

Delivering the electricity distribution structure of charges project

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Overview:

Distribution network operators (DNOs) are required under their licences to review and develop the charging methodologies that determine how they charge different customers for connecting to and using their networks. Having appropriate charging methodologies in place that properly reflect the costs (and benefits) that different customers impose on the network is very important. Appropriate methodologies facilitate efficient network development. Inappropriate charges could act as a barrier to renewable distributed generation that could have an important role to play in reducing carbon emissions from the energy sector.

Although Ofgem has had a structure of charges project since 2000 and has set several deadlines within that project, only one DNO group has a partially revised methodology in place. This document consults on two ways in which we could require DNOs to ensure new methods are in place by 1 October 2009.

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Context

The costs of connecting to and using the electricity distribution network depend on several factors such as the customers' location and the capacity a customer requires. Ensuring customers are charged (or rewarded) for the impact they have on network costs is key to encouraging the efficient development of these networks. Cost reflective charging methodologies could reduce the need for investment in the networks, benefiting business and domestic customers by lowering the distribution charges that make up around 17% of a typical domestic consumer's bill.

The current electricity distribution charging structures were predominantly developed in the late 1970s. Since that time there have been significant developments and changes in the way customers connect to and use the distribution network. Charging structures have failed to keep up with technologies such as distributed generation that could have an important role to play in reducing carbon emissions from the energy sector.

In 2000, we launched a project to review the structure of charges levied by electricity distribution businesses. Originally, it was intended that DNOs would implement revised arrangements by April 2005. In November 2003 however, we agreed to delay development due to the impending work on the fourth Distribution Price Control Review (DPCR4).

Although the price controls took effect in April 2005, and Ofgem has since set deadlines, most companies still do not have improved methodologies in place. Only two DNOs (comprising Western Power Distribution's two distribution services areas) have a revised methodology in place which relates to customers connecting to the highest voltage levels (EHV) of their networks. The fifth Distribution Price Control Review (DPCR5) has started and one of its key objectives is to ensure that DNOs facilitate the connection of low carbon technologies to the distribution network. Progress on this front will be hampered unless DNOs introduce more cost reflective charging methodologies.

Associated Documents

- Electricity distribution price control review initial consultation document, 32/08, March 2008
<http://www.ofgem.gov.uk/Networks/ElecDist/PriceCtrls/DPCR5/Documents1/Initial%20consultation%20document.pdf>
- Distributed energy - initial proposals for more flexible market and licensing arrangements, 295/07, December 2007
<http://www.ofgem.gov.uk/Networks/ElecDist/Policy/DistGen/Documents1/DE%20con%20doc%20-%20complete%20draft%20v3%20141207.pdf>
- Electricity distribution licence review proposals, 259/07, October 2007
<http://www.ofgem.gov.uk/Networks/ElecDist/Policy/Documents1/DLR%20Proposals%20consultation.pdf>
- Structure of electricity distribution charges: update on progress and next steps, April 2007
<http://www.ofgem.gov.uk/Networks/ElecDist/Policy/DistChrgs/Documents1/suppliers%20%20letter%20cons%20letter%20030407.pdf>
- Decision in relation to WPD's proposal to modify its electricity distribution use of system charging model, south west area, February 2007
<http://www.ofgem.gov.uk/Networks/ElecDist/Policy/DistChrgMods/Documents1/16856-2007.pdf>
- Decision in relation to WPD's proposal to modify its electricity distribution use of system charging model, south Wales area, February 2007
<http://www.ofgem.gov.uk/Networks/ElecDist/Policy/DistChrgMods/Documents1/16857-20a07.pdf>
- Electricity distribution use of system charging: Bath University benefits analysis report on the long term charging framework, 12/06, January 2006
<http://www.ofgem.gov.uk/Networks/ElecDist/Policy/DistChrgs/Documents1/12617-1206a.pdf>
- Structure of electricity distribution charges, 135/05, May 2005
<http://www.ofgem.gov.uk/Networks/ElecDist/Policy/DistChrgs/Documents1/10763-13505.pdf>
- Electricity Distribution - Academic reports on the long term charging framework, March 2005
<http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=186&refer=Networks/ElecDist/Policy/DistChrgs>
- DNOs' current use of system charging methodologies
<http://www.ofgem.gov.uk/Networks/ElecDist/Policy/DistChrgs/Pages/DistChrgs.aspx>

Table of Contents

Summary	1
1. Introduction	3
Background to the electricity distribution structure of charges project	4
Background to the current consultation	5
Drivers for the structure of charges project going forward	6
Overview and structure of the document	7
2. High-level principles	9
Charging principles and objectives	9
Licence objectives	9
Competition Act 1998	9
Economic principles	10
Key issues and objectives for a revised charging methodology	10
Conclusions	12
3. Options for the structure of charges project	13
Option one – introduce a licence obligation on individual DNOs	14
Option two - introduce a common methodology for UoS charging across all DNOs	15
Concerns raised with the common methodology option	17
Conclusions	19
Approach for implementing options	19
Competition Commission	20
4. Next steps	21
Appendices	23
Appendix 1 – Consultation Response and Questions	24
Appendix 2 – Project timeline to date	26
Appendix 3 – DNO methodology development work	28
Appendix 4 – Proposed principles for UoS charges	29
Appendix 5 – A common UoS charging methodology	33
Scope of a common charging methodology	33
Governance and administration of the common methodology	33
Process for development of the common methodology	34
Appendix 6 – Indicative timeline for development by CLM	37
Appendix 7 – Illustrative licence drafting for Options 1 and 2	39
Overview of the proposed collective licence modifications	39
Illustrative licence drafting	40
Appendix 8 – The Authority’s Powers and Duties	41
Appendix 9 – Glossary	43
Appendix 10 – Feedback Questionnaire	46

Summary

Ofgem launched the structure of charges project in 2000. The purpose of the project was to review the methodologies used to calculate distribution network charges and to accelerate the development of charging methodologies by all distribution network operators (DNOs). Since 2000, DNOs have repeatedly failed to deliver revised methodologies despite agreeing to meet various deadlines. Only Western Power Distribution has a revised methodology in place in respect of customers connected to the EHV network. While other DNOs have been working on charging methodologies, progress has been slow and there is no certain date by which appropriate methodologies will be in place. We are concerned about this delay. It stands in the way of the efficient development of the networks and prevents the industry from playing a full role in tackling climate change.

