



SP Transmission & Distribution

Response to Ofgem Consultation Paper:

**Electricity Distribution Price Control Review
October Update**

19th November 2003

Members of the ScottishPower group

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EXECUTIVE SUMMARY

This distribution price control review is different from previous price control reviews. Increasing costs in a number of areas, including distributed generation and network investment, will result in upward pressure on prices.

As set out in previous consultation responses, the key issues are as follows:

- a sufficient and stable return is required to attract and retain equity funding;
- a framework for the connection of renewable generation needs to be agreed and implemented if Government targets are to be achieved;
- allowed investment must be increased to secure the long-term safety, reliability and sustainability of the electricity infrastructure; and
- a sound and transparent approach to efficiency analysis is required to ensure adequate funding.

These issues are addressed in more detail below.

COST OF CAPITAL

An increased cost of capital is strongly supported by market evidence, recent regulatory determinations and authoritative academic studies.

- A higher cost of capital will promote future investment confidence and incentives.
- A pre-tax approach to cost of capital must be retained in order to provide the correct incentive to maintain tax liabilities at an efficient level in the medium to long-term.

DISTRIBUTED GENERATION (DG)

Government targets for renewable energy are extremely challenging. The regulatory framework must support the achievement of these targets and avoid creating unnecessary risk and uncertainty for all stakeholders.

- Advanced investment will be the most economic and effective means of ensuring that additional network capacity is made available when and where it is most needed.
- A programme of advanced investment should be agreed with companies such as SP Distribution and SP Manweb that are already significantly impacted by DG.
- Any mechanism that exposes companies to excessive risk or provides a lower than regulated return for DG related investment will be a major barrier to the achievement of Government targets.

NETWORK INVESTMENT REQUIREMENTS

Allowed investment levels must be increased to secure the long-term safety, reliability and sustainability of the electricity infrastructure.

- A long-term investment programme, focussed on critical assets, needs to be agreed now.
- This programme must address each company's specific requirements.



ASSESSING COSTS AND EFFICIENCY

A robust approach, that does not rely on any single measure and takes proper account of regional and inherited factors, is required.

- We welcome Ofgem's intention to use a variety of techniques including total cost analysis.
- Simplistic analysis of past cost-trends would result in serious misrepresentation of the future potential for cost reductions.
- Transparency is essential in order to enable companies to understand Ofgem's analysis and conclusions.

In addition to the high level issues noted above, there are a number of other important issues that require consideration:

- **Depreciation Cliff-Edge**

The approach used by Ofgem to smooth the revenue profiles of those companies that faced this issue at the last review must be extended to all companies.

- Revenue profiles should be smoothed by accelerating post-vesting depreciation.
- Early clarity is required on Ofgem's proposed treatment of this important issue.

- **Pensions**

Ofgem must take proper account of the reasons why deficits have arisen and must assess future costs in a fair, consistent and transparent manner.

- Proper account must be taken of the costs associated with liabilities under the Electricity Act 1989.
- The costs of providing enhanced benefits under severance arrangements are legitimate costs that have delivered price reductions to customers.

- **Uncertainty**

Transparent mechanisms are required to deal with cost uncertainty between price controls.

- The framework developed by Frontier Economics is theoretical in nature and raises many questions regarding practical application.
- Reassurances on interim adjustments and recovery of efficiently incurred costs during the next price control are welcome but do not reduce the perception of regulatory risk faced by companies.

We look forward to publication of Ofgem's latest thinking on these issues, and on the many other important issues for this price review, in the December consultation paper. We remain committed to working with Ofgem and the rest of the industry throughout the review process to deliver a successful outcome that balances the interests of customers, shareholders and all other stakeholders. We hope that our comments in this response document will prove helpful in meeting this objective.



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SECTION 1: FORM, STRUCTURE AND SCOPE OF THE PRICE CONTROL

1.1 SUMMARY OF RESPONSE TO JULY PAPER

1.1.1 The key points in this area from our response to Ofgem's consultation document of July 2003 are summarised below:

- the focus of improvements to the incentive framework must be on refining the operation of IIP (as applied to the existing output measures) rather than significantly extending its coverage;
- wheeling charges incurred in respect of electricity transported across the network of another distribution company should be treated as pass-through;
- transparent mechanisms for dealing with cost uncertainty between price controls are required regardless of the duration of the price control;
- any rolling mechanism should de-couple capex savings from the RAV;
- a 50:50 sharing of efficiency savings between companies and customers is optimal;
- the connection component of EHV charges should continue to be excluded from the price control; and
- the development of competition in connections and the interests of customers in general will be best served by continuation of the existing regulatory arrangements coupled with the introduction of appropriate performance standards.

1.1.2 We look forward to publication of Ofgem's further thinking on these issues in the December consultation paper. Our response to the issues raised by the October paper is set out in the following paragraphs.



1.2 FORM AND STRUCTURE OF THE PRICE CONTROL

- 1.2.1 We welcome confirmation of Ofgem's intention to continue with RPI-X price controls and the recognition that improvements are required in a number of areas. However, we have significant concerns around Ofgem's proposals on rolling mechanisms and on the losses incentive. These concerns are set out in sections 1.3 and 1.4 of this response document. Our comments on the other issues raised in this area are provided below.
- 1.2.2 We note that Ofgem is considering the application of a limited incentive mechanism to the recovery of NGC exit charges and business rates. These costs are non-controllable from the perspective of the distribution business and are therefore not appropriate for the application of an incentive mechanism, however limited. Although, in theory, there might appear to be some scope for companies to influence the level of these costs, in practice scope is very limited.
- 1.2.3 Companies focus significant effort on the management of these costs in line with their licence obligation to develop and maintain an efficient, co-ordinated and economical system of electricity distribution. We are not aware of any evidence of inefficient management of these costs. If Ofgem has any concerns in this area then they should be dealt with on a company specific basis.
- 1.2.4 On the specific issue of NGC exit charges, these are already subject to regulation by Ofgem. It is not appropriate for variations in these charges to result in penalties or windfall gains for a distribution company.



