

Structure of electricity distribution charges

Approval of CE Electric's charging methodologies: Decision document

February 2005

Summary

This document provides the Gas and Electricity Markets Authority's decision concerning approval of CE Electric's use of system (UoS) and connection charging methodologies. Distribution network operators are required by their licence to determine these and for them to be approved by the Authority by 1 April 2005.

The document sets out that the Authority approves the methodologies and the form of the statement subject to certain conditions. The Authority:

1. Approves CE Electric's UoS charging methodologies, pursuant to standard licence condition (SLC) 4(1a), subject to the following conditions:
 - ◆ Review of the use of system charging model and development of an alternative approach by 1 April 2006.
 - ◆ Revised approach to the EHV demand transition, in accordance with the timescales set out below.
2. Approves CE Electric's connection charging methodologies in accordance with SLC4B(1a).

Notice of the Authority's proposed decision was provided to CE on 16 December 2004, and CE Electric has had 28 days to make representations on issues pertaining to the charging methodologies where conditional approval was proposed. The Authority has considered CE's representations, and this document constitutes the Authority's decision. Where conditional approval has been granted the Authority will consider enforcement action where the condition of that approval is not met.

The following chapters provide further details on the nature and contents of these decisions along with the timing of relevant action.

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1. Introduction

- 1.1. This document sets out the Authority's decision concerning approval of CE Electric's (CE) charging methodology statements following the modification to standard licence condition (SLC) 4 of the distribution network operators' (DNOs') electricity distribution licence (the licence, as amended in July 2004¹) and following consideration of responses to the October consultation² on this matter.
- 1.2. Notice of this decision was provided to CE on 16 December 2004, and 28 days allowed for CE to submit a representation. CE submitted a letter accepting the conditions on 13 January 2005, redrafted Use of system (UoS) methodology statements for both Northern (NEDL) and Yorkshire (YEDL) areas on 26 January 2005 and redrafted connections methodology statements for both NEDL and YEDL on 10 February 2005. The decisions in this document are based on the 26 January 2005 UoS statements and the 10 February 2005 connections statements, and not earlier versions.
- 1.3. This constitutes formal notice of the Authority's decision and explains the basis of the Authority's decisions, setting out responses to the October consultation paper, Authority views and the Authority's conclusion on each matter.
- 1.4. The licence requires the DNOs to determine UoS and connection charging methodologies for approval by the Authority by 1 April 2005. In addition, a statement of use of system charges is required which is subject to Authority approval of the form of the document.
- 1.5. Separate methodologies and charging statements are required for each licensed distribution area. In accordance with this, CE has submitted documents for YEDL and NEDL areas. The methodology statements for YEDL and NEDL are the same

¹ See Section 11A notice, document reference 150/04 (6 July 2004), available on the Ofgem website at www.ofgem.gov.uk under the Licensing (modifications) area of work. This sets out the modification of all distribution licences, to come into effect on 7 July 2004.

² "Structure of electricity distribution charges – Proposed DNO charging methodology statements: Consultation document" October 2004 235/04.

other than by name and therefore this decision document covers both licensed areas, and references to CE cover both YEDL and NEDL licensed areas.

Purpose of this document

- 1.6. The purpose of this document is to set out the Authority's decision on approval of CE's charging methodologies and charging statement. The Authority's conclusions are set out in chapters 4, 5 and 6.

Structure of this document

- 1.7. The structure of this document is as follows:

♦ Chapter 2

This chapter sets out the interim charging arrangements and implications for the approval of the methodologies.

♦ Chapter 3

This chapter sets out the approvals process, and includes the relevant objectives set out in the licence.

♦ Chapter 4

Chapter 4 details UoS issues that have been considered and outlines the Authority's reasoning for approval or non-approval.

♦ Chapter 5

Sets out connection charging issues that have been considered and outlines the Authority's reasoning for approval or non-approval.

♦ Chapter 6

This chapter sets out that the form of the statement of UoS charges has been approved.

