory risk. This risk does not arise because regulators act improperly or capriciously but because it is the regulatory process that decides whether, and when, a licensee can recover the costs that it has incurred. Any mechanism whose purpose is to mitigate the business risks that are faced by a DNO but whose operation is contingent on the exercise of further regulatory discretion simply substitutes a regulatory risk for a business risk. Where the recovery of a cost is subject to regulatory discretion, investors will see a risk that the costs may not be allowed when that discretion is exercised. Moreover, even if regulatory discretion is removed from the *assessment* of entitlement (i.e. the entitlement is defined in advance in the price control conditions introduced for the DPCR5 period and is not contingent on any further regulatory assessment or judgement) another regulatory risk is introduced if the period in which the adjustments to allowed income take place is after another price control review (i.e. in the DPCR6 period). Ofgem, perhaps unintentionally,

acknowledges this point in the *Methodology paper* when it states (in the context of logging-up mechanisms):

'Whilst this approach would still lead ultimately to adjustments to allowed revenue, a logging up approach takes place in the context of a new price control when there is typically a step change in allowed revenues in any case...'

- 219 Price control reviews have improved in transparency over the years, but there is still plenty of regulatory discretion that is inherent in the process. It is hard to see how Ofgem could give investors certainty that a logged-up entitlement from the DPCR5 period that would give rise to an additional income entitlement in the DPCR6 period would not be offset by the exercise of an opposite discretion with respect to other areas of cost or risk at DPCR6.
- 220 Throughout chapter ten of the *Methodology paper* there is a theme that suggests that DNOs must carry additional risks during the DPCR5 period but that these risks need not be fully recognised in the cost of capital at DPCR5 because they may be recovered at some future date subject to regulatory discretion. Risks cannot be wished away in this manner.
- 221 The risks will still be present. The DNO would bear the cost and cash flow consequences during the DPCR5 period and the business risk would still be present but would now take the form of regulatory risk at DPCR6. Since regulatory risk is ultimately the principal risk that a DNO bears it is not clear that much would be achieved in the way of real risk mitigation by the approach that Ofgem seems to favour.

Wherever possible an uncertainty mechanism should lead to an adjustment within the DPCR5 period.

222 The most effective way to deal with the risks to which the *Methodology paper* refers is to create strictly defined, but limited, rights at DPCR5 where the entitlement to recover the amounts in question is crystallised, as far as possible, within the DPCR5 period.

Question 2: What risks should be covered by specific mitigation mechanism by a general type of reopener and which should be left to the DNOs to manage?

An appropriate revenue driver will mitigate some risks...

223 Where material risks can be mitigated by using an appropriate external index within the revenue driver, there is no reason why this should not be part of the new DPCR5 price

control. Appropriate signals that variations in charges will occur can be dealt with by a combination of publication and lagged entitlement under the price control formula.

...and the DPCR4 reopener condition is the appropriate model for dealing with material cost uncertainties arising from changes to the requirements placed on DNOs.

224 However, where the uncertainty relates to a possible material change in what a DNO is to be required to deliver, the appropriate model is the reopener condition in the current electricity distribution licence. Risks that are not material, or that a DNO is best placed to manage, should be left for the DNO to manage and should be remunerated by making an *ex ante* assumption about the probable level of cost that should be included in the price control and the DNO should be remunerated in the cost of capital for carrying any risk that the *ex ante* assumption may be insufficient to cover the outturn. The traditional approach of an *ex ante* judgement where the risk is remunerated in the cost of capital has the merit of simplicity and transparency, but it is inherently less likely to track the actual path of costs that a DNO may encounter. The more material the risk, and the less controllable the cost is by the DNO, the more forceful is the argument in favour of a specific treatment, whether in the form of an automatic adjustment or a mid-period regulatory assessment.

Question 3: Are there any additional risk mitigation mechanisms that we should be considering that are not identified in this chapter?

225 We believe that Ofgem has correctly identified all the possible mechanisms that could be used at DPCR5 to mitigate risk.

CHAPTER ELEVEN – TAX METHODOLOGY

Question 1: Is the approach to modelling DNOs' capital allowances on a common basis representative of the industry position and does it ensure that no individual DNO is materially advantaged or disadvantaged by this methodology?

Tax charges should be computed on a company-specific basis.

- 226 In finalising the DPCR settlement, each DNO will be assumed to have a specific capex allowance. In our view it follows that the tax allowances should have due regard to the composition of this underlying capex.
- 227 We, and the other DNOs, have worked closely with Ofgem, in particular making a significant commitment in completing the detailed table F8 in the FBPQ, to assist in enabling a fuller understanding of how each DNO allocates the different categories of

capital expenditure to the separate tax allowance pools. As such Ofgem should gain comfort as to why there are differences between DNOs, which then means that the approach that is based on making a common assumption to be applied to all DNOs should not be used. We refer to this as the 'common' approach.

