

Structure of electricity distribution charges

Update document and Licence modifications

April 2004

Summary

This document provides an update on Ofgem's views on the structure of electricity distribution charges following the November Initial Decision document¹. This document is also the statutory consultation on the modification of the distribution licences pursuant to Section 11A of the Electricity Act 1989.

Ofgem's Initial Decision document proposed that the implementation of revised arrangements for the structure of electricity distribution charges be achieved in two stages. From April 2005 a new charging regime, 'interim arrangements', will be established which will essentially provide for a common connection boundary for demand and generation, removing the deep charging of generation, and introducing the requirement for distribution network operators (DNOs) to determine connection and use of system charging methodologies. In parallel with this further consideration will be given to the 'longer term charging arrangements' which will be in place by 2010. Consideration will be given to the earlier introduction of arrangements where appropriate.

An Implementation Steering Group (ISG) has been established to advise on the details of the interim arrangements applying from 2005 and to consider development of the longer term framework.

Respondents to the November Initial Decision document were generally supportive of the main principles and proposals of the document, and were encouraged by the progress made. There was wide support for the move to shallower connection charges along with the introduction of generator use of system charges, but it was recognised that the benefit of deep connection charging was its ability to include pricing signals, and that charges established under the new regime must be both cost-reflective and predictable. There was general support for the introduction of charging methodologies, although concern was raised over the level of detail which they should contain. Some respondents felt that interested parties should be included in the approval process, and it was also noted that Ofgem needed to provide approval efficiently and quickly.

¹ Structure of electricity distribution charges – initial decision document November 2003, reference 142/03

Ofgem has considered these responses in detail in developing the proposed licence modifications which are being consulted on as part of this document. Ofgem considers that licence modifications are needed:

- In order to comply with the EC Directive 2003/54/EC, which includes a requirement for the Authority to approve charging methodologies for use of system and connection. For this reason and to improve transparency, Ofgem proposes to modify standard conditions 4 – 4C of the distribution licence to include an obligation on the DNO to prepare methodologies for connection to and use of the distribution system to be approved by Ofgem.
- In line with Ofgem's decision in December 2003 on distribution rebates to suppliers, the changes required to standard condition 4 have been included as part of this consultation. The changes required to the Special Conditions will be included with the Distribution Price Control Review (DPCR) licence modification consultations later this year.
- Further changes are required to conditions 4 – 4C to deliver the proposed interim arrangements for the structure of distribution charges.

Ofgem welcomes any comments on this document and specifically the proposed licence modifications. Respondents are requested to provide their responses by 7 May 2004 including any representations or objections from distribution licence holders.

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1. Introduction

- 1.1. The current structure of electricity distribution charges has not changed significantly since the 1980s. In December 2000 Ofgem undertook an initial consultation to review whether this structure remained appropriate. This review was driven by concerns over the divergence of charging arrangements between different distribution companies and also the recognition that with the expected increase in distributed generation the current arrangements were flawed.
- 1.2. Following this initial consultation, Ofgem consulted further during 2002 and 2003 and held public workshops, leading to the publication of an Initial Decision document in November 2003. The November document proposed that by April 2005:
 - ◆ there will be a common connection boundary for demand and generation;
 - ◆ generators will no longer pay deep connection charges;
 - ◆ new generators will face use of system charges within a framework designed to avoid unnecessary unpredictability;
 - ◆ distribution companies will be required to justify their approach and methods for setting tariffs; and
 - ◆ work will be under way on the development of long-term models to set tariffs.
- 1.3. Ofgem received 32 responses to the November document. These represented distribution network operators (DNOs), suppliers, demand customers, generators, micro generators and other interested bodies. Copies of all non-confidential responses are available from the Ofgem website (www.ofgem.gov.uk). A full summary of the responses is given in Appendix 3 to this document.

Purpose of this document

- 1.4. The purpose of this document is two fold. Firstly, it is the statutory consultation on the modifications to the electricity distribution licences. Secondly it provides further detail on Ofgem's thinking, specifically on the interim charging arrangements.
- 1.5. This document details the statutory consultation on the proposed electricity distribution licence modifications. EC Directive 2003/54/EC requires Ofgem to approve at least the methodologies that DNOs use to set charges for connection to and use of the distribution systems. This requires changes to the standard conditions of the distribution licence. Changes to the distribution licence are also required to implement Ofgem's initial decisions on structure of charges and also to capture the changes proposed following the rebates review. All these changes require modifications to standard condition 4 and therefore have been included within this statutory consultation.
- 1.6. Following responses to the November decision document and further work within the ISG, Ofgem's view on the interim arrangements has developed. Specific areas include the proposed connection charging boundary, the generation use of system methodology and the proposed format for the methodologies and the associated change process that should be followed. This detail is provided later in this document.

Structure of this document

- 1.7. The structure of this document is as follows:
 - ◆ Chapter 2 Licence Modifications
 - ◆ Chapter 3 Interim Arrangements
 - ◆ Chapter 4 Longer Term Framework
 - ◆ Chapter 5 Summary Impact Assessment
 - ◆ Chapter 6 Implementation

- ◆ Appendix 1 Notice and Modification of Electricity Distribution Licence pursuant to Section 11A of the Electricity Act 1989
- ◆ Appendix 2 Connection Charging Methodology Guidance
- ◆ Appendix 3 Summary of responses to November 2003 Initial Decision Document

Project timetable

1.8. The table below sets out the timetable for the structure of charges project. This sets out the key output milestones for the implementation phase of the project. The next update paper is expected to be October 2004 and will be in the form of a consultation on the proposed DNO charging methodologies.

Date	Milestone
1 July 2004	Implementation deadline for EU Directive 2003/54/EC
July 2004	DNOs submit draft 2005/06 charging methodologies to Ofgem
August 2004	Ofgem provides comments on draft methodologies
September 2004	DNOs submit proposed methodologies including indicative charges to Ofgem for approval
October 2004	Ofgem consults with Industry on DNO proposed charging methodologies
By end of 2004	Ofgem reports on results of DNO charging methodologies approval process
1 April 2005	Implementation of interim arrangements
Mid 2005	Consultation on long term charging model
Early 2006	Second consultation on the long term charging model. DNOs to publish details of proposed use of system models and methodologies and also indicative charges to apply from implementation of the long term arrangements
Mid to late 2006	Ofgem to publish final proposals on the long term charging model

Responding to this document

- 1.9. Any representation or objection to the proposed licence modifications should be made on or before 7 May 2004 to the address below marked for the attention of Mark Cox. Ofgem would also welcome responses and comments on the content of the update document and these should also be received by 7 May 2004 and sent to the address below.

Mark Cox
Networks - Distribution
Office of Gas and Electricity Markets
9 Millbank
London
SW1P 3GE
Tel: 0207 901 7458
Fax: 0207 901 7478
Email: mark.cox@ofgem.gov.uk

- 1.10. All responses will be held electronically in Ofgem's Research and Information Centre. In addition, they will normally be published on the Ofgem website unless they are clearly marked confidential. Where possible, consultees should put confidential material in appendices to their responses. Ofgem prefers to receive responses electronically so that they can easily be placed on the website.
- 1.11. Copies of this document and other material relating to this project are available on the Ofgem website.
- 1.12. Should you have any questions regarding the issues raised in this document please contact Mark Cox on 0207 901 7458.

2. Licence Modification

Proposed Modifications

- 2.1. This document incorporates the statutory consultation on the proposed modification of distribution licences pursuant to Section 11A of the Electricity Act 1989 (“the Act”). Appendix 1 includes a modification proposal notice along with the detailed proposed modifications.
- 2.2. The proposed modifications cover changes to standard licence conditions 4 – 4C along with additional definitions in standard licence condition 1. The licence modifications are required:
- ◆ to comply with EC Directive 2003/54/EC which concerns common rules for the internal market in electricity, the modifications put an obligation on the relevant DNO to produce charging methodologies for both connection to and use of the DNO’s distribution system;
 - ◆ to deliver the proposed changes for electricity distribution rebates to suppliers². This will only include those changes necessary to standard licence condition 4. Further changes will be required to the special licence conditions, as detailed in this decision document and these will be addressed through the distribution price control workstream; and
 - ◆ to deliver the proposed changes to the structure of charges detailed in the November Initial Decision document. This is specifically to remove the 25 per cent connection charging rule and introduce changes to allow apportionment rules to determine a proportion of reinforcement costs to be included in the connection charge.
- 2.3. The licence changes as discussed in previous documents are similar to those conditions for the electricity transmission companies as detailed in supplementary standard conditions C7-C7E (for England and Wales) of the

² Electricity distribution rebates to suppliers 155/03 – decision document December 2003

transmission licence. They require the DNO to determine connection and use of system charging methodologies for approval by the Authority and outline the process for making subsequent amendments to the methodology.

- 2.4. The licence modifications require DNOs in the first instance to put in place methodologies for the purposes of determining tariffs and charges to be effective from April 2005. To ensure that draft tariffs can be published in good time it is expected that DNOs will have their charging methodologies approved by the Authority by the end of 2004 following industry consultation.
- 2.5. Once the methodologies have been established the DNO is required to keep the methodologies under review, and where appropriate make modifications requisite for the purposes of better achieving the relevant objectives.
- 2.6. Any proposed modifications to the methodologies will be assessed against better achieving the relevant objectives which follow the principles that have been outlined in the June³ and November documents. These objectives are incorporated within the licence. The relevant objectives are:
 - ◆ that compliance with the charging methodology facilitates the efficient discharge by the licensee of the obligations imposed upon it under the Act and by its licence;
 - ◆ that compliance with the charging methodology facilitates effective competition in the generation and supply of electricity, and does not restrict, distort or prevent competition in the transmission or distribution of electricity;
 - ◆ that compliance with the methodology results in charges which reflect, as far as reasonably practicable (taking account of implementation costs), the costs incurred by the licensee in its distribution business; and

³ Structure of electricity distribution charges: Initial conclusions, June 2003 reference 43/03

- ◆ that so far as consistent with the above objectives, the methodology, as far as reasonably practicable, will take account of developments in the licensee's distribution business.

2.7. It is important that connected parties, users of the distribution system and interested parties are consulted when significant changes to the methodologies are proposed to ensure that a balance of views is considered. However, Ofgem recognises that it may not be the most efficient approach to require the DNOs to consult for all changes proposed, particularly considering that similar changes may occur to more than one of the DNO methodologies at the same time. Therefore an explicit licence requirement on the DNO to consult has not been proposed and this should avoid the process becoming overly cumbersome. In many cases though it will be important to consult and seek views from the industry and interested parties and therefore it is proposed that Ofgem undertake consultations on proposed modifications where it is deemed to be appropriate. In these cases any decision on the proposed modification will be delayed until the consultation is complete.

EC Directive 2003/54/EC and EC Regulation 1228/2003

- 2.8. In the November 2003 document Ofgem noted that both the EC Directive and EC Regulation may require consideration in relation to the structure of charges work. As detailed above Ofgem has included within the proposed licence modifications the changes necessary to meet the requirements of the EC Directive.
- 2.9. Several respondents to the November document raised the concern that they did not believe that the EC Regulation affected the structure of charges project and sought clarity. Ofgem has reviewed the regulation and supports the view that it has limited impact on the structure of charges project at this stage. It considers 'progressive harmonisation of the underlying principles of setting charges' and therefore no changes have been proposed.