2. Interim arrangements

- 2.1. In November 2003 Ofgem proposed that the implementation of revised arrangements for the structure of electricity distribution charges be achieved in two stages. In making this decision Ofgem recognised the comments of interested parties that any attempt to introduce wholesale changes to charging arrangements from 1 April 2005 was extremely challenging.
- 2.2. From 1 April 2005 a new charging regime, 'interim arrangements', will be established predominantly addressing a common connection charging boundary for demand and generation, removing deep charging of generators, and introducing the requirement for DNOs to determine connection and use of system charging methodologies.
- 2.3. In parallel with this further consideration needs to be given to the most suitable longer term methodology. It is still Ofgem's view that the demand and generation regimes should be fully aligned with use of system charges established via charging models based on forward looking long run incremental costs (LRIC). Ofgem expects these models to be developed by DNOs in 2005, with consultation and the resolution of any outstanding issues by 2006. The longer term arrangements will be developed within the charging methodology framework introduced and effective from 1 April 2005.
- 2.4. In making the decisions on the methodologies effective from 1 April 2005 the Authority has recognised this two stage implementation and that some issues are not practicable to rectify by 1 April 2005. Therefore, the charging methodologies approved for 1 April 2005 form a baseline for the interim arrangements, from which the longer term arrangements will be developed during 2005.
- 2.5. In addition to the items that require further time to rectify, the DNOs are obliged to review their methodologies at least once a year for the purpose of ensuring that they continue to achieve the relevant objectives as although the methodologies may achieve the relevant objectives at day one, circumstances may change over time and it is important to continually assess that the charging arrangements are still appropriate. The DNO is also obliged to make modifications to their charging methodologies where improvements can be

identified. This document, in addition to the principles outlined above, identifies some areas where the DNO methodologies could be bettered. Ofgem is keen for the longer term arrangements to be progressed and expects DNOs to actively develop longer term charging arrangements over the coming year.

- 2.6. As detailed above the obligation to develop charging arrangements for the longer term is with the DNO but it is proposed that the Implementation Steering Group (ISG) continues as an industry discussion group to facilitate this process, along with Ofgem led wider consultations with the industry, academia and other interested parties as appropriate.

3. Approvals process

Licence conditions

- 3.1. SLC 4 of the licence requires each DNO, by 1 April 2005, to determine and prepare charging methodologies and statements approved by the Authority that achieve the relevant licence objectives. In considering whether to approve the charging methodologies to take effect from 1 April 2005 the Authority has considered the relevant objectives and its wider statutory duties³.
- 3.2. These obligations, the relevant objectives, are contained within SLC4 and SLC4B of each DNO's electricity distribution licence as amended on 7 July 2004⁴:
- ◆ that compliance with the charging methodologies facilitates the discharge by the licensee of the obligations imposed upon it under the Electricity Act 1989 (the Act) and by its licence;
 - ◆ that compliance with the charging methodologies facilitates 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 methodologies 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
 - ◆ that so far as consistent with the above objectives, the methodologies, as far as reasonably practicable, will take account of developments in the licensee's distribution business.
- 3.3. The licence specifies that a reader of the methodology should be able to make a reasonable estimate of charges (SLC4A, para 1 and SLC4B, para 4(b)) using the methodology and charging statement.

³ Ofgem's statutory duties are wider than the matters considered by the relevant objectives and include amongst other things having regard to social and environmental guidance provided to Ofgem by the government.

⁴ As set out in document reference 150/04, available on the Ofgem website at www.ofgem.gov.uk.