- 228 Another factor that needs to be considered is that tax allowances are not indexed and therefore timing variances are not NPV-neutral. This situation is exacerbated by Ofgem's stated intention to reset allowances at the start of each review period. Thus the DNO's actual tax allocations will ultimately be used, which will result in customers receiving tax benefits twice that the DNO will itself receive only once. This reinforces the need for tax allowances to be based on a company-specific approach that recognises the real tax charges that the DNO will face. We refer to this as the 'specific' approach.
- 229 The characteristics of each DNO's individual capex programme should drive the regulatory tax allocations, rather than the tax allocations of other DNOs. In CE's view Ofgem needs to change its approach from 'common' to 'specific'.

Question 2: Views are invited on whether the most appropriate option for the tax treatment of reopeners is the case by case approach.

230 In our view, in order to maintain flexibility each reopener should be treated on a caseby-case basis consistent with the approach adopted for DPCR4.

Question 3: Should the DNOs retain the risk and rewards for all amounts below/above the trigger threshold; or for the entire amount rather than the excess over the materiality trigger; and what should be the appropriate timing of adjusting DUoS revenues following both single and multiple trigger events?

DNOs should be able to recover the full amount of any adverse changes in tax law and HMRC guidance.

- 231 The adjusted amount should be the entire amount rather than just the excess above the trigger threshold. Furthermore, we consider that all trigger events should be logged during a regulatory year and a single calculation undertaken. In this way a number of events that may individually fall beneath the threshold are caught and factored into the calculation.
- 232 As regards timing, practically, it seems that the calculation of the adjustment needed to distribution use of system (DUoS) revenues cannot be undertaken until after the end of the regulatory year, say in the first/second quarter of the following regulatory year.

Adjustments to users' charges would then flow through in the subsequent regulatory year.

Question 4: We invite views on the practicality of communicating the likelihood of a trigger being activated and the methodology for it.

- 233 The process required for the communication of the likelihood of a trigger being activated is dependent upon the trigger events that are ultimately included in the mechanism. Triggers such as changes in primary legislation will be widely known as they are normally communicated as part of a Chancellor's Budget.
- 234 In our view changes to case law and HMRC published guidance should also be included in the trigger mechanism.
- 235 All changes in tax from whatever source will be considered as part of the annual tax computation prepared by each DNO and will feature as part of the reconciliations undertaken as part of the annual RRP submission.
- 236 In the main, DNOs will have processes in place to track tax changes either via in-house expertise, discussions with HMRC or liaison with tax advisors/auditors. It will be incumbent upon DNOs to notify Ofgem (with supporting evidence) of any tax changes that will need to be factored into any tax correction mechanism.

OTHER ISSUES COVERED IN THE METHODOLOGY PAPER

- 237 The *Methodology paper* covers a number of issues of some significance to the price control review without setting out specific questions for respondents to address.
- 238 In this section of our response we have set out our views on those issues that we think merit comment but where the subject matter did not lend itself to being incorporated within the answers to the questions posed in the *Methodology paper*. These are set out below.

The treatment of excluded services in the Methodology paper should be developed to recognise different solutions for different services.

- 239 Appendix 17 of the *Methodology paper* deals with the treatment of excluded services at DPCR5, suggesting the following four options:
 - retention of the current DPCR4 approach of using forecast revenues as a proxy for cost levels with a true-up each year;

- use of an all-DNO averaging approach to forecasting revenues;
- a partial true-up each year to provide some incentive for DNOs to carry out additional activity. This should mean that benefits would be shared between DNOs and customers; and
- a form of 'cost plus' price control for excluded services such that allowed revenues would be ascertained from costs properly incurred, plus an allowed return on the resources expended.
- 240 In our view each of the services currently treated as an excluded service needs to be looked at separately to determine how it should be treated at DPCR5. Some services are currently treated as excluded from the price control because the revenue driver in the original price controls imposed at privatisation was defined wholly in terms of units distributed. Since privatisation the revenue driver has changed and it is proposed that at DPCR5 the 'units distributed' component of the revenue driver is to be removed altogether. This may have implications for the classification of some excluded services.
- 241 In particular, Ofgem is concerned about reactive power charges. Quite why it was felt to be appropriate to exclude the revenue from such charges from the price control is not clear to us. Whatever reasons prevailed in 1990, the situation is very different today. Apart from the removal of the unit-related component of the price control formula, account needs to be taken of the changes that will result from the structure of charges project. Ofgem has stated that it expects reactive power to be a feature of the approved charging methodology. From 1 April 2010, therefore, it can be assumed that all DNOs will charge for reactive power. There appears to be no compelling reason why the revenue that results from such charges should be excluded from the price control formula whereas the revenue that a DNO receives from the distribution of units or from capacity charges is included. We would therefore recommend that, once the principal revenue driver has been determined, the question that should be asked is whether there is anything special about the revenue or the costs associated with a particular activity that means that it should be excluded from the price control. If the activity in question has some unique properties that mean that it would be inappropriate to remunerate it through the principal control, a number of other questions follow, such as:
 - should the activity be regulated at all?
 - would it be more appropriate for the activity to be carried out by another entity (i.e. other than the licensee)?
- 242 If it is concluded that the activity should be regulated and that the licensee may be permitted to provide the service from within its distribution business, the form of