Wheeling Charges

1.2.5 As set out in our response to Ofgem's July document, a number of companies, including SP Manweb, incur 'wheeling' charges in respect of electricity transported across the network of another distribution company. There is currently no mechanism for recovery of these charges.

1.2.6 These charges should be treated as pass-through. We urge Ofgem to make this change as soon as possible and to give proper consideration to allowing recovery of the costs incurred during the current price-control period.

1.3 *FIXED RETENTION PERIOD FOR EFFICIENCY SAVINGS*

1.3.1 We continue to have a number of significant concerns regarding Ofgem's proposals for rolling mechanisms:

- there is no mechanism to address incentive distortions between capital expenditure (capex) and operating expenditure (opex); and
- there is a need to strengthen efficiency incentives .



1.3.2 As set out in our response to the July document, we have developed detailed and practical proposals for a rolling mechanism that removes the distortions arising from timing and from differences between capex and opex incentives. A paper outlining these proposals was submitted to Ofgem in June 2003 and we have had a number of constructive meetings with Ofgem on this issue. The mechanism set out in these proposals has the following advantages over a mechanism linked to the RAV:

- distortions to capex/opex incentives are eliminated by the use of a 'regulatory reserve' to capture savings;
- incentives are strengthened and distortions removed without any requirement to lengthen the period between price reviews; and
- companies retain the same share of capex savings regardless of regulatory depreciation lives.

1.3.3 We are therefore disappointed that Ofgem appear to have settled on a rolling mechanism linked to the RAV without mention or consideration of potential alternatives in any of their consultation documents. We urge Ofgem to give full consideration to all of the alternatives in the December paper.

1.3.4 The allowed level of capital expenditure should not necessarily be seen as the maximum level of expenditure that a company can incur. While we welcome Ofgem's recognition of this issue, we are concerned that the application of the rolling adjustment mechanism to capex overspends will have this effect. As set out in our response to Ofgem's June paper, significant changes to projected levels of capex should be dealt with as an interim adjustment to the price control while minor changes should, with prior regulatory agreement, be logged up for recovery via the next price control. Any logging up mechanism must preserve the net present value of the investment regardless of when recovery takes place.



Ofwat's Latest Proposals

1.3.5 Ofwat propose a number of changes to their rolling incentive mechanism in their consultation paper of June 2003¹ with the objective of enhancing and simplifying the incentive regime for the future:

- the exclusion of atypical and exceptional events;
- the application of the rolling mechanism to the current year plus five (rather than five-years including the current year) to avoid difficulties with capturing performance in the last year of a price control; and
- the application of a multiplier for efficient companies to increase the proportion of savings that can be retained.

1.3.6 We urge Ofgem to give consideration to these proposals in the development of the rolling incentive.

1.4 *DISTRIBUTION LOSSES*

1.4.1 We note Ofgem's view that an output-based losses incentive is appropriate. While we recognise the theoretical attractions of such an approach, we continue to support an input-based regime as the most pragmatic and effective means of reducing losses. Such a regime would be based on the delivery of specific loss reduction programmes and projects.

¹ Ofwat June 2003 – Rewarding Future Out-Performance and Handling Under-Performance of Regulatory Expectations – A Consultation Document.



1.4.2 Our previous consultation responses have highlighted a number of practical concerns with Ofgem's proposals for a revised incentive, including:

- how loss reducing capex will be ring-fenced and how the efficiency tests for recovery of loss reducing capex would work;
- how risks to companies from external factors affecting measured losses, including weather, voltage mix, unmetered inventories and revenue protection, will be dealt with;
- how the lack of incentive on third party connectors to take account of losses will be dealt with; and
- how the impact of distributed generation will be taken account of.

1.4.3 While we welcome some recognition by Ofgem of issues around distributed generation, capital expenditure and measurement, we are disappointed that these and the other points above do not appear to have been fully addressed. It is important that these issues are fully addressed before any firm proposals for changes to the existing incentive are finalised. We remain committed to working with Ofgem on this issue.



SECTION 2: QUALITY OF SERVICE AND OTHER OUTPUTS

2.1 *SUMMARY OF RESPONSE TO JULY PAPER*

2.1.1 The key points in this area from our response to Ofgem's consultation document of July 2003 are summarised below:

- the scope of output measures should be based on measures required to protect customers' interests, informed by robust research into customers' priorities and willingness to pay;
- it is inappropriate to require increased performance levels that go beyond the expenditure assumptions underlying the price control;
- targets for output measures should focus on the long-term;
- Guaranteed Standards (GS) should not be subject to any overall incentive mechanism but should continue to relate to the level of service provided to individual customers; and
- the introduction of additional outputs for social and environmental obligations would be duplication of effort and could result in companies being exposed to multiple penalties for the same event.

2.1.2 We look forward to publication of Ofgem's further thinking on these issues in the December consultation paper. Our response to the issues raised by the October paper is set out in the following paragraphs.