Consultation process

- 3.4. Ofgem ran a month long consultation on the draft charging methodologies submitted by DNOs on 30 September in its October 2004 consultation document. Prior to this, initial draft methodologies were consulted on by Ofgem for a month in July 2004 in an open letter which anonymously set out the DNOs' first draft proposed statements and requested comments on issues raised therein.
- 3.5. Prior to these two consultations focussing on the new DNO methodologies, consultations progressing ideas regarding charging structures were published between December 2000 and April 2004.
- 3.6. The October document invited views on the matters raised in this consultation document and asked for comments on whether the DNOs' draft methodology statements achieve the relevant licence objectives.
- 3.7. Views were invited on the detail of the methodologies, specifically:
- ◆ areas where the methodologies may not achieve the relevant objectives;
 - ◆ whether enough information has been provided to enable users to make a reasonable estimate of charges that they may become liable for; and
 - ◆ areas where the methodology statements could be improved.
- 3.8. Twenty responses were received to the October document⁵. Respondent's views on specific policy areas are included in sections 4, 5 and 6 as appropriate.
- 3.9. Ofgem consulted separately on the transition of EHV demand charges in December 2004 to ensure that industry views were captured on the issue where the method used to calculate charges has been altered by certain DNOs. A decision on this matter is being published separately.

⁵ Responses to the October consultation document are published on the Ofgem website, www.ofgem.gov.uk under the Electricity Distribution Charges area of work.

4. Use of system charging methodology

- 4.1. This section sets out issues concerning CE's UoS methodology and the Authority's approval of it. For each issue comments received from respondents to the October consultation document are set out along with the Authority's conclusions. The decision of whether to approve the methodology as a whole is based on the consideration detailed below and is provided at the end of the chapter.

DUoS issues

DUoS charging model

- 4.2. CE's charging model is based on a historic distribution reinforcement model (DRM) methodology for apportioning cost between customer groups and it is these relative costs which are then updated for allowed revenue in relevant years and adjusted year on year for differences in customer numbers, units distributed and consumption patterns. This ensures that the original cost reflectivity between these customer groups is maintained each year. However such an approach does not review the original cost apportionment between these groups, e.g. for changing network costs or network design. On this basis the ability of the model to reflect costs appropriately to different parties going forward is flawed.
- 4.3. It is unlikely that significant changes have occurred to make the charges produced from the model unreasonable, but it is clear that such a model needs to be changed to better reflect costs to parties with time.

Comments received

- 4.4. No comments were received on this matter.

DNO representation

- 4.5. CE's letter of 13 January 2005 accepted the need to develop a new model and committed to working towards this in 2005. CE also noted that some commonality among the charging methodologies would be useful, and it would

be important for companies to work together through the ISG to develop long term arrangements.

Authority conclusion

- 4.6. The charging model proposed by CE is flawed in its cost reflectivity to different customer groups. Without a review of the charging model and the apportionment of costs between different parties once a year it is difficult to justify that it is cost reflective. The Authority recognises that it may not be possible to develop a more suitable approach or model by 1 April 2005 and in the absence of a better model the current model is the most cost reflective and stable basis for determining charges available to CE. On this basis the Authority approves the charging methodology conditional on a revised sufficiently cost reflective approach and alternative model being developed by 1 April 2006.

EHV transition

- 4.7. CE has used a number of different methods in the past for calculating site specific demand use of system (DUoS) charges at EHV. This causes some underlying price disturbance. From 1 April 2005 a common methodology is being proposed across CE's YEDL and NEDL areas. This means that some customers see large changes in charges. CE proposes to allow reductions in charges immediately and to limit year on year increases to RPI.
- 4.8. Ofgem consulted on this matter as part of the October 2004 consultation on the proposed DNO methodology statements, and again on 17 December 2004⁶ to ensure that industry views were captured.

Comments received – October consultation

- 4.9. Three respondents to the October consultation raised concerns about the need for transparency in relation to EHV charges, with one of these stressing the need for charges to be cost reflective and the method of calculation to be clear. Another respondent was concerned over the level of charge disturbance and questioned the classification of assets between connection and UoS. This respondent suggested that it may be better to freeze EHV demand charges until

the longer term arrangements are brought in that this would prevent two transitions and the potential for double charging.