Electricity Distribution Rebates to Suppliers

2.10. The proposed licence modifications, as detailed earlier in the document, also include the changes to the standard licence conditions required to bring into effect the decisions in the December 2003 document on electricity distribution rebates to suppliers. The decision document outlined:

- ◆ DNOs should only be allowed to give rebates with the prior consent of the Authority;
- ◆ the notice period for DUoS tariff changes will be reduced to three months;
- ◆ a 'deadband' will be introduced within which penal interest rates will not be levied for over or under recovery of less than or equal to two percent of allowed revenue. The interest rate in this band will be equivalent to the 'base rate' plus one and a half percent;
- ◆ the penal interest levied on the whole amount of any over recovery if it is greater than two percent of allowed revenue will be reduced to 'base rate' plus three percent; and
- ◆ DNOs will be required to include information on any recent or proposed rebates in an annex to DUoS charging statements.

2.11. Ofgem requested responses regarding the decisions and particularly the form of changes to standard and special conditions. Ofgem received 6 responses to this document and the issues associated with implementation are summarised below.

2.12. There was general support for the changes proposed by Ofgem, although one respondent felt that the proposed changes would provide perverse results when combined with the existing 'best endeavours' requirement to set charges within

the price control ceiling. Another felt that the changes would not address the primary concern as they will not directly affect the pricing policy of suppliers.

- 2.13. Some respondents raised concerns over the timing and interaction of approval of the charging methodology documents and information on rebates becoming available. Concern was also raised as to the transparency of the process that Ofgem would go through in determining whether rebates should be allowed.
- 2.14. Ofgem is considering amending the 'best endeavours' obligation in special condition B and the wording under special condition C. Ofgem believes that the proposal to reduce the notice period for a change of use of system charge from five months to three months will allow the DNOs to react more quickly to events over which they have little control but significantly affects its income. Ofgem does not expect the charging methodology to include a provision of a rebate to suppliers and that such changes will have to be agreed on a case by case basis with the Authority. The detail and the level of any rebates to be given will be contained within the proposed use of system charging statement which will be revised as necessary.
- 2.15. There was support from respondents to make the necessary modifications to the standard and special licence conditions coincident with the structure of charges review and the price control review respectively. The structure of charges workstream is addressing the standard licence condition modifications only and it is noted that the changes to the special licence conditions outlined in the December 2003 electricity distribution rebates to suppliers decision document will be included within the DPCR decision documents and the proposed special licence conditions modifications.

3. Interim Arrangements

Charging Methodologies

- 3.1. As discussed in chapter 2, the proposed licence modifications place a requirement on licence holders to determine methodologies for use of, and connection to, distribution systems.
- 3.2. Proposed licence condition 4 'Charges for use of system' sets a requirement on DNOs by 1 April 2005 to determine a use of system charging methodology and prepare a statement of the use of system charging methodology, which are to be approved by the Authority. Condition 4 also requires DNOs to prepare a statement, in a form approved by the Authority, of charges for use of the system. From 1 April 2005, this statement must be prepared in accordance with the use of system charging methodology.
- 3.3. Proposed licence condition 4B 'Connection charging methodology' sets a requirement upon DNOs by 1 April 2005 to determine and prepare a statement of the connection charging methodology approved by the Authority. This statement will set out the basis upon which charges will be made for connection to the distribution system. The statement must be in such form and in such detail to enable any person to make a reasonable estimate of connection charges. Where practicable this should include examples of the connection charges likely to be made in different cases.
- 3.4. As explained in chapter 2, DNOs will be required to comply with the conditions relating to methodologies from 1 April 2005. In order for DNOs to set their charges the charging methodologies will need to be approved some time before this date. Ofgem's project timetable expects DNOs to have their methodologies approved by the end of 2004. It is proposed that the form and the detail of these methodologies will be developed during 2004 with a formal consultation with the industry on proposed methodology statements in October 2004. In order to support the October consultation, Ofgem proposes that DNOs will prepare indicative charges based on the proposed methodologies. For clarity, demand tariffs will be based on revenues for 2004/05 as the final allowed revenues for 2005/06 will not be known at this time due to the price control review. If the

methodology is unchanged and hence the tariffs are unaffected, then the DNO should state this. If the methodology proposed differs from that used to set 2004/05 tariffs, the submission should show the impact of the new methodology on tariffs.

- 3.5. The rebates consultation process in 2003 proposed that DNOs be required to give three months prior notice to users of changes to their use of system charges, a reduction from the existing five months notice period. Assuming methodologies are approved in November or December 2004, DNOs will need to publish their 2005/06 indicative charges by 1 January 2005. At this time, Ofgem's final proposals for the 2005-2010 allowed revenue will have also been published. It is expected that the final statement of charges will be published in February 2005, once the final tariffs have been determined.
- 3.6. Once the methodology statements are in place, DNOs will be required, at least once per year, to review the methodologies and make any changes necessary to ensure that they better achieve the relevant objectives. Any subsequent proposed modifications will follow the process detailed in the licence conditions. This process is similar to the existing electricity transmission model. The DNO will be responsible for putting forward modifications that it believes better achieve the relevant objectives.
- 3.7. There is some variance from the transmission licence conditions for the consultation process. It is Ofgem's view that it may not be appropriate or the most efficient process to require DNOs to consult with the industry on every proposed modification. Because there are currently 14 distribution licensees, there is a greater chance that similar changes may be proposed by DNOs at the same or different times, and, through Ofgem consulting where it believes it to be appropriate, the efficiency of this process will be improved. For instance this may allow Ofgem to consult on several DNO methodology changes at the same time and reduce the burden on DNOs, suppliers, distributed generators and other industry parties.

Guidance for DNO methodologies

- 3.8. As discussed earlier in this chapter, Appendix 2 sets out the draft guidance for the connection charging boundary rules. This guidance note has been developed following initial discussion with the Implementation Steering Group (ISG), and sets out Ofgem's view of the appropriate approach to the setting of connection methodologies. Views are invited on the proposed approach.
- 3.9. The connection charging rules set out in Appendix 2 are not exhaustive and are not intended to cover every distribution scenario. It is for DNOs to consider more detailed charging rules based upon their own business needs and to ensure that any abnormal connection requests can be managed effectively.
- 3.10. Similarly, further consideration is given later in this chapter to generator use of system charging methodologies. These proposals will form the basis of a further guidance note to be published by Ofgem.

Form of the methodology statements

- 3.11. In order to ensure that the different DNO methodology statements can be understood by users of the system and other interested parties, it is important that there is a degree of consistency in the form of the statements. Ofgem has stated that the methodologies should be in accordance with the principles stated in previous documents and which form the basis of the relevant objectives. To this end a limited degree of commonality is assured. In addition, the price control has developed a common framework to incentivise and facilitate the connection of distributed generation. Consequently Ofgem would expect the DNOs to adopt similar approaches when developing their charging methodologies. The production of guidance notes, such as the connection charging boundary provided in Appendix 2, will also aid in this consistency. Furthermore it is Ofgem's view that greater openness in the publication of the methodology will promote predictability for users. Nevertheless views are invited from the industry and interested parties as to the desirable form and content of the methodology statements.

Ofgem process for initial approval of charging methodologies

- 3.12. Ofgem's timescales for the approvals process are set out above. It is envisaged that methodologies will be approved during November or December 2004. This will be preceded by a period of consultation with the industry, to be managed by Ofgem.
- 3.13. Before Ofgem gives its approval to the DNO charging methodologies it must be satisfied that they meet the relevant objectives as defined in the proposed licence conditions 4A 'Use of system charging methodology' and 4B 'Connection charging methodology'. The relevant objectives for both use of system charging methodologies and connection charging methodologies are:
- (a) that compliance with the charging methodology facilitates the efficient discharge by the licensee of the obligations imposed upon it under the Act and by this licence;
 - (b) that compliance with the charging methodology facilitates effective competition in the generation and supply of electricity, and does not restrict, distort or prevent competition in the transmission or distribution of electricity;
 - (c) that compliance with the charging methodology results in charges which reflect, as far as is reasonably practicable (taking account of implementation costs), the costs incurred by the licensee in its distribution business; and
 - (d) that, so far as is consistent with sub-paragraphs (a), (b) and (c), the charging methodology, as far as is reasonably practicable, properly takes account of the developments in the licensee's distribution business.
- 3.14. In addition to assessing whether methodologies meet relevant objectives, when deciding whether to approve methodologies, Ofgem will also:
- ◆ consider responses to the consultation process; and

- ◆ consider whether the methodology statements take account of the guidance given in this document.
- 3.15. Ofgem will not approve a charging methodology if it does not believe that it meets the relevant objectives. It is Ofgem's view that there are different ways in which DNOs could set charges in order to satisfy the relevant objectives. The proposed licence condition recognises that the methodologies will need to develop over time and places a requirement on DNOs to review them at least once per year. This will lead to methodologies evolving and improving over time.

Connection Charging

- 3.16. In the November decision document it was recognised that the decision on the boundary between connection charges and use of system charges is subject to the extent to which manageable models can be developed that reflect forward looking economic costs and benefits in use of system charges. These models are not yet in a usable form and therefore for the interim period, while further consideration is given to use of system models, it is appropriate to retain stronger locational signals through a shallowish connection charge. This connection charge will include costs for the provision of assets for connection to and extension of the network along with a contribution to the costs of any required reinforcement assets.
- 3.17. Ofgem proposed that there will be a common connection charging boundary for both demand and generation which means a move away from the deep connection charging regime for distributed generation. Also the current rules for demand include a de minimis 25 per cent rule for the allocation of reinforcement costs. This has led to perverse incentives around the threshold due to its 'cliff face' approach and therefore it is proposed to replace it with more proportionate methods which means that connecting parties (both demand and generation) are required to contribute to reinforcement costs on a sliding scale basis.
- 3.18. Respondents to the November document supported the move to a shallowish arrangement and also the removal of the 25 per cent rule, with some respondents noting that it created distortions at the threshold and should be

replaced by an assessment of usage. There was support for demand and generation to be treated equally from a connection boundary perspective and that the same rules should apply independent of voltage. Other respondents felt that EHV charges should be treated differently and the DNO should be able to determine EHV charges separately due to the perceived risks.

3.19. Ofgem has worked with the ISG members and a sub group of ISG members to develop the connection charging rules since the November document. In developing the connection charging rules, Ofgem has considered the responses to the November document along with discussions within the ISG forum and tried to achieve a set of rules that are broadly cost reflective but also transparent and straightforward and practical to apply in the majority of cases. The rules are attached in Appendix 2 in the form of a guidance note. It is expected that the guidance note will form the basis of the methods that DNOs will use in determining connection charges. Ofgem's approval process will consider whether the DNO's proposed methodology complies with the guidelines. It is proposed that the guidelines apply to both demand and generation connections and apply to all distribution voltages including EHV (up to 132kV in England and Wales, to 33kV in Scotland). Briefly, the note proposes that:

- ◆ connection charges include any additional assets required to connect the party to the existing Distribution system, including any system extensions, along with a contribution, determined by the apportionment rules, to any reinforcement of existing distribution assets;
- ◆ apportionment rules provide a sliding scale approach to contributions from a connecting party to reinforcement costs;
- ◆ reinforcement costs will be limited to one voltage level above; and
- ◆ connection charges may include where appropriate a contribution to the costs of existing reinforcement assets.