2.2 *QUALITY OF SERVICE*

Customer Survey

- 2.2.1 In addition to our comments on the issues raised in the October update paper, this section of the response document provides comments on Accent's report (September 2003) on the first phase of research into customer expectations and willingness to pay.
- 2.2.2 The first phase of the customer survey is useful as an indication of what might be of concern to customers and forms a basis on which to build a more thorough assessment of willingness to pay for improvements. However, given that this phase of the survey reflects customers' desires without explicit regard to the likely costs associated with particular improvements in service, it is inappropriate, at this stage, to draw conclusions about priorities or raise expectations of particular improvements.
- 2.2.3 Clearly, customers' desire for further improvements must be considered with an understanding of the cost of the required improvements and willingness to pay. It should be noted that the costs associated with many of the potential improvements identified by the first phase of research, such as reducing time periods for compensation, reducing the number of multiple interruptions and 'undergrounding' of overhead lines, would be significant.
- 2.2.4 It is essential that the second phase of the survey makes an effective assessment of willingness to pay for service improvements. In particular, careful attention must be paid to the way in which potential trade-offs are presented to customers. Proper account will also have to be taken of the views of different classes of customers such as rural and urban, domestic and business and across socio-economic groups.



2.2.5 We are pleased to have had the opportunity to work with Ofgem and the rest of the industry on Ofgem's Willingness to Pay working group. We remain committed to this working group and believe that it has a significant role to play in assessing and understanding customers' preferences and willingness to pay.

Customer Communication

2.2.6 We note that Ofgem intends to consult on whether or not it would be appropriate to strengthen or expand the existing incentives in this area. The current 'Quality of Service' and proposed 'Speed of Answering' measures and incentives address the major aspects of the service. The focus should therefore be on improving the robustness and operation of the existing incentives rather than extending their scope.

2.2.7 We support the principles and objectives behind the recent changes to the Regulatory Instructions and Guidance (RIGs) to improve the measurement of 'Speed of Answering' and expect these to provide statistics which are more comparable between companies.

Comparing Quality of Supply Performance

2.2.8 We support Ofgem's work in relation to disaggregation of quality of supply performance and believe that a very powerful tool is beginning to emerge. However, we are of the view that a cautious approach is required as the analysis is currently based only on one year's data (02/03). Targets for the next price control period should not be finalised until 03/04 data is available to confirm the results that have emerged from the current analysis.

2.2.9 While we recognise that disaggregation allows the comparison of outputs across companies, we are very concerned that simplistic use of the data will fail to make allowance for the limitations that remain within the disaggregation process. We believe that the power of the disaggregation



process is its ability to highlight why the performance of each company differs from the benchmark. This explanatory aspect of disaggregation, together with an understanding of the cost of improving each aspect of performance and customers willingness to pay, are key aspects of setting improvement targets.

- 2.2.10 One potential drawback of Ofgem's approach, which focuses on global CI/CML performance, is that it potentially ignores the spread in the performance experienced between rural and urban customers. It is important that Ofgem's approach does not prevent or discourage companies from targeting investment at their 'worst served' customers and reducing this spread in performance.

Rewarding Frontier Performance

- 2.2.11 We agree that frontier performance in terms of CI/CML should be rewarded. Rewards should reflect the amount by which a company has out-performed its benchmark. Such measurements should be based on underlying performance levels calculated on an average basis rather on a single year's data, which can be beneficially or adversely affected by weather patterns.



Scope of the Output Incentive Scheme for the Next Price Control Period

2.2.12 Our detailed comments on the scope of the output based incentive regime are contained in our response to the July consultation document. In general, our views can be summarised as follows:

- the focus of improvements to the incentive framework must be on refining the operation of IIP (as applied to the existing output measures) rather than significantly extending the range of output measures;
- the scope of output measures should be based on measures required to protect customers' interests, informed by robust research into priorities and willingness to pay; and
- the costs of achieving any expected improvement in performance under such an incentive regime should be considered on a company specific basis, and would require full funding through an appropriate allowance.

Changes to the Standards of Performance Arrangements

2.2.13 The points made in paragraph 2.2.12 in respect of customer research, willingness to pay and funding of costs associated with any expected improvement in performance apply equally to any changes to the standard of performance arrangements.

2.3 NETWORK RESILIENCE

2.3.1 Network resilience is a multi-dimensional concept encompassing the ability of a network to withstand severe events and the ability of a company to respond to such events. While it is possible to make an assessment of network resilience at any time, the resilience or otherwise of a network can only be truly measured after the occurrence of a severe event. There is no



consistent test that can be applied to measure the severity of such events which occur relatively infrequently and have a wide-ranging impact.

- 2.3.2 It is therefore very difficult to design and implement an incentive mechanism around the concept of network resilience. It is however, possible to improve network resilience in the medium to long-term by funding appropriate work programmes, and introducing appropriate incentives for delivery of these work programmes.

Factors that Determine Network Resilience

- 2.3.3 Before considering how network resilience might be improved and measured, it is useful to consider the factors that determine network resilience:

- line construction;
- tree management;
- line maintenance; and
- response.

Line Construction

- 2.3.4 Different areas of the country experience different extremes in weather conditions depending, for example, on factors such as height above sea level and proximity to the coast. Lines must be constructed to a standard appropriate to their local environment and line construction is therefore a critical determinant of network resilience.