Comments received – December consultation

- 4.10. There were 12 responses with the majority showing opposition to the two year transition. One customer supported Ofgem's proposal to allow the full reduction, while a supplier supported Ofgem's approach but felt that if there was to be any cross subsidy then it should be retained within the EHV sector, i.e. reductions phased in line with increases. One DNO did not object to the Ofgem proposal but noted concern over the impact on intensive electricity users. Responses also suggested that major increases could have a significant impact on the economics of their business at the sites and employment in local areas, and that adequate time was needed to budget for the changes. Some customers also noted the need for consistency between the DNOs in their EHV methodologies.

DNO representation

- 4.11. CE's 13 January representation explained that the transition strategy was intended to provide price stability for customers, with the intention of bringing in the new charges in full in 2010. CE accepted the need to review this in light of the consultation and Authority decision.

Conclusion

- 4.12. The Authority's decision on this matter has been taken following consideration of the December consultation responses and the DNO's representation. The Authority proposes that any increase in charges for EHV demand customers due to the changes in methodology from 1 April 2005 be capped to 15 percent, pending further work and review of the appropriateness of the methodologies in consultation with interested parties. Once that review has been concluded and robust models established, the full effect of the models should be applied. This is expected to be no later than April 2007.

- 4.13. This approach limits the initial impact, but sets a clear timetable to resolve the issue in line with the development of longer term charging methodologies and greater visibility of future likely changes in charges.
- 4.14. Where there are reductions in EHV charges then these should be applied in full from 1 April 2005 but these customers should note that there may be further disturbance as the DNOs develop their charging methodologies further.
- 4.15. A more detailed explanation of this decision is being published in a separate decision document, available from the Ofgem website.
- 4.16. Approval for the UoS methodology is conditional upon CE revising their approach in light of this decision and setting out their strategy for transition of EHV charges effective from 1 April 2005 in its methodology by 1 April 2005 and the transitional approach (if any) for EHV charges effective from 1 April 2006 by October 2005.

DUoS general commentary

Reactive charges

- 4.17. As set out in the October 2004 consultation document, the Authority recognises that charging on a kVA basis reflects some of the cost imposed by reactive power in that charges are levied on contracted maximum demand in kVA.
- 4.18. However, this method of charging does not recognise total kVArh demand and the impact of this total demand on losses on the system. The Authority views this as an important component of charging in order to incentivise high power factors.
- 4.19. The Authority feels that improvements can be made to the cost reflectivity of use of system charges with regard to incorporating kVArh charges. Responses to the consultation were generally in favour of charging in a manner that increased the incentive on customers to improve their power factors. However, it was noted that on the transmission system costs are smeared across all suppliers and generators. One supplier noted that kVA charging provides no incentive on reactive costs because capacity is fixed in the short term.

- 4.20. The Authority notes the comments received and will progress this issue as part of the longer term charging framework.

Tariff structures

- 4.21. The methodologies need to set out the basis for the determination of different tariff groups and indicate the methodology for charging different customers. Tariff structures are integral to producing transparent methodologies that better meet the relevant licence objectives.
- 4.22. Clarity over tariff structures is required to demonstrate that costs are being recovered across customers that cause the cost, to the greatest extent possible. The methodology determines the method of charging tariffs. The Authority considers tariff structures to be an integral part of the charging methodology, and any changes in structure would constitute a change in the methodology which would need to follow the change modification process. CE makes this clear in its methodology and details the generic elements of tariff structures, noting that the detail for different customers is included within the charging statement.
- 4.23. Charges can only be levied on items set out in the charging methodology. Hence, the basis of all charges must be explained in the methodology.
- 4.24. Issues over appropriate tariff structures will be considered further in development of a longer term framework, taking other developments on the system and metering constraints into account.

Standing charge level

- 4.25. One specific tariff structure issue is the level of standing charges to variable unit charges.
- 4.26. Respondents to the October consultation noted that the split between standing and usage charges affected different users differently and possibly adversely (including microgeneration). The Authority notes that, with the exception of Western Power Distribution, the DNOs levy standing charges, but that these vary widely.
- 4.27. The suggestion of reassessing tariffs and charges based on actual demand (downstream costs) was also raised in a July open letter consultation response.