3.20. All of these guidelines apply to both demand and generation.

3.21. The apportionment rules for reinforcement costs have been split between an effective network capacity rule based on analysis of the security of the network against planning standards (ER P2/5) and a fault level rule. In general these are

the two sets of criteria that will cover most scenarios. It is expected that there may be interaction between these rules particularly where multiple reinforcements are required on very complex schemes. Ofgem expects that the DNO will design the minimum network solution to allow the connection of the relevant party and apply the rules in a consistent manner, which means that the security rule will be applied to the reinforcement works which are driven by compliance with the security requirement, while any other costs (not already apportioned according to the security rule) associated with any reinforcement of assets to ensure that network fault levels remain within rating will be apportioned based on the fault level rule.

- 3.22. Ofgem believes that the proposed apportionment rules provide sufficient locational cost signal within the connection charge but equally recognise the benefit that other users will get from the assets installed. In the case of network reinforcements the existing assets will be removed and in some cases will be old or not reusable but in other cases will have some residual value. Consideration was given to the value of these assets and how this should be attributed and Ofgem supports the view that with the proposed charging rules this value (asset) should be retained by the DNO on behalf of customers in general for future use on the system where appropriate.
- 3.23. Further consideration has been given to charges as a second (or subsequent) comer contribution. Under the connection charges regulations⁴ at present, if a new connectee (the second comer) uses assets that have already been paid for by a previous connectee (first comer) then, with certain restrictions, DNOs are required to charge the second comer a proportion of the costs and pay these to the first comer. Under the interim arrangements this will continue for new connection assets but for reinforcement assets the first comer will only have paid a proportionate share of reinforcement costs so would not have 'over-paid' and would not need or merit a repayment. However, in this case it is important that the second comer is still charged a proportionate share of these reinforcement assets to ensure that they are not free loading on the original investment. It is proposed that DNOs, where appropriate, charge the second comer a proportionate share of the reinforcement costs. It may be appropriate that a de

⁴ The Electricity (Connection Charges) (Amendment) Regulations 2002, Statutory Instrument 2002 No.3232

minimis level is used to ensure that such a proposal is workable and does not impose undue implementation costs on the DNO. This will be for DNOs to propose as part of their methodologies. Where a contribution is made this amount will be netted off the value of the original asset in the Regulatory Asset Value (RAV).

- 3.24. EHV charges will normally be treated on the same basis as other charges with the same connection charging boundary apportionment rules for both demand and generation. It may be appropriate that due to the size of the connection charges involved and the more limited number of connectees that the DNO and the connectee enter into negotiations which may lead to these charges being recovered over a period of time rather than as a one off charge.
- 3.25. DNOs have a duty under the Act to connect parties (Section 16) but there is also provision under Section 22 for a DNO to enter into a special connection agreement on such terms as may be agreed by the parties. It is recognised that it may not be appropriate to detail all the possible arrangements that a DNO may enter into under section 22 in the connection charging methodology as these will be subject to negotiation between the DNO and the connectee. However, it should be noted that such arrangements can exist.

Generation Use of System Charging

- 3.26. The November document proposed the introduction of a generator use of system charge for the interim arrangements. These arrangements will replace the current deep connection charging regime which is considered to be a barrier to entry and provides incentives to defer the timing of connection. It will also facilitate the move to proposed long term arrangements which should model and assess the marginal costs and benefits of demand and generation on the distribution network.
- 3.27. The distribution price control proposes to incentivise DNOs to connect and utilise distributed generation. The proposed incentive will operate through a mechanism that is a partial pass through along with a £/kW/year incentive rate. This is intended to provide DNOs with an incentive to adopt proactive and

innovative solutions to connecting generation where it is economic to do so. Ofgem's view is that these costs and incentives should be borne by the connecting generator through a use of system charge. This hybrid mechanism is being developed through the distribution price control workstream but it is expected that the level of pass through will be 80% and the incentive payment will be £1.5/kW/year. There will also be a £1/kW allowance for operations and maintenance costs.

- 3.28. Responses to the November document in general supported the move towards a generator use of system charge but stressed that they should be predictable and not overly complex and that true cost reflectivity could lead to volatility.
- 3.29. It will be for the DNOs to propose their approach to setting tariffs for distributed generators but essentially these methods should be cost reflective as far as practical and efficient to do so, should be predictable and not cause undue volatility. Initially, Ofgem expects that the charge will be capacity based and this may vary by voltage and location if this is appropriate. The DNO will determine the tariffs by considering what the likely costs are for connecting distributed generation at different voltage levels on their network and whether specific locations will incur significantly different costs. This analysis will form the basis of the tariff structure. The more accurate the forecasts are and the greater the degree to which they are represented within the tariffs the lower the scope for volatility in the tariff and the level of unpredictability.
- 3.30. Ofgem received several responses to the November document which considered the issue of microgeneration directly. There was concern that not sufficient consideration had been given to this distinct type of generation and that a 'blanket' generator use of system charge was inappropriate. As discussed above Ofgem's view is that users should be charged for the costs that they impose upon the network and expects that the generator use of system charge will reflect appropriately these costs. Although there have been mixed views on the impact of LV generation, there has been little evidence at this stage to suggest that microgeneration will impose any direct cost on the existing DNO network in the short term until there is significant penetration and there is some evidence to suggest that microgeneration may have some benefit in offsetting demand at peak times. As discussed in previous documents Ofgem recognises that the DNOs are best placed to identify where costs are imposed on the network and

will review the methodologies that are proposed. In determining how cost reflective a charge should be, consideration should be given to the costs of implementing the charging regime and an appropriate balance reached.

- 3.31. In the November document Ofgem considered the expected levels of generator use of system tariffs. From DNOs' own estimates of costs it was considered that generator tariffs would on average be less than £6/kW per year. The December 2003 Price Control document⁵ published further details on DNOs' projections of shared costs associated with future distributed generation connections. This information indicated that, for example, most projects (60 per cent by capacity), expected over the period, could be connected with unit costs of reinforcement less than or equal to £14/kW - which would equate to a use of system charge of less than or equal to £3.69/kW per year. Since November Ofgem has considered the connection charging boundary further and with the current proposals the boundary will be 'shallowish' with a proportion of the reinforcement costs recovered through connection charges up front and therefore the level of tariffs will on average be lower as the above numbers assume a shallow rather than shallowish connection.
- 3.32. Concerns were raised in the responses to the November document regarding the need for a tariff cap to be introduced to manage the volatility. Ofgem recognises that it is important that tariffs are predictable and are not unduly volatile and as discussed above this volatility will be limited by effective tariff models. However, there may still be a requirement in the short term for a tariff cap to be introduced to reduce volatility and unpredictability. This could be through an actual price cap or through a restriction on tariff changes year on year. However it is likely to be difficult to determine an effective overall price cap for a DNO's network and therefore Ofgem believes that to restrict year on year movements may be a more appropriate mechanism in the short term rather than a simple price cap.

⁵ Electricity distribution price control review, second consultation 171/03, December 2003

Billing Issues

- 3.33. A large number of the distributed generators are likely to operate through a supplier with the supplier registering the meters. In this scenario the DNO will be able to separately bill the supplier for any charges levied for that connection. This may be possible through the existing DUoSA⁶. However Ofgem does not believe that this should be the exclusive case and it is important that generators can choose to have a direct contractual relationship with the DNO for both connection and use of system. In such a case the charges would be levied directly on the generator.

Existing generators

- 3.34. As detailed in the November document, existing generators will not be included within the charging base (unless they opt in) and will receive a full rebate of the generator use of system charge until at least 2010. The position will be reviewed as the long term arrangements are developed.

Power Factor

- 3.35. It is important that connected parties are encouraged to operate their connections, whether demand or generation, near unity power factor to ensure efficient use of the system and maximise available capacity, avoid requirement for early capital expenditure in reinforcing the network and also to avoid increasing losses on the system. It is therefore Ofgem's view that DNOs should consider how best to reflect these costs.
- 3.36. Equipment exists that corrects for low power factor and therefore increases available capacity. This has the benefits of reducing losses, deferring the need for network reinforcement and improving voltage quality. Power factor correcting equipment can be installed both on customers' premises and on the network itself. Ofgem supports the use of this type of equipment because of the benefits outlined and is working with the Carbon Trust to make the case for Enhanced Capital Allowances for power factor correction equipment. It is

⁶ Distribution Use of System Agreement (DUoSA) – contract for suppliers using the DNO's distribution system

important that DNOs' charging arrangements reflect the costs that low power factors impose on the networks and Ofgem would expect DNOs to include charges for low power factors for large customers as part of any revised charging methodology.

Tariff Support Allowance and O&M

- 3.37. From 1 April 2005 Tariff Support Allowance (TSA) and Operations and Maintenance (O&M) charges will be removed from connection charges. It is proposed that O&M costs are recovered through use of system charges except where there are additional requirements specific to a particular connection which are above the normal level of assets required to be installed. In this case these may be recovered from the connecting party.
- 3.38. As detailed in the November document Ofgem noted that it may be appropriate for allowances for network adoption to be considered in the context of competition in connections. The purpose of removing TSA is to ensure that there is transparency in costs for connection to developers and other connecting parties. This does not imply that these networks should have different ownership or that incumbent DNOs should be restricted from adopting these assets if they have been constructed and installed by a third party.
- 3.39. Ofgem proposes that greater transparency is encouraged in this area to ensure that competition in the provision of connections is not obscured by the opportunity to adopt and own networks. This should help to enable the cost of connections to be minimised whilst providing a more transparent approach to network adoption.
- 3.40. In the short term the DNO will be required to breakdown connection charges, both for contestable and non contestable works, so that any developer or other connection customer can make effective decisions in the provision of the connection. Subsequent to this process the DNO or other licensed network operator may wish to adopt the network and where appropriate the DNO may make a network adoption payment. Any payment for subsequent adoption will be progressed as a separate process to the offer to connect.

3.41. It is Ofgem's initial view that incumbent DNOs should not be precluded from making a payment for the contestable assets as part of adoption but the incumbent DNO will not be obliged to make a payment. However, it is important that the levels of these payments are not set at unreasonable levels to ensure that end consumers are not disadvantaged. Further consideration will be needed to develop arrangements to ensure that the requirement to offer a connection to the DNO network is separated from the process of network adoption.

4. Longer Term Framework

- 4.1. In the November initial decision document, Ofgem proposed that progress towards the new regime for the structure of electricity distribution charges would be best achieved on an incremental basis, with interim changes to the connection boundary and the introduction of simple generator use of system charges on 1 April 2005. Once the interim regime is in place, DNOs would be able to progress towards the longer-term vision.
- 4.2. In the document, Ofgem explained that, in principle, the longer-term charging framework should treat generation and demand users on a consistent and cost-reflective basis. This would be achieved by the adoption of a common connection charging policy for new generation and demand connections. Ofgem explained the desirability of reflecting costs to users on a forward-looking long run incremental cost (LRIC) basis rather than solely in relation to connection costs incurred, minimising the problems associated with free-rider and first comer/second comer connections. Ofgem also set out its decision that the long term regime should seek to provide cost reflective locational signals, avoid unduly volatile or unpredictable charges and avoid undue or unmanageable complexity in use of system charges.
- 4.3. Ofgem explained that, particularly given the importance attached by prospective generators to predictability, it is not appropriate to pre-judge the issue of the most suitable use of system methodology. Work on the longer term models would benefit from progress to a stage where indicative charges can be set out prior to taking the decision to move to a shallow connection policy, or prior to reaching a firm conclusion about where the appropriate connection boundary lies.
- 4.4. On the issue of timescales, Ofgem explained that its intention was for DNOs and other interested parties to begin work on the longer-term solution during 2004, and to take this work forward during 2005.
- 4.5. In the November document, Ofgem outlined four possible use of system models:

- 2 generator and demand use of system charges;
- 3 contract path model; and
- 4 splitting the Regulatory Asset Base (RAB) between generation and demand customers.