- 2.3.5 Most companies have inherited networks that contain a large proportion of BS1320 lines as this was the standard used during the rural electrification programmes that took place during the 1950s and 1960s. For some companies these lines will be entirely suitable for the area in which they are



constructed, however for those companies that operate networks in the more exposed parts of the country (such as North Wales and much of Scotland), they are inadequate. These lines will need to be replaced by lines of an appropriate construction standard if network resilience is to be a key objective. Some companies will therefore require significantly more investment than others to improve network resilience. The appropriate construction standards for our network areas include internal company specification L10 (50mm² aluminium conductor steel reinforced) and L27 (100mm² all aluminium alloy conductor).

Tree Management

2.3.6 Tree management is usually undertaken to provide safety clearance between the overhead line and the branches of trees and shrubs. Whilst this is adequate during normal weather patterns, clearance within 'falling distance' of overhead lines is required to protect against the possibility of trees being uprooted during severe weather and falling into them.

2.3.7 If resilience is to be improved then consideration will need to be given to the amount of funding that is allowed for tree management and to the statutory powers that companies have in relation to tree removal. Our tree clearance programme is currently based on a five-year cycle. A three-year cycle is likely to be more appropriate if there is to be an increased focus on network resilience. However, where tree removal is not possible and given appropriate funding, it may be necessary to re-route or perhaps underground circuits.

Line Maintenance

2.3.8 While the construction standard sets the capability of the line to withstand severe weather conditions, it is clearly necessary for the line to be maintained to appropriate standards. Effective programmes must therefore be funded to maintain network resilience.



Response

2.3.9 Even with appropriately constructed networks, maintained to appropriate levels, overhead lines will be impacted by short periods of severe weather. Appropriate contingency plans and effective execution of such plans are therefore another important determinant of network resilience. This requires consideration of all aspects of emergency response, including effective use of direct staff, involvement of contractors, provision of materials and provision of specialist equipment.

Improving Network Resilience

2.3.10 Improved network resilience will only be achieved if all four of the factors listed above are adequately addressed and appropriately funded. Once funding decisions have been made and work programmes agreed it would be possible to develop appropriate incentives to ensure effective and efficient delivery. An appropriate form of input-based incentive will be most suited to overhead line replacement, tree management and maintenance programmes.

Measuring Network Resilience

2.3.11 The effectiveness of any improvement programmes and the response of the company will only be apparent after the occurrence of a real event. These aspects can only be measured by a detailed review of the unique circumstances surrounding a particular event. Such a review would consider aspects such as:

- CI/CML impact;
- response times;
- weather severity and environmental conditions;
- line construction standards; and
- any other contributory factors such as availability of contracting staff, materials and specialist equipment.



- 2.3.12 It is not appropriate for Ofgem to apply a benchmark approach to evaluating performance following the occurrence of a severe event. Such an approach represents a gross simplification that cannot give proper consideration to the unique circumstances of each specific event.



SECTION 3: DISTRIBUTED GENERATION

3.1 *SUMMARY OF RESPONSE TO JULY PAPER*

3.1.1 The key points in this area from our response to Ofgem's consultation document of July 2003 are summarised below:

- the regulatory framework must support the achievement of challenging Government targets and avoid creating unnecessary risk and uncertainty for all stakeholders;
- incentives for distributed generation (DG) and innovation should only apply to those aspects that can be controlled by companies and only proportionately to the degree of that control;
- it will be possible for a baseline programme of investment to be agreed with Ofgem for those companies that are already significantly impacted by DG, in terms of interest and formal applications;
- this baseline investment would be secured in the RAV with only the efficiency of implementing the agreed schemes being assessed after the event;
- a hybrid scheme could be an appropriate means of dealing with investment that is incremental to the baseline programme depending on the balance between the two components;
- appropriate allowance must be made for the additional operating costs arising from increased complexity of network operation and the costs associated with any network availability measures; and
- existing measures under IIP and GS/OS should be refined to ensure consistency of treatment between generation and demand rather than introducing new measures and incentives for network availability.

3.1.2 We look forward to publication of Ofgem's further thinking on these issues in the December consultation paper. Our response to the issues raised by the October paper is set out in the following paragraphs.



3.2 ***INCENTIVE FRAMEWORK FOR DISTRIBUTED GENERATION***

- 3.2.1 As stated in previous responses, we agree with Ofgem that any mechanism to facilitate distributed generation (DG) must balance the need to minimise the financial risk on companies against the need to protect customers' interests in terms of the costs that they will bear. Government targets for renewable energy are extremely challenging and the regulatory framework must support the achievement of these targets and avoid creating unnecessary risk and uncertainty for all stakeholders.
- 3.2.2 Any mechanism that exposes companies to excessive risk or provides a lower than regulated return for DG related investment will be a major barrier to the achievement of Government targets.
- 3.2.3 We note Ofgem's comments that the majority of respondents to the July paper broadly supported the hybrid mechanism and that no respondents presented an alternative framework. This comment does not reflect the position set out in our response to the July paper.
- 3.2.4 Our response stated that, for those companies that are already significantly impacted by DG, in terms of interest and formal applications, it will be possible for a baseline programme of investment to be agreed with Ofgem. Our response further stated that a hybrid scheme could be an appropriate means of dealing with investment that is incremental to the agreed programme depending on the balance between the two components.
- 3.2.5 We continue to believe that advance investment will be the most efficient and effective means of facilitating DG. A programme of advance investment would be agreed based on a reasonable assessment of demonstrable need. This investment would be secured in the RAV, at the normal regulated rate of return. Significant changes to this programme would be dealt with as an interim review while minor changes could be subject to the hybrid mechanism or some form of logging-up mechanism.