- 4.28. This issue will be considered further in development of a longer term framework along with wider tariff structures, as set out above.

Demand models – general

- 4.29. The Authority notes respondents to the October consultation who suggest that in order for users to be able to estimate their future charges, full details were needed on the inputs to the model.
- 4.30. Such inputs include operation and maintenance (O&M) costs and calculations, the derivation of modern equivalent asset values, the calculation of yardsticks, line loss factors (LLF) and diversity factors, and the treatment of NGC exit charges and rates. One respondent suggested publishing the models in full, and also noted that the publication of tariff classes and line loss factors in a common electronic format would be useful.
- 4.31. The Authority notes these concerns, and considers that the relevant objectives could be better met by increasing the level of detail in the methodology statements. The Authority believes that this issue should be addressed during ongoing review of the methodologies by DNOs, Ofgem and the industry along with consideration over the publication of models/other information.

GDUoS issues

EHV GDUoS charges

- 4.32. CE has set out a methodology for charging new generators for use of system on a site specific basis at EHV.

Comments received

- 4.33. Four respondents noted the benefits of publishing tariffs for GDUoS charges at EHV, namely that these aided generators at the development stage, and avoided non-transparent bilateral negotiations between DNOs and customers. The majority were in favour of site specific charges at this time for a variety of reasons including uncertainty over year on year tariff movement and consistency with demand DUoS charges at EHV. One noted that transparency was still a concern with site specific charges, and it would be important that the

methodology was clear, to allow future charges to be estimated, if these were to be adopted. One response supported the move to tariffs in the future but thought that a site specific charge at this time would be preferable to an area wide tariff.

Authority position

- 4.34. The charges proposed for the interim arrangements for generation were expected to facilitate competition in distributed generation. Whilst noting that this is an interim solution and that GDUoS charges are new, the Authority envisaged that the DNOs would deliver UoS charges on a tariff basis rather than site specific charges which are more representative of the recovery of deep reinforcement costs.
- 4.35. The Authority sees no reason for GDUoS charges to have the same methodology as site specific demand EHV DUoS charges in the interim period. The Authority wishes to minimise potential future legacy or transitional issues.
- 4.36. However, in discussing this issue with the DNOs it is apparent that some DNOs believe that cost reflectivity at this time is better met using site specific charges rather than a tariff. This does not achieve what the Authority envisaged in terms of forward looking, transparent charges. However, this approach does not appear unreasonable in the short term where DNOs believe this is the most cost reflective solution. The Authority notes that customers should be made aware of plans to change the approach over the longer term when a tariff based approach is implemented.

Conclusion

- 4.37. The Authority agrees to approve the site specific GDUoS charging methodology until the longer term framework is implemented.

GDUoS general commentary

Microgeneration

- 4.38. The methodology includes the capability for GDUoS charges to be collected from microgenerators or small scale embedded generators.

- 4.39. Responses to the consultation noted the need for any microgeneration charges to reflect actual costs on the system. It was also felt that benefits to the system should be taken into account, but the difficulty of identifying such benefits was noted, given that take up is still low. In general, respondents stressed the need to avoid disincentivising or prohibiting microgeneration connections in the next few years. One respondent also raised the concern that tariff structures (where standing charges are high and variable charges are low) can offset the benefits of installing microgeneration.
- 4.40. The Authority considers that charges should reflect the cost and benefits a user imposes on the system. Where DNOs have identified costs associated with LV connected generators, it is appropriate that these customers are charged. DNOs should continue to monitor costs incurred associated with microgeneration connections and adjust charges as necessary.

Other GDUoS issues

- 4.41. The Authority also notes that there are further issues to consider on the structure of generator charges, and that enduring solutions for some issues may be different from the interim approved methods. DNOs' GDUoS charging methodologies should increase in sophistication and cost reflectivity as knowledge of actual cost impacts increases.
- 4.42. These issues include the use of restrictions on volatility, appropriate tariff structures, contractual issues and the reflection of deferred costs on the system. These will be addressed for the longer term framework during 2005.