4.6. Ofgem requested views on the initial thoughts detailed in the document.

Views of respondents

- 4.7. The majority of respondents to the November document supported Ofgem's vision for the longer term solution. Many respondents recognised that the impact of significant volumes of distributed generation connections to distribution systems will require changes to the regime to better reflect the changes in the role of distribution networks. In general, respondents welcomed Ofgem's decision to progress towards the longer-term solution using an incremental approach.
- 4.8. There was general support for the implementation in the longer-term of cost reflective models based on long run incremental costs. The majority of respondents who offered views on the longer term framework favoured further investigation of options 1 (entry-exit model) and 2 (generator and demand charges) and the abandonment of options 3 (contract path) and 4 (splitting the RAB). A common theme of the responses was the desire to achieve greater clarity on the models and cost drivers in the short term rather than the long term, and there was also a general consensus that the work on developing the long term regime should seek a simple and transparent system with obvious benefits for network users and customers.
- 4.9. The longer term solution for connection charging was generally welcomed, although a number of DNOs were concerned that pricing signals, while obvious in connection charges, could be diluted if moved to use of system charges. Some respondents expressed strong opinions that progress to a regime of shallow connection charges that contain locational messages for the majority of connections could not be achievable at an economic cost.

- 4.10. There was also support for the principle that the longer term solution should avoid unduly volatile or unpredictable charges, and also for it to avoid, where possible, undue complexity in charges.
- 4.11. There were some comments on the timing for the introduction of the longer-term regime. Some parties felt that DNOs should be encouraged to bring the introduction of LRIC models forward from the 1 April 2010 deadline if possible, and one DNO commented that DNOs should have the freedom to implement these models as and when they are individually developed by DNOs rather than being dictated by the pace of the slowest DNO.
- 4.12. As well as responses from DNOs, larger generators, suppliers and other organisations, there was also a significant volume of responses from microgenerators. These parties expressed concern over the use of system proposals and their application to microgenerators.

Ofgem's further thoughts

- 4.13. Ofgem is encouraged by the general support for the proposals for the development of the longer-term regime, and notes the acceptance from many interested parties that progress towards the longer-term model is best achieved on an incremental basis, with interim arrangements to be introduced on 1 April 2005.
- 4.14. Ofgem also notes the comments of some parties that DNOs should be encouraged to bring forward the implementation of LRIC models sooner than 1 April 2010 if this can be achieved. If appropriate use of system charging models can be developed that are cost-reflective, predictable and not unduly complex then a case for earlier implementation of a LRIC model by individual DNOs should be made. This is supported by Ofgem but it is important that such changes are developed and presented to interested parties at an early stage and with sufficient notice and detail so that any change can be considered. Any changes to a DNO's connection charging and / or use of system charging methodology would need to be brought about by a change to the approved methodology, and would require the DNO to demonstrate that the modification proposal(s) results in the DNO better meeting the relevant objectives. Further

details of the process for modifying methodologies once they are in place is given in chapter 3.

- 4.15. It remains Ofgem's view that the longer-term regime is best served by the introduction of cost reflective forward looking LRIC models for use of system. In light of responses to the November document, the most appropriate model might be based upon either option 1 from the document (LRIC model based upon an either an entry-exit charging model) or option 2 (generator and demand use of system charges), although Ofgem does not wish to preclude work on alternative options at this stage.

Way forward

- 4.16. As highlighted in the November document, significant work remains before a firm conclusion can be drawn on the best approach to adopt for the structure of electricity distribution charges in the longer term.
- 4.17. Because many of the aspects of the longer-term regime are known e.g. moving away from deep generation connection charges and moving to a common boundary for demand and generation connections, the incremental approach to introducing the new regime will allow many of the benefits of the revised charging arrangements to be introduced in April 2005, coinciding with the start of the 2005-2010 price control period. It is expected that DNOs will begin to develop the longer term arrangements during 2004/05, with a view to implementing improvements to the interim regime charging arrangements in the period 2005-2010. With the introduction of the new charging methodologies and intrinsic modification process, Ofgem expects that the development of the longer-term arrangements will be a mixture of evolution supported by the Ofgem led review in 2005.
- 4.18. To continue to support the ongoing work, it is expected that the ISG will continue until at least the end of 2004 so as to ensure that the interim arrangements are implemented to plan and on time for 1 April 2005. During the latter part of 2004, it is Ofgem's intention that the ISG will begin to consider the longer-term arrangements in detail. Once the interim arrangements have been introduced in 2005, Ofgem is willing to consider the possibility of the ISG

continuing as a regular forum to facilitate in the development of the longer-term methodologies.

- 4.19. In addition to the work of the ISG, the industry is also involved in the establishment of a commercial forum with terms of reference that focus on governance arrangements within the electricity distribution industry. As this may lead to the development of model contract terms for the governance of connection to and use of distribution networks, it is important that the ISG and the commercial forum establish close ties and are kept informed of developments.

5. Summary Impact Assessment

- 5.1. The November Initial Decision document contained a draft regulatory impact assessment (RIA) covering the costs and benefits of Ofgem's initial decision on the revised charging arrangements.
- 5.2. The RIA was based on the proposals contained in that decision document, which are now being implemented. Ofgem has reviewed the RIA and found that, since there has been no policy change since November, the cost benefit analysis remains valid, and is not being reproduced in this document.
- 5.3. Respondents to the November document expressed satisfaction with the progress made in the RIA, and an interest in further understanding the costs of the interim arrangements. As implementation progresses, it is increasingly important to understand that these costs are closely tied into the price control's emerging conclusions on the distributed generation hybrid mechanism.
- 5.4. With this in mind, the structure of charges and DG RIAs have been combined. This amalgamated RIA⁷ was published with the DPCR4 March document, and is available from the Ofgem website. Specific comments on the RIA should be included in responses to the March DPCR document, and will be considered by price control and distribution policy teams in tandem.
- 5.5. Risks associated with the implementation of the new regime continue to be monitored and assessed as part of Ofgem's work on implementation, and updates will be provided as necessary. Further detail on costs will also be included in the October structure of charges document, since this will consult on DNO connection and use of system methodologies for 2005.

⁷ Regulatory Impact Assessment for distributed generation and structure of distribution charges 62c/04

6. Implementation

- 6.1. The November 2003 document set out Ofgem's initial decision on the structure of electricity distribution charges and explained the implementation process and high-level project timetable.

Views of Respondents

- 6.2. Many of the respondents to the November document offered views on the issue of implementation. There was general support for the phased approach to implementation, although several respondents commented that the possibility of implementing the longer-term arrangements in 2010 was unnecessary delay. There were also a number of respondents that lobbied for an acceleration of the implementation process, with a general recognition that there was much work to be completed in the early part of 2004 if the 1 April 2005 milestone was to be achieved.
- 6.3. On the issue of charging, one DNO expressed concern that the final details of the price control would not be known until November 2004, and commented that DNOs would not be able to publish 2005/06 indicative charges until after this time. Another DNO raised the issue of consistency between DNOs, commenting that it may not be necessary for DNO charging policies to be developed at the same pace given that the pattern of DG growth was likely to differ between DNO areas. Generator representatives requested that Ofgem continue to involve a wide range of parties in the decision making process.
- 6.4. On the subject of the Implementation Steering Group (ISG), there was praise for the work carried out by the group. ISG members were committed to continuing to support the ongoing process. There were also calls from the microgeneration community for smaller generator representation on this group.
- 6.5. Respondents were also generally in favour of the creation of a commercial governance forum, although there was a general view that work on the structure of charges should not be within the scope of the forum to avoid delay whilst the forum is established. One DNO noted that much could be done on a bilateral basis to improve communication between parties, and that formal groups were more relevant to consideration of major regulatory change.

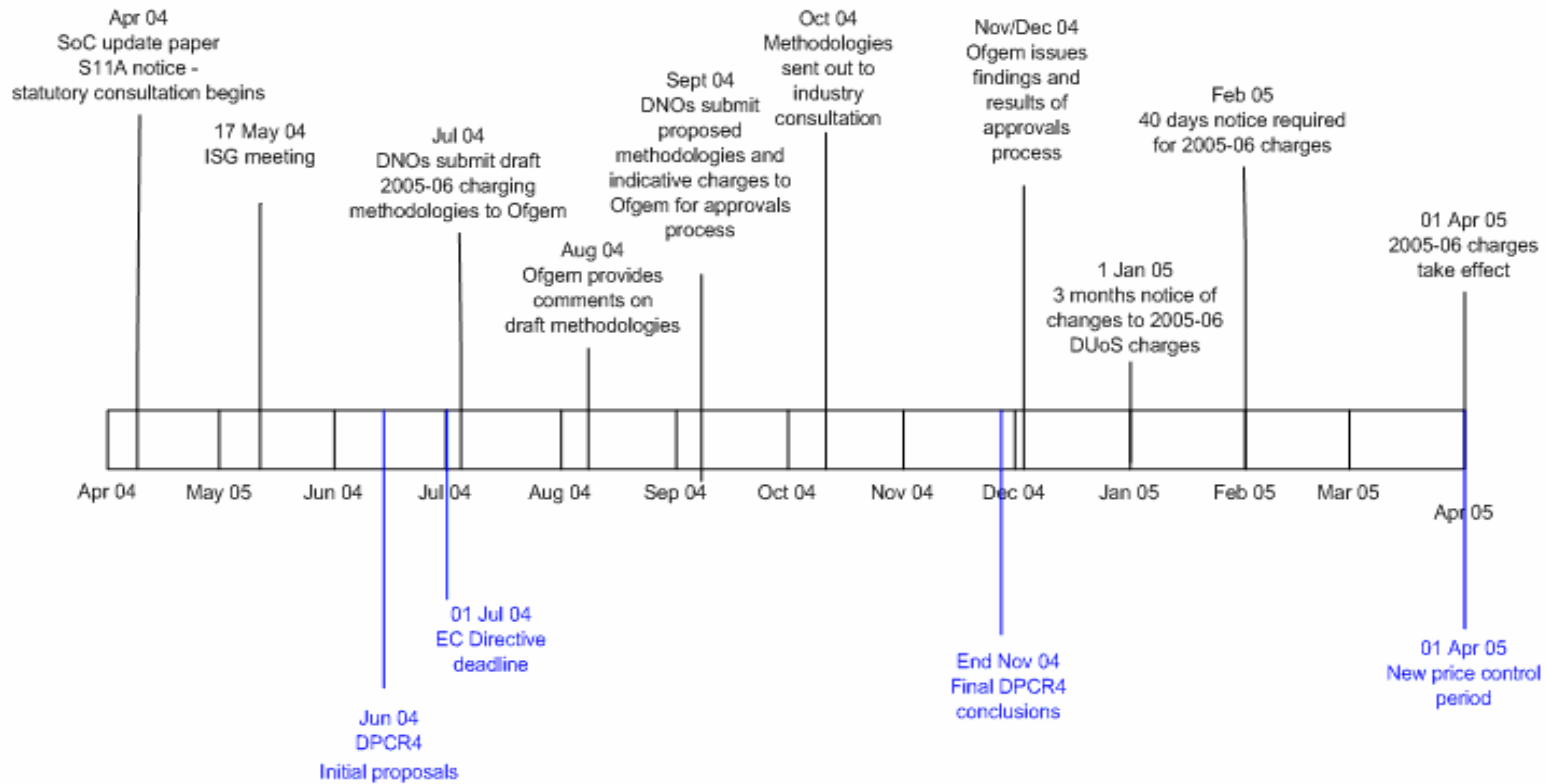
Timetable

- 6.6. This document has built on the content of the November document and has explained the process for implementation in more detail. A project timeline, showing the key events until the 1 April 2005 milestone is shown overleaf.