regulation that should be applied is likely to differ across the various activities. For example, some of the current excluded services may be best treated by new regulatory treatment of that activity; Ofgem has suggested this for the shared-use assets associated with new connections whilst the sole-use assets may be permitted to earn a margin where the work is contestable. Other activities may be left for separate negotiation between the parties, with a power to request a determination from Ofgem if agreement cannot be reached.

243 Ofgem has raised concerns about the forecasting and true-up aspects of the current treatment of excluded services. Connection charges account for about 75% of the value of the excluded services listed in special condition A2 of the electricity distribution licence. The next largest category is non-trading rechargeables – which represents about 18% of the total. The rest of the excluded services for the fourteen DNOs totalled only £67m in 2007/08. One third of this was income from reactive power charges, which we argue above should not be excluded at all. Ofgem may consider that what is left is not particularly material. If so, it probably does not matter much which of the four treatments outlined by Ofgem is to be applied, although we note that some treatments have greater incentive properties than others. We give more specific comment on each of these below.

Option 1 – retain the current DPCR4 approach.

- 244 This option is a continuation of the no risk/no reward regime operated throughout the DPCR4 period.
- 245 Any over- or under-recovery of revenue against the forecast would result in adjustments to allowances currently (23.5% RAV and 76.5% regulatory opex) so that DNOs remain NPV-neutral to the provision of these services.

Option 2 – apply an all-DNO averaging approach to forecasting revenues

- 246 This option would set the initial forecast revenue levels for excluded services based upon an all-DNO average figure and this average cost level would be deducted from the RAV. Those DNOs with above-average activity levels would have an incentive to maintain these and those with below-average levels would be encouraged to increase activity to generate more revenues. These additional revenues would be taken into account at subsequent price control reviews for the benefit of DUoS customers.
- 247 In summary, if we understand this option correctly, it provides risks but no rewards for DNOs. A DNO will be out of pocket if it provides a below-average volume of services and does not increase revenue to at least the average level. However, any over-recovery against the average level will be recovered from the DNO in subsequent price controls so there is no balancing upside position.

- 248 Additionally we have concerns over the proposed use of a weighted industry average as this may not reflect the legacy positions on services such as top-up and standby and may also be difficult to apply where some DNOs do not currently provide a specific excluded service.
- 249 CE does not believe that this option provides a balanced risk/reward position for DNOs.

Option 3 – a partial true-up of actual revenues to forecast levels on an annual basis

- 250 This option offers a risk/reward environment that will allow a DNO to keep a proportion of any revenue recovered above the forecast level, including additional income from the provision of new services. It also introduces risk in that the DNO would be exposed to a proportion of any under-recovery of revenue against forecast levels.
- 251 Where appropriate we would be happy to accept this mechanism provided that the level of partial true-up, as yet unpublished by Ofgem, presents a balanced position for risk and reward between customers and DNOs

Option 4 – a 'cost-plus' price control mechanism

- 252 This mechanism would calculate allowed revenues from costs properly incurred and enable a DNO to recover an allowed return on the resources expended. Any revenue in excess of the allowed amount for each service would be subject to a RAV reduction.
- 253 From the *Methodology paper* it would appear that this may be the option preferred by Ofgem. It is the only option that Ofgem has expanded upon and it is evident that some thought has been put into the detail of how this option would work in practice.
- 254 Adoption of this option would require DNOs to introduce a new system for accurately tracking all of the costs relating to the provision of the relevant excluded service. This would include capital costs and direct opex costs (labour, transport etc). Additionally a new mechanism would need to be introduced to allocate indirect opex costs (business overheads) to excluded services. In the past it has proved difficult to isolate the costs relating to some excluded services, particularly where the work is completed in association with other work that is not classed as excluded services. Whether this approach is practicable will depend on the service in question.
- 255 We set out below how we consider each of the current categories of excluded service should be treated at DPCR5.