Defining the Balance Between Pass-Through and Incentivisation

- 3.2.6 We agree with Ofgem that, if the degree of variability in the costs of providing network access is high, then it will be necessary for any hybrid mechanism to allow a high proportion of costs to be passed through. It is our experience that cost variability is high with costs varying on a site-specific basis. This appears to be supported by the summary information from the Distributed Generation Business Plan Questionnaires (DGBPQ). Even the most complex of incentive schemes would be unable to account for this high degree of cost variability.
- 3.2.7 It should be noted that the degree of cost variability is not the only factor that must be taken into account when considering the split between the pass-through and incentive components of any hybrid mechanism. The lack of influence and control that a distribution company has over the level of DG is another extremely important factor.
- 3.2.8 As a result of these issues it is our view that that any hybrid mechanism should pass-through all efficient investment at the regulated rate of return. We understand that this would limit the premium return that could be earned but believe this to be entirely appropriate as it is not in the interests of customers for companies to receive significant windfall gains from higher than anticipated levels of DG.
- 3.2.9 Discussions on the development of a hybrid mechanism and its potential application to DG are at an extremely early stage. The application of a hybrid mechanism to demand related connections should not be contemplated until practical experience of the operation of such a mechanism is available.



3.3 REGISTERED POWER ZONES AND INNOVATION FUNDING

3.3.1 We are generally supportive of Ofgem's approach and will continue to work with Ofgem in this area. We have developed concept proposals for a Registered Power Zone (RPZ) in Wales and will be discussing these proposals with Ofgem.

3.3.2 We agree that a simplified approach to the Innovation Funding Incentive (IFI) is appropriate at this stage. We also agree that transparency is essential to ensure value for money from IFI expenditure.

3.3.3 Based on our work with a number of different parties, we believe that there are potentially significant benefits, in terms of reduced costs to generators, from Category C expenditure (expenditure aimed at establishing enhanced technical understanding). However there is currently no mechanism for funding work in this area. As set out in our response to Ofgem's discussion paper on Innovation and Registered Power Zones, funding is required in this area to enable companies to "kick-start" R&D work and focus on enhancing technical understanding of existing and new techniques.

3.4 REGULATORY IMPACT ASSESSMENT

3.4.1 We welcome Ofgem's inclusion of an initial Regulatory Impact Assessment (RIA) for DG. As set out in our response to Ofgem's July paper, all material changes to the regulatory framework should be covered by such an assessment.

Costs and Benefits

3.4.2 We agree with Ofgem that the main cost elements are those associated with reinforcing and transforming networks to facilitate DG. These costs have been quantified for the period of the next price control in each company's Distributed Generation Business Plan Questionnaire (DGBPQ). In addition it



should be noted that considerable further work is required to understand the impact of DG on the quality and security of supply of other customers. This impact will become clearer as further experience is gained of operating networks with significant amounts of DG.

3.4.3 These costs are clearly significant and any mechanism that introduces risk and uncertainty around recovery of these costs will be a major barrier to the development of DG and the achievement of Government targets.

3.4.4 While the total cost to users (i.e. demand and generation) can be quantified based on the DGBPQ submissions, the impact on different categories of user cannot be properly quantified until there is further clarity on the structure of distribution charges.

3.4.5 We agree with Ofgem that the main benefits will arise through facilitating progress towards the Government's energy policy targets. As previously stated, the building of networks is essential if these targets are to be met.

3.4.6 As Ofgem states, a full quantitative evaluation of all the benefits might not be possible. However we would be pleased to work with Ofgem and other interested parties to attempt to quantify these benefits.

Distributional Effects

3.4.7 We note Ofgem's comment that it might need to consider the distributional effects on existing generators and demand customers both within the same area and across Great Britain. Ofgem's current proposals on structure of charges are for connection charges to generators to become 'shallower'. This will certainly have an impact on existing generators and demand customers.



3.4.8 In addition, a significant proportion of the distributed generation required to meet Government targets will locate in the licensed areas of a few companies. It is therefore desirable that a scheme be introduced to ensure that the price increases required to fund the costs of meeting Government targets are spread across all customers in Great Britain. It will therefore be necessary for Ofgem to consider the distributional effects on existing generators and demand customers both within the same area and across Great Britain.

Risks and Unintended Consequences

3.4.9 We agree with Ofgem that uncertainty and cost under-recovery from the perspective of the distribution company are the main issues that could raise potential risks to the success of the policy in meeting its objectives.



SECTION 4: ASSESSING COSTS

4.1 *SUMMARY OF RESPONSE TO JULY PAPER*

4.1.1 The key points in this area from our response to Ofgem's consultation document of July 2003 are summarised below:

- allowed investment levels must be increased to secure the long-term safety, reliability and sustainability of the electricity infrastructure;
- Ofgem must use its assessment of Asset Risk Management (ARM) policies and practices of each company as a major determinant in establishing the credibility of investment plans;
- we welcome Ofgem's intention to utilise several alternative approaches to assessing costs and efficiency;
- transparency, in terms of approach and analysis, is essential;
- it must be recognised that past performance is not necessarily a good indicator when assessing future costs;
- the efficiency analysis during DPCR3, including the regression analysis and the normalisation adjustments, contained a number of significant flaws (these, together with suggested improvements, were pointed out in detail in our response to the July paper);
- merger savings must be treated like any other efficiency saving and captured via comparative analysis;
- it is not valid to assume that merged companies will be on the efficiency frontier as there are now more merged companies than non-merged companies; and
- the results of any Total Factor Productivity (TFP) analysis will require careful interpretation.