Implementation steering group (ISG)

- 6.7. The ISG has supported the structure of charges project since its formation in September 2003. The group comprises representatives of each of the DNO groups, suppliers, distributed generators and customers. The ISG has met approximately every six weeks, and Ofgem has found the knowledgeable debate within the group to be extremely useful in taking forward the structure of charges project.
- 6.8. The ISG terms of reference for the group can be accessed via the Ofgem website at http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/4764_Implementation_SteeringGroup_TermsReference_Oct03.pdf
- 6.9. Ofgem expects the ISG to continue until at least the end of 2004 so as to ensure that the interim arrangements are implemented to plan and on time for 1 April 2005. During the latter part of 2004, it is Ofgem's intention that the ISG will begin to consider the longer-term arrangements in more detail. Once the interim arrangements have been introduced in 2005, Ofgem is willing to consider the possibility of the ISG continuing as a regular forum to facilitate in the development of the longer-term methodologies.
- 6.10. For further information about the ISG, please contact Clover Powell at clover.powell@ofgem.gov.uk

Structure of electricity distribution charges - project timetable to April 2005



Commercial forum

- 6.11. In the November document, Ofgem provided an update on the possibility of the creation of a commercial forum to discuss common commercial, administrative and regulatory issues affecting the electricity distribution industry.
- 6.12. On 28 November 2003, Ofgem hosted a half-day industry seminar to gain views on the need for a forum. Following a positive response from seminar attendees, Ofgem convened an initial forum on 10 February 2004, where terms of reference were discussed and group members agreed to form two sub-groups to look at different areas of work affecting the group. For further information about the forum and sub-groups, please contact Georgina Lawrence at georgina.lawrence@ofgem.gov.uk
- 6.13. Although Ofgem believes it important to keep the work of the commercial forum and the ISG separate, there will be some overlap between the groups, for example in discussions about model contract terms for the governance of connection to and use of distribution networks. It is therefore important that the ISG and the commercial forum establish close ties and are kept informed of developments.

Transitional arrangements

- 6.14. The changes to the charging arrangements including the removal of TSA and O&M and changes to the connection charging boundary provide transitional issues with connection offers made before April 2005. It is important that DNOs charge in accordance with the published Condition 4 statement but it is recognised that there needs to be a move towards the new arrangements. It is expected that any contracts in place prior to the interim arrangements coming into effect will be honoured but that DNOs should be mindful of the proposed changes when making offers to new participants and arrangements should be agreed between the two parties.
- 6.15. The changes proposed for generation are more substantial and Ofgem supports the approach taken by some DNOs to offer generators an option of an annualised charge for reinforcement works which could more easily be replaced by a generator use of system charge.

6.16. Consideration will need to be taken of how the charges established for the interim arrangements will then work along side or be incorporated within the long term charging arrangements. It is important that further differential charging regimes are not created. In order to limit the impact of this on generators who connect under the interim arrangements, it is proposed that any substantial changes towards longer term arrangements are published by the DNO a long time (e.g. minimum of 12 months) in advance of the introduction of any proposed new tariffs. This will allow generators under the interim arrangements or prospective generators to be aware of any possible changes to the charging regime.

Appendix 1 Notice and Modification of Electricity Distribution Licence pursuant to Section 11A of the Electricity Act 1989

Notice under Section 11A(3) of the Electricity Act 1989

The Gas and Electricity Markets Authority ('the Authority') hereby gives notice pursuant to Section 11A(3) of the Electricity Act 1989 ('the Act') as follows:

1. The Authority proposes to modify all of the distribution licences that are granted, or treated as granted, pursuant to Section 6(1)(c) of the Act, in two respects detailed below –

- a. By amending standard condition 1, Definitions and Interpretation by introducing two new definitions
- b. By substituting for standard conditions 4, 4A, 4B, and 4C the following new standard conditions
 - i. Standard condition 4 Charges for Use of System
 - ii. Standard condition 4A Use of System Charging Methodology
 - iii. Standard condition 4B Connection Charging Methodology
 - iv. Standard condition 4C Non-discrimination in the Provision of Use of System and Connection to the System
 - v. Standard condition 4D Requirement to Offer Terms for Use of System and Connection
 - vi. Standard condition 4E Functions of the Authority;

2. In summary, the reasons for the Authority proposing the modifications are to comply with EC Directive 2003/54/EC concerning common rules for the internal market in electricity and repealing Directive 96/92/EC, and to introduce proposed changes to the structure of charges as outlined in the November initial decision document⁸. Further detail is provided in a document published by the Authority on 6 April 2004 entitled "Structure of electricity distribution charges: update document and proposed licence modifications". A copy of the document is available (free of charge) from the Ofgem library, 9 Millbank, London SW1P 3GE (020 7901 7003) or the Ofgem website (www.ofgem.gov.uk).

⁸Structure of electricity distribution charges – initial decision document November 2003, reference 142/03

3. The effect of these proposed modifications will be to implement changes in the charging regime for connection to, and use of, the electricity distribution networks. The revised charging regime will facilitate the predicted increase in distributed generation, provide a robust and predictable long term charging framework for all network operators and users, and enable compliance with the above EC Directive. Further detail on the effect of the modifications is given in the "Structure of electricity distribution charges: update and proposed licence modifications" document.

4. The proposed licence modifications are annexed to this notice.

5. Any representations or objections to the proposed licence modifications may be made by 7 May 2004 and should be addressed to Mark Cox, 9 Millbank, London SW1P 3GE (020 7901 7458) or mark.cox@ofgem.gov.uk.



Martin Crouch

Director – Distribution, Networks

Authorised on behalf of the Authority

6 April 2004

Annex

TO NOTICE UNDER SECTION 11A ELECTRICITY ACT

Amendments to existing provisions of the distribution licence

Condition 1. Definitions and Interpretation

[All definitions within the above amended standard condition 1 remain the same save the following amendments]

“connection charging methodology” means the principles upon which, and the methods by which, for the purposes of better achieving the objectives referred to in paragraph 18 of standard condition 4B (Connection Charging Methodology), connection charges are determined.

“use of system charging methodology” means the principles upon which, and the methods by which, for the purposes of achieving the objectives referred to in paragraph 5 of standard condition 4A (Use of System Charging Methodology), use of system charges are determined.

Condition 4. Charges for Use of System

1. The licensee shall, by 1 April 2005:
 - (a) determine a use of system charging methodology approved by the Authority;
 - (b) conform to the use of system charging methodology as modified in accordance with standard condition 4A (Use of System Charging Methodology); and
 - (c) prepare a statement of the use of system methodology approved by the Authority of the methods by which and the principles on which the charges (if any) for availability of distribution capacity on the licensee's distribution system will be made.

2. The licensee shall prepare, other than in respect of a charge which the Authority has consented need not so appear, a statement, in a form approved by the Authority, setting out the basis upon which charges will be made for use of system; and in such form and in such detail to enable any person to make a reasonable estimate of the charges to which he would become liable for the provision of such services. From 1 April 2005, this statement shall be prepared in accordance with the use of system charging methodology. Without prejudice to paragraph 6 of this condition or paragraph 3 of standard condition 4A (Use of System Charging Methodology), if any change is made in the use of system charges to be so made other than in relation to charges to be made in respect of the use of system charging methodology, the licensee shall, before the changes take effect, furnish the Authority with a revision of the statement of use of system charges (or if the Authority so accepts, with amendments to the previous such statement) and/or (as the case may be) with a revision of the statement of the use of system charging methodology, which reflect the changes.

3. The statement referred to at paragraph 2 shall include:
 - (a) a schedule of charges for the distribution of electricity under use of system;

- (b) a schedule of adjustment factors to be made in respect of distribution losses, in the form of additional supplies required to cover those distribution losses;
 - (c) a schedule of charges in respect of accounting and administrative services;
 - (d) a schedule of the charges (if any) which may be made for the provision and installation of any electrical plant at entry or exit points, the provision and installation of which are ancillary to the grant of use of system, and for the maintenance of such electrical plant; and
 - (e) information of any electricity distribution use of system rebates given or announced to authorised electricity operators in the 12 months preceding the date of publication or revision of the statement
4. Approvals by the Authority pursuant to paragraphs 1(a) and 1(c) may be granted subject to such conditions relating to further action to be undertaken by the licensee in relation to the use of system charging methodology better meeting the relevant objectives set out in standard condition 4A as the Authority deems appropriate. Such conditions may include (but are not limited to) elements relating to the time by which action under the conditions must be completed.
5. Nothing in this condition shall affect the ability of the licensee to charge according to the statement issued pursuant to paragraph 2.
6. The licensee shall send to the Authority not less than 3 months prior to the date on which it proposes to amend its use of system charges in respect of any agreement for use of system, a notice setting out the licensee's proposals in relation to such amendment together with an explanation of the proposed amendment (including a statement of any assumptions on which such proposals are based), and the licensee shall send a copy of such notice to any person who has entered into an agreement for use of system in accordance with the provisions of this licence.
7. Except with the prior consent of the Authority, the licensee shall not amend its use of system charges in respect of any agreement for use of system save to the extent that it has given prior notice of the amendment in accordance with paragraph 6 and such amendment reflects the proposals made in the notice (subject only to revisions

consequent upon material changes in the matters which were expressed, in the statement which accompanied the notice, to be assumptions on which the proposals were based).

8. Unless otherwise determined by the Authority, the licensee shall only enter arrangements for use of system which secure that use of system charges will conform with the statement last furnished under paragraph 2 either:
 - (a) before it enters into the arrangements; or
 - (b) before the charges in question from time to time fall to be made,and, for the purposes of this paragraph, the reference to the statement last furnished under paragraph 2 shall be construed, where that statement is subject to amendments so furnished before the relevant time, as a reference to that statement as so amended.
9. References in paragraphs 1, 2, 6 and 8 to charges do not include references to connection charges.
10. The licensee may periodically revise the information set out in and, with the approval of the Authority, alter the form of the statements prepared in accordance with paragraph 1(c) and 2 and shall, at least once in every year that this licence is in force, make such revisions as may be necessary to such statements in order that the information set out in the statements shall continue to be accurate in all material respects.
11. The licensee shall give or send a copy of the statements prepared in accordance with paragraph 1(c) and 2, or (as the case may be) of the latest revision of such statements, to any person who requests a copy of such statement or statements.
12. The licensee may make a charge for any statement given or sent pursuant to paragraph 11 of an amount which shall not exceed the amount specified in directions issued by the Authority for the purposes of this condition based on the Authority's estimate of the licensee's reasonable costs of providing such a statement.

Condition 4A. Use of System Charging Methodology

1. The licensee shall, for the purpose of ensuring that the use of system charging methodology achieves the relevant objectives, review the use of system charging methodology at least once in every year.
2. The licensee shall, subject to paragraph 3, make such modifications of the use of system charging methodology as may be requisite for the purpose of better achieving the relevant objectives.
3. Except with the consent of the Authority, before making a modification to the use of system charging methodology, the licensee shall:
 - (a) furnish the Authority with a report setting out;
 - (i) the terms proposed for the modification;
 - (ii) how the intended modification better achieves the relevant objectives; and
 - (iii) a timetable for implementation of the modification and the date with effect from which the modification (if made) is to take effect, such date being not earlier than the date on which the period referred to in paragraph 4 expires; and
 - (b) where the Authority has given a direction that sub-paragraph (a) should not apply, comply with such other requirements (if any) that the Authority may specify in the direction.
4. Where the licensee has complied with the requirements of paragraph 3, it shall, make the modification to the use of system charging methodology, unless:
 - (a) the Authority has within 28 days of the report being furnished to him given a direction that the modification may not be made, or
 - (b) the Authority has within 28 days of the report being furnished to him, notified the licensee that it intends to consult and then within 3 months given a direction that the modification may not be made.