Reactive charges

- 4.43. Two consultation respondents suggested that charges for poor power factor should be matched by payments for generators who reduced costs on the system. One other respondent queried the appropriateness of generator reactive charges all together, noting that Grid Code restrictions could force generators to operate at particular power factors, and suggesting that this matter needed further consideration.
- 4.44. The Authority supports reactive charges, but agrees that the appropriateness of levying such charges on generators is a matter for further consideration, which

will be dealt with further as part of the development of post April 2005 charging structures.

Decision on use of system charging methodology

- 4.45. The Authority approves CE 's UoS charging methodology conditional on the following actions:
- ◆ Review of the use of system charging model and development of an alternative approach by 1 April 2006.
 - ◆ Revised approach to the EHV demand transition, in accordance with the timescales set out above.
- 4.46. CE should also note that further work to improve the methodology will be required on certain areas now, and as the methodology evolves over time, including alterations on the items set out above to ensure that the methodology continues to better meet the relevant objectives.

5. Connection charging methodology

- 5.1. There are no major issues with CE's connection charging methodology. This section sets out some general comments.

Connections general commentary

Description of O&M charges

- 5.2. O&M charges are used to recover future operating and maintenance costs of the connection assets where appropriate. In general the DNO is allowed the costs of these activities within its price control and they are recovered through use of system charges. However the exception to this is where customers wish to have an enhanced connection which includes additional assets beyond a normal secure connection the DNO will charge for these additional assets through the connection charge. The future O&M for these assets will be recovered from the connecting party in an additional connection charge.
- 5.3. In this case the DNO has described O&M charges within Section 3.10 and also Section 11. It would be clearer if the charges were described once in a clear manner. In section 3.1 the DNO notes that a connection charge may be levied including O&M where additional assets are installed but imply that there may be other circumstances. The statement needs to be clear when these charges may be levied as part of the connection charge.

EHV terms and conditions

- 5.4. Section 11.1 suggests that for EHV customers the normal terms contained in the statement will not apply and customers will have to apply on an individual basis. The statement does not explain why the terms would be different for EHV customers or what the terms would be. Further explanation needs to be provided in this instance.

Metering charges

- 5.5. SLC4B(5) states that any charges for the provision of special metering or telemetry or data processing equipment which are not covered by the charges in

the SLC36 statement of Metering and Data Services charges should be included in the connections statement. If any charges are to be levied for these items as connection charges, details would need to be included in the statement.

Drafting

- 5.6. The references to section 4.5 and 4.6 on page 4 appear to be wrong. Also on page 4, section 3.2, a reference to 3.17 seems to have been included by mistake.
- 5.7. The last paragraph on page 46 ends 'in addition:'

Decision on connection charging methodology

- 5.8. The Authority approves CE's connection charging methodology.
- 5.9. CE should also note that further work to improve the methodology will be required on certain areas now and as the methodology evolves over time, including alterations on the items set out above to ensure that the methodology continues to better meet the relevant objectives.

6. Statement of UoS charges

- 6.1. On 26 November 2004 CE submitted charging statements for NEDL and YEDL for use of system charges for demand and generation to apply from 1 April 2005. The Authority approved the form of the statements in the notice document sent to CE on 16 December 2004.
- 6.2. No major issues were identified concerning CE's UoS charging statements, and in general, the documents are clear and well set out. Some minor points for consideration during future review of the statements are set out below.

Charging statement – general commentary

- 6.3. It is noted that more detailed 'look up tables' are provided in addition to the main statement. It should be obvious to customers where these tables can be found. It is also important to ensure that the look up tables are clearly laid out, and that they do not contain information that would better sit in the charging statement.
- 6.4. The statements include information on the calculation of LLFs. LLFs have been identified by the October consultation responses and the Authority as an area for review in the future, and this section may also be considered as part of that process.
- 6.5. The statements also contain some details on charges for unmetered supplies and discounted tariffs for customers providing primary substations (YEDL only). CE should ensure that this information is not within the scope of the UoS methodology.