4.1.2 We look forward to publication of Ofgem's further thinking on these issues in the December consultation paper. Our response to the issues raised by the October paper is set out in the following paragraphs.



4.2 *OFGEM'S APPROACH TO ASSESSING COSTS*

4.2.1 We are generally supportive of the principles of the approach outlined by Ofgem for assessing costs but, based on our experience during the last review, have some concerns about the application of these principals. As stated in our response to the July consultation paper, transparency of approach and analysis is essential. We welcome the transparent approach adopted so far and will continue to work with Ofgem in this complex area.

4.2.2 Comparative analysis will require a sound methodology, robust normalised data and must take account of the small number of comparator companies that are available. However, even when these fundamental requirements are met, measuring relative efficiency is a considerable challenge for statistical and other quantitative techniques. The weighting placed by Ofgem on comparative analysis must take proper account of these difficulties.

Normalising Data

4.2.3 It is important that Ofgem works closely with companies to understand their respective cost bases and assist with comparative analysis. Factors that must be taken account of include:

- 132kV costs in Scotland;
- rural/urban mix of customers;
- percentage of network comprised of overhead lines;
- climate;
- lightning;
- tree coverage;
- engineering policies (including Asset Risk Management Policies) and construction standards;
- levels of activity in particular areas (such as distributed generation and competition in connections);
- cost allocation methodologies; and
- exceptional and atypical events.



Issues from CEPA Report

4.2.4 Our detailed response to the issues raised in the CEPA report is included in Appendix 1 of this document. Our main comments are as follows:

- we welcome the use of a variety of techniques and agree that properly implemented COLS supplemented by DEA are the most appropriate techniques;
- the use of panel data techniques would potentially enhance the analysis provided that the additional years of data are strictly comparable;
- we support the use of total cost analysis as long as proper account is taken of issues such as asset replacement cycles, different levels of load related investment and differing assumptions on RAV valuation and depreciation;
- analysis should be carried out on individual companies and on groups of companies (a more detailed response on merger issues is provided in paragraphs 4.2.5 to 4.2.7);
- benchmarking must appropriately incorporate differences in quality and costs;
- it will be extremely difficult in practice to make meaningful comparisons with international data;
- we share CEPA's concerns regarding transparency of the analysis carried out during DPCR3 and welcome Ofgem's efforts to improve transparency during the current review;
- based on the most recent data, there does not appear to be any need to change either the components of the composite scale variable or their relative weightings from those used during DPCR3; and
- we do not understand or agree with CEPA's comment that, with the move towards competition in metering, customer numbers are no longer as important a factor in determining the costs of distribution companies.



Treatment of Merger Savings

4.2.5 As set out in our response to the July consultation paper, there are two important principles that must be applied to the treatment of mergers:

- merger savings must be treated like any other efficiency saving and captured via comparative analysis; and
- it is not valid to assume that merged companies will be on the efficiency frontier as there are now more merged companies than non-merged companies.

4.2.6 Given all the mergers that have taken place since the last review, any top-down comparative-efficiency assessments will capture the merger savings that have occurred. Any additional adjustments by Ofgem will therefore involve a double counting of these savings except in the specific context of making comparisons of non-merged companies with merged companies.

4.2.7 Comparative efficiency analysis can be undertaken in such a way as to recognise the ability of merged companies to remove duplication of overheads in certain functions. Any adjustment made to compare merged companies and non-merged companies must have the effect of treating all merged companies in the same way.

Total Factor Productivity

4.2.8 We note that Ofgem have commissioned CEPA to undertake a study of Total Factor Productivity (TFP) on its behalf and await the results of the study with interest. As set out in our response to the July consultation paper, the results of any TFP analysis will require careful interpretation. There is considerable doubt as to whether TFP analysis can provide sufficiently robust assessments for use in setting allowances. TFP assessments require numerous



assumptions in order to derive appropriate cost benchmarks, and these derived benchmarks are sensitive to the assumptions used.

- 4.2.9 TFP does not take account of several important factors, such as output quality, exogenous factors and relative efficiency, which are all key determinants of cost performance over time. In addition, as previously stated, past performance trends are not necessarily a good indicator of future performance trends.



SECTION 5: FINANCIAL ISSUES

5.1 *SUMMARY OF RESPONSE TO JULY PAPER*

5.1.1 The key points in this area from our response to Ofgem's consultation document of July 2003 are summarised below.

- a sufficient and stable return is required to attract and retain funding from capital markets;
- an increased cost of capital is strongly supported by market evidence, recent regulatory determinations and authoritative academic studies;
- the approach used by Ofgem for those companies that faced the depreciation 'cliff-edge' at the last review must be extended to all companies at this review i.e. revenue profiles should be smoothed by accelerating depreciation for post-vesting assets;
- a move to a post-tax cost of capital would destroy medium to long-term incentives for tax efficiency and would have adverse consequences for all stakeholders, including customers;
- while we welcome Ofgem's confirmation of the use of a common assumption on gearing, this is not consistent with the use of company specific allowances for tax liabilities; and
- Ofgem must continue to reflect historic 'embedded' debt in the WACC calculation.

5.1.2 We look forward to publication of Ofgem's further thinking on these issues in the December consultation paper. Our response to the issues raised by the October paper is set out in the following paragraphs.



5.2 *TREATMENT OF PENSION COSTS*

5.2.1 In our response to the July paper we welcomed recognition of this major issue and set out our main concern's with Ofgem's proposed treatment of the issue, namely:

- the need to recognise the impact of obligations arising under the Electricity Act 1989 when making cost comparisons; and
- the need to recognise the costs of providing enhanced benefits under severance arrangements as a legitimate business cost that has resulted in efficiencies that have been passed back to customers.