5. In paragraphs 1, 2 and 3 “the relevant objectives” shall mean the following objectives:
 - a) that compliance with the use of system charging methodology facilitates the efficient discharge by the licensee of the obligations imposed upon it under the Act and by this licence;
 - b) that compliance with the use of system charging methodology facilitates effective competition in the generation and supply of electricity, and does not restrict, distort or prevent competition in the transmission or distribution of electricity;
 - c) that compliance with the use of system charging methodology results in charges which reflect, as far as is reasonably practicable (taking account of implementation costs), the costs incurred by the licensee in its distribution business; and
 - d) that, so far as is consistent with sub-paragraphs (a), (b) and (c), the use of system charging methodology, as far as is reasonably practicable, properly takes account of the developments in the licensee’s distribution business.
6. The licensee shall send a copy of any report furnished under paragraph 3 to any person who asks for any such report.
7. The licensee may make a charge for any report sent pursuant to paragraph 6 of an amount which shall not exceed the amount specified in directions issued by the Authority for the purposes of this condition based on the Authority’s estimate of the licensee's reasonable costs of providing such a report.
8. Nothing in this condition shall:
 - a) where any charge restriction conditions (within the meaning given in paragraph 3 of special condition A of the distribution licence as at 6 April 2004) apply, impact on the application of those conditions; or
 - b) where any charging arrangements condition (within the meaning of amended standard condition BA1 of the distribution licence as from time

to time modified or replaced in accordance with the provisions of the Act) applies, impact on the application of that condition.

Condition 4B. Connection Charging Methodology

1. The licensee shall, by 1 April 2005:
 - (a) determine a connection charging methodology approved by the Authority; and
 - (b) conform to the connection charging methodology as modified in accordance with paragraph 17.
2. The licensee shall, for the purpose of ensuring that the connection charging methodology achieves the relevant objectives, review the connection charging methodology at least once in every year.
3. The licensee shall, subject to paragraph 16, make such modifications to the connection charging methodology as may be requisite for the purpose of better achieving the relevant objectives.
4. The licensee shall:
 - (a) prepare a statement in a form approved by the Authority setting out the basis upon which charges will be made for the provision of connections to the licensee's distribution system, including:
 - (i) a schedule listing those items (including the carrying out of works and the provision and installation of electric lines or electrical plant) of significant cost liable to be required for the purpose of connection (at entry or exit points) to the licensee's distribution system for which connection charges may be made or levied and including (where practicable) indicative charges for each such item and (in other cases) an explanation of the methods by which and the principles on which such charges will be calculated, including;
 - (ii) the methods by which and the principles on which any charges will be made in respect of extension or reinforcement of the licensee's distribution system rendered (in the licensee's discretion) necessary or appropriate by virtue of providing connection to or use of system to any person seeking connection;

- (iii) the methods by which and the principles on which connection charges will be made in circumstances where the electric lines or electrical plant to be installed are (at the licensee's discretion) of greater size or capacity than that required for use of system by the person seeking connection;
- (iv) (save to the extent that such matters are included in any agreement offered in accordance with standard condition 36B (Requirement to Offer Terms for the Provision of Distributor Metering and Data Services) the methods by which and principles on which any charges will be made for the provision of special metering or telemetry or data processing equipment by the licensee for the purposes of enabling any person who is party to the Balancing and Settlement Code and or the Settlement Agreement for Scotland to comply with its obligations in respect of metering thereunder, or for the performance by the licensee of any service in relation to such metering thereto;
- (v) the methods by which and principles on which any charges will be made for disconnection from the licensee's distribution system and the removal of electrical plant and electric lines following disconnection; and
- (vi) the methods by which and the principles on which any charges (including any capitalised charge) will be made for maintenance, repair and replacement required of electric lines or electrical plant provided and installed for making a connection to the licensee's distribution system.

and the statement referred to in this paragraph shall be in such form and with such detail as shall be necessary to enable any person to make a reasonable estimate of the charges which the person would become liable to pay for the provision of such services.

- (b) From 1 April 2005 the statement referred to in (a) shall be prepared in accordance with the connection charging methodology, and shall be approved by the Authority.

5. An approval by the Authority pursuant to paragraph 1(a) and 4(b) may be granted subject to such conditions relating to further action to be undertaken by the licensee in relation to the connection charging methodology better meeting the relevant objectives set out in paragraph 18 by the Authority as the Authority deems appropriate. Such conditions may include (but are not limited to)

elements relating to the time by which actions under this condition need to be completed.

6. Nothing in this condition shall affect the ability of the licensee to charge according to the statement issued pursuant to paragraph 4.
7. Unless otherwise determined by the Authority, the licensee shall only enter into an agreement for providing a connection or modification to or retention of an existing connection which secures that the connection charges will conform with the statement of the connection charging methodology last furnished under paragraphs 4(b) or 17 either:
 - a) before it enters into the arrangements; or
 - b) before the charges in question from time to time fall to be made.
8. Connection charges for those items referred to in paragraph 4 will be set at a level which will enable the licensee to recover:
 - a) the appropriate proportion to be determined having regard to the factors set out in paragraph 4 of the costs directly or indirectly incurred in carrying out any works, the extension or reinforcement of the licensee's distribution system or the provision and installation, maintenance, repair, and replacement or (as the case may be) removal following disconnection of any electric lines or electrical plant; and
 - b) a reasonable rate of return on the capital represented by such costs.
9. For the purpose of determining an appropriate proportion of the costs directly or indirectly incurred in carrying out works under an agreement for providing a connection or modification to or retention of an existing connection, the licensee shall have regard to:
 - a) the benefit (if any) to be obtained or likely in the future to be obtained by the licensee or any other person as a result of the carrying out of such works by reason of extension of the licensee's distribution system or the provision of additional entry or exit points on such system or otherwise;
 - b) the ability or likely future ability of the licensee to recoup a proportion of such costs from third parties; and

- c) the principles that, subject to sub-paragraph (v):
- i. charges will not generally take into account system reinforcement carried out at more than one voltage level above the voltage of connection;
 - ii. charges will not generally take into account the costs (including any capitalised charge) for maintenance, repair and replacement required of electric lines or electrical plant provided and installed for making a connection to the licensee's distribution system.
 - iii. the licensee may charge at the time of connection an amount for reinforcement of the licensee's distribution system based upon a proportionate share of the increased capacity requirement at the relevant points on the system;
 - iv. connection charges will not cover costs that are covered by use of system charges; and
 - v. up to 31 March 2005, the licensee will be subject to the provisions under condition 4B paragraph 5c of this licence in the form of that condition in force on 6 April 2004.

10. If so requested and subject to paragraphs 12 and 14, the licensee shall, as soon as practicable and in any event within 28 days (or where the Authority so approves such longer period as the licensee may reasonably require having regard to the nature and complexity of the request) after the date referred to in paragraph 11 give or send to any person making such request a statement showing present and future circuit capacity, forecast power flows and loading on the part or parts of the licensee's distribution system specified in the request and fault levels for each distribution node covered by the request and containing:
- a) such further information as shall be reasonably necessary to enable such person to identify and evaluate the opportunities available when connecting to and making use of the part or parts of the licensee's distribution system specified in the request; and

- b) if so requested, a commentary prepared by the licensee indicating the licensee's views as to the suitability of the part or parts of the licensee's distribution system specified in the request for new connections and the distribution of further quantities of electricity.
11. For the purposes of paragraph 10, the date referred to shall be the later of:
- (a) the date of receipt of the request referred to in paragraph 10; or
 - (b) the date on which the licensee receives agreement from the person making the request to pay the amount estimated or such other amount as is determined by the Authority (as the case may be) under paragraph 13.
12. The licensee shall include in every statement given or sent under paragraph 10 the information required by that paragraph except that the licensee may:
- a) with the prior consent of the Authority omit from any such statement any details as to circuit capacity, power flows, loading or other information, disclosure of which would, in the view of the Authority, seriously and prejudicially affect the commercial interests of the licensee or any third party; and
 - b) omit information the disclosure of which would place the licensee in breach of standard condition 39 (Restriction on Use of Certain Information and Independence of the Distribution Business) (if applicable).
13. The licensee may within 10 days after receipt of the request provide an estimate of its reasonable costs in the preparation of any statement referred to in paragraph 10, and its obligation to provide such statement shall be conditional on the person requesting such statement agreeing to pay the amount estimated or such other amount as the Authority may, upon application of the licensee or the person requesting such statement, direct.
14. The licensee shall give or send a copy of the statements prepared in accordance with paragraph 4, or (as the case may be) of the latest revision of such statements, to any person who requests a copy of such statement or statements.
15. The licensee may make a charge for any statement given or sent pursuant to paragraph 14 of an amount which shall not exceed the amount specified in directions issued by the Authority for the purposes of this condition based on the Authority's estimate of the licensee's reasonable costs of providing such a statement.

16. Except with the consent of the Authority, before making a modification to the connection charging methodology the licensee shall:
- (a) furnish the Authority with a report setting out:
 - (i) the terms proposed for the modification;
 - (ii) how the intended modification better achieves the relevant objectives; and
 - (iii) a timetable for implementation of the modification and the date with effect from which the modification (if made) is to take effect, such date being not earlier than the date on which the period referred to in paragraph 17 expires; and
 - (c) where the Authority has given a direction that sub-paragraph (a) should not apply, comply with such other requirements (if any) that the Authority may specify in the direction.
17. Where the licensee:
- (a) has complied with the requirements of paragraph 16, it shall, make the modification to the connection charging methodology, unless:
 - (i) the Authority has within 28 days of the report being furnished to him given a direction that the modification may not be made, or
 - (ii) the Authority has, within 28 days of the report being furnished to him, notified the licensee that it intends to consult and then within 3 months given a direction that the modification may not be made.
 - (b) makes a modification to the connection charging methodology, furnish the Authority with a revised statement showing the changed connection charging methodology and such revised statement of the connection charging methodology shall supersede previous statements of the connection charging methodology furnished under paragraph 3 from the date specified therein

18. In paragraphs 2, 3 and 16 “the relevant objectives” shall mean the objectives referred to in paragraph 5 of standard condition 4A(Use of System Charging Methodology), as if references therein to the use of system charging methodology were to the connection charging methodology.
19. The licensee shall send a copy of any report furnished under paragraph 16 to any person who asks for such a report.
20. The licensee may make a charge for any report sent pursuant to paragraph 16 of an amount which shall not exceed the amount specified in directions issued by the Authority for the purposes of this condition based on the Authority’s estimate of the licensee's reasonable costs of providing such a report
21. Nothing in this condition shall:
 - a) where any charge restriction conditions (within the meaning given in paragraph 3 of special condition A of the distribution licence as at 2 April 2004) apply, impact on the application of those conditions; or
 - b) where any charging arrangements condition (within the meaning of amended standard condition BA1 of the distribution licence as from time to time modified or replaced in accordance with the provisions of the Act) applies, impact on the application of that condition.