ES1: Use of system revenue received in respect of new (or altered) EHV premises

256 The reason that new EHV premises are treated as an excluded service is that the investment in the assets necessary to serve such premises is significant and the terms on which connection (and, therefore, use of system) is provided are often the subject of individual negotiation. This is probably not going to change and the distribution of electricity to new or altered EHV premises should continue to be excluded from the price control until the next review (i.e. DPCR6). Customers (or suppliers) can be protected by a right of determination and the revenue entitlement should be based on efficient costs incurred plus a reasonable rate of return.

ES2: New connections

257 New connections are to be made subject to a new price control and will no longer be a pure excluded service.

ES3: Revenue protection

- 258 It is not clear that revenue protection activity should be price controlled at all.
- 259 If suppliers value the service, or if they are compelled to procure it, it may be best to remove the activity from the distribution business altogether. If it is considered that the DNO is best placed to provide a service from which all benefit, it should be the subject of licence or other performance requirements, with cost recovery under the main control or incentivised in a separate control.
- 260 We cannot see why this activity should be an excluded service.

ES4: Provision of statements

261 This category of excluded service serves no purpose. It should be abolished.

ES5: Non-trading rechargeables - relocation and diversion

- 262 Strictly speaking this is probably not an excluded service at all. Even without its explicit designation as such, the revenue received from this activity would not be price controlled because it is not derived from use of system charges.
- 263 DNOs relocate their assets to suit third parties (at their request) and are remunerated for this at cost. A third party cannot ask the Authority to settle disputes about reasonableness of the charges because the Authority does not have the vires to determine such disputes. It would be inappropriate to subject such matters to price control or to determination. This activity should be treated as if it were an excluded

service (i.e. consistently with the current treatment), but it needs no special incentivisation under the licence.

ES6: Non-trading rechargeables - rearrangement of connection at a premises

264 This activity should be treated as it is now or under the price control for new connections. There is no need to incentivise a different form of behaviour.

ES7: Top-up and standby and additional security

265 These activities are not part of the normal requirements of a connected customer. It may be appropriate to give further incentives, either in a separate control or under the third and fourth options being considered by Ofgem. Alternatively, the existing arrangements could continue.

ES8: Reactive power

266 There is no reason that this should continue to be an excluded service. It will be a normal revenue stream for DNOs in the DPCR5 period.

ES9: Other

267 The introduction of other excluded services should not be discouraged. For this 'other' category we favour either the third or fourth of the options being considered by Ofgem.

Transmission exit charges are already appropriately regulated and incentivised.

- 268 We recognise Ofgem's concerns over potential inefficiency in transmission investment, but submit that they are unfounded. Any incentive on distributors in respect of exit charges would be regulating the same activity twice.
- 269 Transmission Owner (TO)-driven Main Interconnected Transmission System (MITS) reinforcement and SuperGrid Transformer (SGT) replacement are significant drivers of exit charges. The timing and scope of these works is entirely under TO control, and subject to their efficiency incentives.
- 270 The TO efficiency incentive is sufficient to encourage them to challenge user capacity requirements, whether on TO- or user-driven works. For example, our ongoing project for a new SGT at West Boldon has a value of around £10m: the total incentive payment available to the TO is £2.5m, which is sufficient to focus the mind.
- 271 TOs have the powers to challenge user requirements. The contract of the Connection and Use of System Code (CUSC) does not require TOs slavishly to follow user

requests, neither does it preclude the equivalent of the counter-offer distributors can make under section 16A(5)(a) of the Electricity Act 1989 (as amended).

- 272 Discussions at Ofgem's Environmental Working Group suggest that TOs do in practice require strong business cases from distributors, including comparison with distribution options, before committing investment. Applications for consents also need to justify the need case.
- 273 These existing TO incentives are stronger and clearer than new distributor incentives. Therefore, our recommended solution is to retain the current full pass-through arrangement. We would happily open our books to Ofgem to validate the efficiency of our decision making. There is regulatory precedent in the economic purchasing obligation applied to Transco metering.
- 274 Failing this, we support the option proposed at the Environmental Working Group of pass-through modified by a measure of utilisation. A fixed allowance with shared over-/under-spend presents unacceptable risk, specifically:
 - Unit price risk, as for distributors' own expenditure programmes. At best, costs for user-driven schemes can be locked down once the construction agreement is signed. Users have no role here in TO-driven work;
 - Users have no control over timing and scope on TOs' own replacement and reinforcement programmes, except at the very margin: we could flex the size of transformers but, with the use of standard ratings, the benefits would be minimal;
 - There are uncertainties in any discretionary investment plan, particularly beyond the price control horizon, i.e. after March 2012; and
 - There may be consequential modifications from other users' connections, e.g. large on-/off-shore wind.
- 275 Some of our concerns with a fixed up-front allowance would be eased if TO-driven work were still subject to pass-through.