5.2.2 These concerns remain and we await Ofgem's detailed proposals with interest. In the meantime, we will continue to work with Ofgem on this important issue.

Retrospection

5.2.3 We agree that a clear starting position must be established and that some retrospection will be required. In addition, we fully support Ofgem's aims of providing an equitable basis for sharing increased costs between customers and shareholders and providing clarity for the future. Ofgem must take proper account of the reasons why deficits have arisen and assess future costs in a fair, transparent and consistent manner if these aims are to be achieved.

5.2.4 It is important to recognise that customers have previously benefited from reduced pension costs arising as a result of pension surpluses. It is therefore entirely appropriate that customers bear an equitable share of increasing costs.



Protected Persons Regulations

5.2.5 We welcome confirmation that Ofgem's proposed guidelines take full account of the obligations imposed on companies by the Electricity Act 1989 but would emphasise that price controls must take full account of the costs associated with these obligations.

Underfunding

5.2.6 We welcome Ofgem's acknowledgement of the points that have been made regarding under-funding of pension costs in previous price controls and await Ofgem's further proposals on this issue.

Regulated - Unregulated split

5.2.7 We welcome Ofgem's recognition of the difficulties associated with splitting liabilities between regulated and non-regulated businesses. We will continue to work with Ofgem to establish a fair and equitable allocation of these liabilities. However, it should be recognised that a considerable degree of estimation will be required. Prior to legal separation, the transmission and distribution businesses of ScottishPower were purely an accounting and regulatory construct within the single statutory entity. Throughout that period, the liability for pension costs rested with the group, rather than with any specific business.

Enhanced Benefits

5.2.8 As previously stated, the provision of enhanced benefits under severance arrangements has resulted in direct savings to customers. While we welcome confirmation that Ofgem will take account of redundancies occurring prior to March 2003 when applying its guidelines, we would reiterate that the costs,



past and future, associated with the provision of these benefits must be treated as a legitimate business cost.

- 5.2.9 Customers have benefited substantially from the use of surpluses to fund severance programmes that have been in excess of those assumed when setting price controls. Precedents set by previous price control settlements have had the effect that, so far, customers have not paid for the investments needed to achieve the large cost savings from which they have benefited directly in the past.

Period Over Which Scheme Deficits Should be Recovered

- 5.2.10 This should be based on actuarial advice. Normal practice is to recover deficits over the remaining working life of current contributing members.
- 5.2.11 We are very concerned at Ofgem's suggestion that a longer period may be appropriate for a financially strong company. All companies should be treated equitably and financially strong companies should not be penalised. It would therefore be entirely inappropriate for a financially strong company to be expected to recover a deficit over a longer period than a financially weaker company.



APPENDIX 1: RESPONSE TO THE ISSUES RAISED BY THE CAMBRIDGE ECONOMIC POLICY ASSOCIATES PAPER ON BENCHMARKING (SEPTEMBER 2003)

GENERAL COMMENTS

As set out in our response to Ofgem's July paper, it is important that lessons from previous reviews are learned and implemented. In this context we welcome Ofgem's consideration of potential improvements to the approach taken at the last review and our comments are provided with this in mind.

Detailed comments on Ofgem's approach were provided in our various responses to the DPCR3 proposals. These comments were summarised as follows in our response to Ofgem's paper of July 2003:

- the top-down efficiency analysis, including the normalisation adjustments and the regression analysis, contained significant flaws;
- PKF's bottom up analysis, on which Ofgem placed considerable weight, contained a number of fundamental flaws including lack of transparency, arbitrary adjustments, simplistic ratio analysis and a 'cherry picking' approach to benchmarking; and
- too much emphasis was placed on historic expenditure and allowances when assessing future capital expenditure requirements.

We share CEPA's concerns regarding transparency of the analysis carried out during DPCR3 and welcome Ofgem's efforts to improve transparency during the current review. However, we do not agree with CEPA's comments that the analysis carried out during DPCR3 was "generally robust" and believe that in many cases the analysis was not, as stated by CEPA, supported by "expert industry judgement".



Care should be taken when comparing the 2001/02 data with 1997/98 data. Considerable changes in accounting (Supply and Corporate costs moved out in DPCR3) and in organisational structures and outsourcing arrangements have taken place since 1997/98. Failure to take account of these changes would result in serious over-estimates of the future potential for cost reductions.

We welcome the consultation exercise on issues around input data and benchmarking techniques and methodologies. While this exercise will be useful in developing the set of assumptions that could be used, it is important that analysis is carried out using the HBPO data to determine the most appropriate set of assumptions and how sensitive the results are to any particular set of assumptions. Results that are highly sensitive to different assumptions will not be robust enough for use in the price review.

RESPONSE TO SPECIFIC ISSUES RAISED IN CEPA PAPER

Our response to the questions raised in the CEPA report is provided below:

INPUTS

What costs should be benchmarked?

How should controllable costs be defined for the purpose of benchmarking?

Controllable operating costs should be assessed in conjunction with total costs. We support the use of total cost analysis when assessing costs and efficiency as this can solve many of the problems around cost allocation and the basis on which previous allowances were set. We were an advocate of a total cost approach during DPCR3.

Controllable operating costs should be defined as total operating costs less rates, depreciation, cost of sales, licence fees and wayleave costs. The costs used should be based on current accounting policies, with appropriate normalisation adjustments.