Condition 4C. Non- discrimination in the Provision of Use of System and Connection to the System

1. In the carrying out of works for the purpose of connection to the licensee's distribution system, or in providing for the modification to or retention of an existing connection to its distribution system, the licensee shall not discriminate between any persons or class or classes of persons.
2. In the provision of use of system the licensee shall not discriminate between any persons or class or classes of persons.
3. Without prejudice to paragraphs 1 and 2, and subject to the provisions of condition 4 (Charges for Use of System), the licensee shall not make charges for the provision of use of system to any person or class or classes of persons which differ from the charges for such provision to any other person or to any class or classes of persons, except in so far as such differences reasonably reflect differences in the costs associated with such provision.
4. The licensee shall not in setting its charges for connection or use of system restrict, distort or prevent competition in the generation, transmission, distribution or supply of electricity.

Condition 4D. Requirement to Offer Terms for Use of System and Connection

1. On application made by any person the licensee shall (subject to paragraph 4) offer to enter into an agreement for use of system:
 - (a) to accept into the licensee's distribution system at such entry point or points and in such quantities as may be specified in the application, electricity to be provided by or on behalf of such person; and/or
 - (b) to distribute such quantities of electricity as are referred to in sub-paragraph (a) (less any distribution losses) at such exit point or points on the licensee's distribution system and to such person or persons as the applicant for use of system may specify.

2. On application made by any person for a connection, the licensee shall offer terms for making the connection pursuant to section 16 and section 16A of the Act. Such offer of a connection shall comply with the provisions of this condition.

3. Where the licensee:
 - (i) makes an offer to enter into a connection agreement pursuant to section 22 of the Act; or
 - (ii) replies to a request for a connection made to it under section 16A of the Act

the licensee shall, in making the offer or replying to the applicant, make detailed provision regarding:

 - (a) the carrying out of the works (if any) required to connect the licensee's distribution system to any other system for the transmission or distribution of electricity, and for the obtaining of any consents necessary for such purpose;
 - (b) the carrying out of the works (if any) in connection with the extension or reinforcement of the licensee's distribution system rendered (in the licensee's discretion) appropriate or necessary by reason of making the

connection or modification to an existing connection and for the obtaining of any consents necessary for such purpose;

- (c) (save to the extent that such matters are included in any agreement offered in accordance with standard condition 36B (Requirement to Offer Terms for the Provision of Distributor Metering and Data Services)) the installation of appropriate meters (if any) required to enable the licensee to measure electricity being accepted into the licensee's distribution system at the specified entry point or points or leaving such system at the specified exit point or points;
- (d) the installation of such switchgear or other apparatus (if any) as may be required for the interruption of supply where the person seeking connection or modification of an existing connection does not require the provision of top-up or standby; and
- (e) (save to the extent that such matters are included in any agreement offered in accordance with standard condition 36B (Requirement to Offer Terms for the Provision of Distributor Metering and Data Services)) the installation of special metering, telemetry or data processing equipment (if any) for the purpose of enabling any person who is party to the Balancing and Settlement Code and or the Settlement Agreement for Scotland to comply with its obligations in respect to metering or the performance by the licensee of any service in relation to such metering thereunder.

4. In making an offer pursuant to this condition to enter into any connection agreement or in replying to a request for connection under section 16A of the Act, the licensee shall set out:

- (a) the date by which in the case of an agreement under paragraph 2, any works required to permit access to the licensee's distribution system (including for this purpose any works to reinforce or extend the licensee's distribution system) shall be completed, time being of the essence unless, in the case of connection agreements only, otherwise agreed between the parties;

- (b) the charges to be paid in respect of the services required, such charges (unless manifestly inappropriate):
 - (i) to be presented in such a way as to be referable to the statement prepared in accordance with paragraph 4 of standard condition 4B (Connection Charging Methodology) or any revision thereof; and
 - (ii) to be set in conformity with the requirements of standard condition 4B (Connection Charging Methodology).
 - (c) such other detailed terms in respect of each of the services required as are or may be appropriate for the purpose of the agreement.
5. The licensee shall offer terms for agreements in accordance with paragraphs 2 and 4 as soon as practicable and (save where the Authority consents to a longer period) in any event not more than the period specified in paragraph 6 after receipt by the licensee (or its agent) from any person of an application containing all such information as the licensee may reasonably require for the purpose of formulating the terms of the offer.
6. For the purposes of paragraph 5, the period specified shall be:
- (a) in the case of persons seeking the provision of use of system only, 28 days;
 - (b) in the case of persons seeking connection or a modification to an existing connection, 3 months; and
 - (c) in the case of persons seeking use of system in conjunction with connection or a modification to an existing connection, 3 months.
7. The licensee shall not be obliged pursuant to this condition to offer to enter or to enter into any agreement:

- (a) under paragraphs 2 and 4 if to do so would be likely to involve the licensee being:
 - (i) in breach of its duties under section 9 of the Act;
 - (ii) in breach of any regulations made under section 29 of the Act or of any other enactment relating to safety or standards applicable in respect to the distribution business;
 - (iii) in breach of the Grid Codes or the licensee's Distribution Code;
or
 - (iv) in breach of the conditions; or
- (b) under paragraphs 2 or 4, if the person making the application does not undertake to be bound, in so far as applicable, by the terms of the licensee's Distribution Code or the applicable Grid Code from time to time in force; or
- (c) under paragraphs 2 and 4, if to do so would be likely to involve the licensee doing something which, without the consent of another person, would require the exercise of a power conferred by any provision of Schedules 3 or 4 to the Act; where the licence does not provide for that provision to have effect in relation to it; and any necessary consent has not, at the time the request is made, been given.

8. The licensee shall within 28 days following receipt of a request from any person, give or send to such person such information in the possession of the licensee as may be reasonably required by such person for the purpose of completing an application under the Application Regulations or such provisions to like effect contained in any further regulations then in force made pursuant to sections 6(3), 60 and 64(1) of the Act.

Condition 4E. Functions of the Authority

1. If, after a period which appears to the Authority to be reasonable for the purpose, the licensee has failed to enter into an agreement with any person entitled or claiming to be entitled thereto pursuant to a request under standard condition 4D (Requirement to Offer Terms for Use of System and Connection) the Authority may, on the application of such person or the licensee, settle any terms of the agreement in dispute between the licensee and that person in such manner as appears to the Authority to be reasonable having (in so far as relevant) regard in particular to the following considerations:
 - (a) that such a person should pay to the licensee,
 - i) in the case of provision of use of system, the use of system charges determined in accordance with standard condition 4 (Charges for Use of System); and
 - ii) in the case of connection charges determined in accordance with standard condition 4B (Connection Charging Methodology).
 - (b) that the performance by the licensee of its obligations under the agreement should not cause it to be in breach of those provisions referred to at paragraph 7 of standard condition 4D (Requirement to Offer Terms for Use of System and Connection);
 - (c) that any methods by which the licensee's distribution system is connected to any other system for the transmission or distribution of electricity accord (in so far as applicable to the licensee) with the applicable Distribution Codes and Grid Codes; and
 - (d) that the terms and conditions of the agreement so settled by the Authority and of any other agreements entered into by the licensee pursuant to a request under standard condition 4D (Requirement to Offer Terms for Use of System and Connection) should be in as similar a form as is practicable.

2. In so far as any person entitled or claiming to be entitled to an offer under standard condition 4D (Requirement to Offer Terms for Use of System and Connection)

wishes to proceed on the basis of an agreement as settled by the Authority pursuant to paragraph 1, the licensee shall forthwith enter into and implement such agreement in accordance with its terms.

3. If either party to such agreement proposes to vary the contractual terms of any agreement for use of system, for the provision of a connection or for the modification to an existing connection to the licensee's distribution system, entered into pursuant to standard condition 4D (Requirement to Offer Terms for Use of System and Connection) or under this condition in any manner provided for under such agreement, the Authority may, at the request of that party, settle any dispute relating to such variation in such manner as appears to the Authority to be reasonable.

4. If the licensee and an authorised electricity operator or other person party to a relevant agreement are in dispute as to whether:
 - (a) use of system charges made, or to be made, conform with the statement of the use of system methodology furnished under paragraphs 1(c) or 10 of standard condition 4 (Charge for Use of System) which applied or applies in relation to the period in respect of which the dispute arises; or
 - (b) use of system charges made, or to be made, conform with the statement of use of system charges furnished under paragraphs 2 or 10 of standard condition 4 (Charge for Use of System) which applied or applies in relation to the period in respect of which the dispute arises; or
 - (c) connection charges made, or to be made, conform with the statement of the connection charging methodology furnished under paragraphs 4 or 17 of standard condition 4B (Connection Charging Methodology) which applied or applies in relation to the period in respect of which the dispute arises,

such dispute may be referred to the Authority for it to determine whether, in the case of sub-paragraph (a), the charges made, or to be made, conformed with the relevant statement(s) furnished under standard condition 4 (Charges for Use of

System), or whether, in the case of sub-paragraphs (b), the charges conformed with the relevant methodology.

Appendix 2 Proposed Guidelines for Connection Charging Boundary Rules

Definitions

Connection Charge –

- 2.1 Charge levied by the Distribution Network Operator for the provision of assets installed to connect the party or parties to the existing distribution network which may include extension works, e.g. new overhead lines or cable, along with a proportion of costs associated with the reinforcement (if any) of the existing distribution network as defined by the Apportionment Rules. There may also be a requirement for other charges to be included within the connection charge such as connection to the DNO system in the case of an Independent Connections Provider. The connection charge normally would be a one off charge at the time of connection.

Connection –

- 2.2 Means either a single connection or a multiple connection, such as a housing development, requested by a single party and any request for increased capacity in respect of an existing connection.

Required Capacity –

- 2.3 Means the design capacity of the Connection at the ownership boundary, as agreed between the Connecting party and the Distributor and laid down in the Connection Agreement. For multiple connections this may be after taking account of demand diversity and appropriate design standards. Capacity may be for either imports from or exports to the Distributor's network and subject to variation in power factor.

Apportionment Rules for Reinforcement

- 2.4 The costs of the assets required to connect a party to the existing network are chargeable in full within the Connection Charge. The costs associated with the reinforcement of existing distribution network assets, up to one voltage level above, will be split with a share attributed to the connecting party based on their requirements as part of their Connection Charge and the remainder nominally recovered through use of system tariffs. For the avoidance of doubt these rules apply to both demand and generation connections.
- 2.5 The following is a set of rules which provides a factor to apply to the reinforcement costs as a simple basis of apportioning costs. The exact detail of the apportionment may be different between individual DNOs but should follow a similar basis.

Security Requirement

$$\text{Cost Apportionment Factor} = \frac{\text{Required Capacity} \times 100}{\text{New Network Capacity}}, \text{ maximum } 100\%$$

- 2.6 The purpose of this rule is to determine a proportion of the reinforcement costs that should be paid by a party. The reinforcement works will be driven by either thermal capacity or voltage or both and will be assessed against the relevant security standard (e.g. ER P2/5). The DNO must determine what the effective (secure) capacity of the existing network is prior to the connection and then the necessary upgrade to ensure the network is secure following the connection of the party. This rule would be used for all equipment types and voltages. The 'New Network Capacity' is the secure network capacity following the reinforcement of the relevant assets. This rule recognises the granularity of equipment sizes and the need for compliance against security criteria. It establishes the benefits being drawn by different parties from the reinforcement and is simple to apply.

Fault Level Requirement

Structure of electricity distribution of
Office of Gas and Electricity Markets

$$\frac{3 \times \text{Fault level contribution from Connection} \times 100}{\text{New Equipment Fault Level Capacity}}, \text{ max } 100\%$$

Cost Apportionment Factor =

- 2.7 The purpose of this rule is to determine a proportion of reinforcement costs that should be paid by a connecting party. The reinforcement works will be driven by fault level restrictions. This rule would be used for all equipment types and voltages. The rule recognises that existing network fault levels are predominantly driven by the system connections (transformer impedance) and therefore the capacity is limited to the remaining headroom. It uses the 'New Equipment Fault Level Capacity' which is the equipment rating following the replacement of assets and recognises the granularity of equipment sizes and limits this exposure to connecting parties.

Contribution to Existing Reinforcement Assets

- 2.8 Where reinforcement assets have been installed to allow the connection of a party and due to the incremental plant sizes spare capacity has been created a large proportion of this cost will be recovered through Use of System tariffs. However if a subsequent party then connects to the network using some or all of this spare capacity, a proportion of the reinforcement costs should be charged to the second comer within the prescribed period.

Apportionment Rules for EHV

- 2.9 The same connection charging boundary apportionment rules for both demand and generation connections at EHV should be applied.

Appendix 3 Summary of responses to November 2003 Initial decision document

Introduction

- 3.1 Ofgem received 32 responses to the November 2003 'Structure of electricity distribution charges: Initial decision document' (142/03). These represented distribution network operators (DNOs), suppliers, demand customers, generators, microgenerators and other interested bodies.

Legal framework

- 3.2 The November document provided some more detail on the legal basis for the project, and on the publication of EC Directive 2003/54/EC and EC Regulation 1228/2003 on 26 June 2003. A number of DNO respondents queried whether any changes were needed to ensure compliance with the EC Directive, since DNOs already submitted charging statements to Ofgem, and there was concern that a more intrusive approach could increase numbers of determinations and restrict commercial freedom. Respondents requested that Ofgem clarify the situation as soon as possible.
- 3.3 DNO respondents doubted that the EC Regulation had any significance for the structure of charges project.

Related policy areas

- 3.4 Respondents noted the relationship between the distribution and transmission charging projects. One felt that the transmission arrangements needed longer to bed in before use as a model for distribution, and another suggested that a comprehensive review of the distribution/transmission boundary was needed to examine the engineering and contractual implications of DG deciding whether to connect at transmission or distribution level.
- 3.5 One respondent noted that generators connected at 132kV in Scotland are currently granted low transmission charges, and if connected in England these would be liable for DUoS charges. Greater consistency between the

transmission and distribution regimes would be welcomed, so that this provision could be removed.

- 3.6 A generator response agreed that there were benefits in having greater consistency, but thought that embedded generators who were subject to TNUoS charges should not also be liable for DUoS charges. It was also noted that simultaneous changes in the transmission and distribution regimes created a heavy administrative burden for CHP operators, and the comparison of access rights for transmission and distribution level connected generators was suggested as a concern for Ofgem to address further.

Ofgem's initial decision

- 3.7 Respondents supported the main principles and proposals of the document, and were encouraged by the progress made. Many responses commented on the plan to approve DNO charging methodologies: some asked that interested parties be included in the approval process, and it was also noted that Ofgem needed to provide approval efficiently and quickly. DNOs also sought greater clarity on what level of detail Ofgem would be seeking in the charging methodologies, and it was suggested that they should remain fairly high level, in order that tariff setting remained in the DNO's control.
- 3.8 There was wide support for the move to shallower connection charges, but a number of issues were raised, particularly by DNO respondents. It was recognised that the benefit of deep connection charging was its ability to include pricing signals, and that this was an issue that needed further consideration. There was also concern that the shallower boundary and UoS charges increased risk for DNOs, and could result in cross subsidy, and that charges established under the new regime must be both cost-reflective and predictable.

Longer term framework

- 3.9 The document outlined the options for long term connection charging and use of system models. Respondents supported the use of LRIC models, and the majority favoured the further investigation of either Options 1 and 2 and the abandonment of Options 3 and 4. A common theme of the responses was the need to achieve greater clarity on the models and cost drivers as soon as

possible, and that the regime should result in a simple and transparent system with obvious benefits for network users and customers.

- 3.10 The longer term solution for connection charging was generally welcomed, although a number of DNOs were concerned that pricing signals, while obvious in connection charges, could be diluted if moved to UoS charges. One DG representative suggested that these could be retained by levying the charges on suppliers, and obliging them to pass through the signals to demand customers and generators.
- 3.11 Respondents noted the need to capture the effects of DG on the system in UoS charges, including the implications of active management, the existence of localised costs, the effects on fault levels, the equitable division of maintenance costs between demand and generation, and the presence of micro generation.
- 3.12 One DNO respondent cautioned against using a 'two RAB' method or deferred connection charges, as both of these were based more on historic costs than LRIC costs, and would create charges increasingly out of step with actual costs.
- 3.13 Respondents noted the timetable for work on the long term solution. Two DNOs asked that the issue of access rights be further considered, and that developments in transmission should be monitored. Concerns were also raised about billing arrangements. However, one DNO suggested that it might be possible to move to the long term methodology faster than expected.

Interim arrangements

- 3.14 Chapter 5 outlined the interim changes being planned for April 2005.
- 3.15 There was a mixed response to the proposal to abolish TSA and O&M, and fears that their removal could increase connection charges. One DNO suggested that those areas where TSAs are given are those where there is most competition in connections, and asked for more detail on how this decision had been reached.
- 3.16 Respondents supported the idea that the rebates feature of the connection charging regulations was unworkable, and one suggested that the CGC and ISG could work on a solution.

Connection Boundary

- 3.17 The removal of the 25% de minimis rule was generally supported, but one DNO suggested its removal may create a perverse incentive. One respondent noted that if DNOs retained the right to apply a de minimis rule, they may increase the cost of connection in order to improve security and reliability. A DNO suggested that consideration of a de minimis threshold should be deferred until the proportion contribution rules were settled. There was support for the proposal to base contributions to reinforcement costs on capacity, but one DNO noted that it was sometimes hard to predict the final maximum demand on a connection, and this made apportioning costs between first and subsequent connectees harder.
- 3.18 Respondents supported the inclusion of fault level contributions in the calculation of connection costs. A number of respondents noted that if caused by DG, it would be inequitable to pass these costs on to demand customers, and another DNO suggested that this was an area for further investigation by the ISG.
- 3.19 DNOs expressed some fears that proposals to annualise EHV costs could result in increased risk and stranded costs. Bringing EHV into the price control was suggested as a simple solution to the problem, and one respondent asked that the ISG consider this issue and the possible effects on existing customers.

Generator use of system charges

- 3.20 Chapter 5 provided more detail on the plans for generator UoS charges, as proposed in the June document. The November document prompted a number of responses from various bodies involved in micro generation, and these principally concerned the proposal to levy UoS charges upon generators.
- 3.21 These responses raised concerns that microgeneration was not being considered as a group distinct from other distributed generation, and asked that Ofgem recognise the differences in types of generation and the benefits of encouraging growth in micro generation. Respondents suggested that growth in microgeneration would have only minimal impact on the system, and there should be stronger incentives for DNOs to encourage it, in line with Government policy.

- 3.22 It was also noted that microgeneration had no means to trade electricity, which made the application of UoS charges unfair, but that it might be possible to collect metering data in the future and develop a trading regime.
- 3.23 Other responses generally supported the move towards generator use of system charges, although it was stressed that the charges needed to be predictable and not overly complex, and that true cost reflectivity could lead to volatility. There was some concern that a tariff cap could create a funding gap for DNOs, and a DNO asked for recognition that even with a cap, UoS charges may increase with time. DNOs noted that locational signals were much easier to incorporate into connection charges, but under the new shallow-ish regime a way would need to be found to include them in the new UoS charges. A generator representative voiced a concern that locational UoS charges would affect remote DG more severely than connection charges, where high connection costs would at least be spread across demand and generation customers.
- 3.24 A number of respondents asked that the effects of DG on the network be taken into account. Some respondents suggested that this could result in negative UoS charges, a suggestion opposed by a DNO, which noted that all connectees receive services from their network operator. One DG representative was concerned that UoS charges would contain strong locational signals, which some DG would be unable to respond to, but a DNO also noted that the companies had little control over the location of DG, which would have implications for the construction of the DG incentive.

Compensation arrangements

- 3.25 There was strong feeling from DNOs that the arrangements for provision of compensation must be dovetailed with the price control incentives on Quality of Supply and IIP, and that allowing for compensation could expose DNOs to large costs. A generator representative suggested that one solution was a cap on the total amount of compensation payable in any one price control period.

Existing generators

- 3.26 The November document suggested some of the issues surrounding treatment of existing generators, but Ofgem has not yet made any decisions on the long term solution in this area. There was agreement that it would be inequitable to charge UoS charges to generators that had already paid deep connection costs. Generator responses were strongly in favour of existing generators being permanently exempt, and some questioned whether DNOs had any legal right to amend existing contracts to include charges.
- 3.27 DNOs were concerned about whether the concept of generators opting in to the new regime was workable, and highlighted a need to set up a system to calculate rebates and UoS charges soon. One DNO suggested that generators should be prohibited from joining the new regime unless there had been material change in their requirements or circumstances, otherwise generators would cherry pick which regime served them best.
- 3.28 One respondent represented a demand customer with on-site generation, and asked that Ofgem recognise that some assets are used for both import and export, and should not be liable to charges for both.

Implementation

Timetable

- 3.29 Most respondents had thoughts on the progress of the project and comments on the plans for phased implementation of the new regime. There was support for the phased approach, and for the acceleration of the implementation process, with the recognition that there is much to be done over the next few months. One DNO said that the final details of the price control would need to be settled before November 2004 if DNOs were to be able to publish indicative charges for 2005-06 at that time. Another DNO asked whether Ofgem was expecting charging policies to be developed at the same pace, given that the pattern of DG growth was likely to differ between DNO areas.
- 3.30 A number of respondents made the general observation that the interim solution should not be allowed to morph into the long term solution, and that any changes to the connection boundary should be based on analysis of UoS tariffs. A DNO also noted that the development of the regime must be strictly controlled, given the complexity of the industry and the numbers of parties

affected by such decisions. Generator representatives asked that a range of views be involved in the decision making process, and one respondent suggested holding an open meeting to discuss charging issues.

ISG

- 3.31 Respondents praised the work already done by the ISG, and members committed support to the ongoing process. A number of responses were keen to see micro generation representation in this group. Respondents were also generally in favour of the creation of a commercial governance forum, although it was thought best to keep the structure of charges out of the scope of this group. One DNO noted that much could be done on a bilateral basis to improve communication between parties, and that formal groups were more relevant to consideration of major regulatory change.

Draft Regulatory Impact Assessment

- 3.32 Those respondents that commented on the draft RIA were generally supportive of the work already done, and acknowledged the need to increase their effectiveness and detail. One DNO asked for assessment of the costs and benefits of the interim solution to be included in the April 2004 document.
- 3.33 One respondent commented on the implications of the structure of charges project for competition. The response was concerned that the difference of treatment between pre- and post-2005 connected generators could distort competition, and disputed the RIA's assertion that changing the connection boundary would aid development of competition in connections.
- 3.34 Three responses commented on the benefits outlined in the RIA. One was concerned that demand customers were unlikely to change their behaviour significantly unless considerable pricing signals were visible to them. Another did not agree with the assertion that there would be benefits for security of supply, and a third asked for greater recognition and more precise measurement of the specific benefits of micro generation.