**What adjustments are required to enable comparisons between DNOs?****What adjustments are required for company specific factors?**

It is important that Ofgem works closely with companies to understand their respective cost bases and assist with comparative analysis. Factors that must be taken account of include:

- 132kV costs in Scotland;
- rural/urban mix of customers;
- percentage of network comprised of overhead lines;
- climate;
- lightning;
- tree coverage;
- engineering policies (including Asset Risk Management Policies) and construction standards;
- levels of activity in particular areas (such as distributed generation and competition in connections);
- cost allocation methodologies; and
- exceptional and atypical events.

How should measures of total cost be calculated?

As previously stated, we support the use of total cost analysis when assessing costs and efficiency. There are however a number of important factors that must be considered when carrying out this analysis. These are as follows:

- companies will be at different stages in their asset replacement cycles and therefore might be required to incur more capital expenditure than others;
- the use of depreciation instead of capex can improve the analysis but account must be taken of different pre-vesting RAV values for Scottish companies and differences in asset lives; and
- the analysis must take account of different levels of load-related capex.

**Should international data be used?****If so, from what sources?**

The use of international benchmarking data is, in theory, attractive. International data can provide a larger data set that could be used to:

- identify relevant cost drivers;
- estimate functional form;
- derive weights for calculating compound variables (e.g. scale and quality measures); and
- test restrictions imposed on parameters (e.g. intercept and returns to scale) or functional form.

However, it will be extremely difficult in practice, to make meaningful comparisons with international data due to differences in a number of fundamental areas, including:

- taxation;
- exchange rates and/or purchasing power parity;
- wage rates;
- accounting conventions;
- planning standards;
- network architecture and distribution voltage levels; and
- quality of supply.

In addition it will be difficult to obtain suitably robust data for benchmarking purposes. In particular, data collated from published statutory accounts will not be suitable.

Should panel data be used?

The use of panel data techniques would potentially enhance the analysis provided that the additional years of data are strictly comparable.



BENCHMARKING TECHNIQUES AND METHODOLOGY

Which techniques should be used?

As previously stated we welcome Ofgem's intention to use a variety of techniques. We agree that properly implemented corrected ordinary least squares (COLS) combined with data envelope analysis (DEA) are most appropriate.

Which cost drivers should be included and how should they be selected?

How should the weighting of cost-drivers be determined?

Based on the most recent data, there does not appear to be any need to change either the components of the composite scale variable or their relative weightings from those used during DPCR3.

We do not understand or agree with CEPA's comment that, with the move towards competition in metering, customer numbers are no longer as important a factor in determining the costs of distribution companies.

What assumptions should be made if using regression e.g. functional form, the intercept etc.?

The functional form should not necessarily be assumed as being linear. A number of functional forms should be considered in the modelling in order to assess the most appropriate. Formal statistical tests can be used to determine what functional form is most appropriate for the data under analysis.

The analysis should not be constrained by any assumption on the intercept.

**If using DEA what combination of inputs and outputs should be used?****Should the models be input or output orientated or both?**

DEA does not permit statistical inference and identification of relevant inputs and outputs can therefore be difficult.

Candidates for inputs include:

- controllable operating costs;
- capital costs (e.g. capital expenditure or depreciation);
- total controllable costs; and
- quality measures (CI and/or CML).

Candidates for outputs include:

- network length (weighted by voltage);
- customers numbers (MPANs);
- units distributed;
- maximum demand; and
- network capacity measures.

In the context of the price review, DEA modelling will be used to determine the minimum level of expenditure required to deliver a certain service. As a result, the DEA model should be input orientated (i.e. seeking to minimise the model's input).

What assumptions should be made about returns to scale and economies of scale?

Ofgem's analysis must take account of the cost-scale relationship. Robust unconstrained regression with appropriate scale variables and DEA analysis using variable returns to scale, with all size variables dealt with as separate outputs, will best capture this relationship.



USE OF BENCHMARKING IN THE FINAL COST ASSESSMENT

What is an appropriate benchmark for DNOs, the frontier firm, the average firm or something else?

As stated in previous responses, Ofgem's approach will need to account for the fact that it will not be possible to remove all inconsistencies and statistical noise. An average approach would be a significant improvement on a frontier approach however this will not eliminate the effect of statistical noise.

How should benchmarking be combined with other analysis, particularly bottom-up modelling and TFP analysis?

As set out in previous responses, we agree that top-down and bottom-up analysis should be used to complement each other. Ofgem's bottom-up analysis should focus on developing a sound understanding of the cost-base of each company and should be used to inform the adjustments required to carry out top-down analysis.

Care must be taken in bottom-up analysis to avoid the use of 'best in class' benchmark costs across all activities. Such benchmarks lead to an unattainable cost base. This problem can be avoided by assessing costs at an aggregated level.

Our concerns with TFP analysis are set out in paragraphs 4.2.8 and 4.2.9 of this document.

OTHER ISSUES

How should merged firms be treated for the purposes of benchmarking?

Should DNO groups be benchmarked as well as 14 DNOs?

Our comments on the treatment of mergers are included in paragraphs 4.2.5 to 4.2.7 of this response document. We agree that analysis should be carried out on individual companies and groups of companies.



Should measures of quality or other outputs be incorporated into the benchmarking process?

Quality of supply varies significantly across companies and clearly affects costs. It should therefore be incorporated into the benchmarking process. Potential environmental output measures have not yet been established and it would be premature to include these in the benchmarking process for DPCR4.