Through the structure of charges project, Ofgem has developed a set of relevant objectives and principles for use of system (UoS) charging methodologies. Objectives include: ensuring efficient use of electricity distribution networks, protecting the interests of consumers and facilitating competition in the electricity industry in general. DNOs are also required to take account of developments in their distribution businesses and charging methodologies should reflect the costs and benefits to the network of distributed generation. However, recent work has shown that UoS charges are a barrier to the take up of distributed generation. This is a serious matter given the part these technologies can play in tackling climate change. It is time for all DNOs to meet the relevant objectives and principles in their UoS charging methodologies.

Given the repeated delays in delivering revised charging methodologies, it is no longer appropriate for this project to continue on a voluntary basis. We propose to place a formal licence condition on DNOs to deliver appropriate charging methodologies ahead of April 2010, the start of the new price control period. This is necessary so that charging methodologies do not undermine or constrain arrangements within the price control aimed at encouraging DNOs to facilitate the connection of distributed generation.

In this document we set out two alternative licence obligations: one on all DNOs to work together to develop a common charging methodology and the other on each individual DNO to deliver a revised charging methodology. Under either scenario we propose that DNOs will be required to charge according to a revised charging methodology by 1 October 2009.

Our preference is for DNOs to work together on a common methodology, as this best meets the objectives for the project and would help suppliers, generators and customers understand the charge setting process better. We will support the industry in delivering charging methodologies under either of these options so long as DNOs set up processes to achieve our deadlines.

Given the importance of delivery on the project and the history to date, if DNOs were to fail to meet the new requirements, we would consider taking enforcement action and / or imposing financial penalties on companies. The Authority may impose a penalty of up to 10% of turnover on any licence holder which has contravened any

relevant licence condition or relevant requirement. Non-compliance regarding the required deadline and principles for UoS charging methodologies could attract a significant penalty.

Following discussion of the high-level options for the structure of charges project, this document sets out our proposed approach for implementing the two options. We recommend implementing a licence obligation, through a collective licence modification (CLM). Under either option the CLM would set a deadline for delivering the revised methodologies. If a sufficient number of DNOs do not agree to the proposed licence amendment, we would consider referring the matter to the Competition Commission.

The document also provides detailed discussion of the high level principles and objectives we consider are a requirement from electricity distribution UoS charging methodologies. The principles and objectives are not new. They have been developed in consultation with DNOs, other interested parties and are based on a series of reports commissioned by us from leading industry academics since the project began in 2000. They show a 'straw-man' framework on which we expect DNOs to base their revised charging methodologies. We have considered these principles in the context of a common methodology, but believe that the principles hold whether DNOs develop methodologies individually or jointly going forward. Should we not require DNOs to work together on a revised methodology, we would still expect a common approach across all DNOs to the greatest extent possible.

We welcome views on the options and approach proposed in this document. Responses to this consultation will help us decide how to take forward the structure of charges project and will inform the detailed implementation plan for the industry for 2008 and beyond.

1. Introduction

Chapter summary: In this chapter we set out the background to the structure of charges project along with the main drivers for the project. We have set voluntary deadlines for DNOs to deliver improved charging structures but revised charging methodologies have not been implemented across the electricity distribution industry.

Question box

Question 1: Do you consider that it is necessary to place a licence obligation on DNOs to deliver use of system charging methodologies that meet the required principles and objectives by 1 October 2009?

1.1. Ensuring parties are charged or rewarded for the impact they have on networks is key to the efficient development of licensed networks. Current electricity distribution charging structures were predominantly developed in the 1970s, but the industry has changed since that time. Implementing revised charging methodologies across distribution service areas (DSAs) is vital for the future development of the industry.

1.2. Cost reflective distribution charges could have an important role to play in facilitating distributed generation (DG) and other technologies which can reduce carbon emissions from the energy sector. However, feedback from work by Ofgem and BERR suggests that current charging arrangements are an impediment to distributed generation. The fifth Distribution Price Control Review (DPCR5) has started and one of its key objectives is to ensure that DNOs facilitate the connection of low carbon technologies to the distribution network. Progress on this front will be hampered unless DNOs introduce more cost reflective charging methodologies.

1.3. In 2000, we launched a project to review the structure of charges levied by electricity distribution businesses and to accelerate the development of improved charging methodologies by all distribution network operators (DNOs). The industry has failed to deliver these methodologies despite agreeing to meet various deadlines and we are deeply concerned about these delays. Currently only two DSAs (both owned by Western Power Distribution (WPD)) have a revised methodology at EHV level in place while other DNOs remain at various stages of development with their charging methodologies.

1.4. The history of the project has shown the limitations of relying on DNOs' voluntary co-operation. We now think it is necessary and proportionate to introduce a change in DNO licences to formally require action. Chapter 3 of this document sets out two options for the electricity distribution industry to ensure that all companies have effective charging structures in place before the next price control begins in 2010.

Background to the electricity distribution structure of charges project

1.5. Electricity distribution networks comprise overhead lines, cables, transformers, and switchgear to transfer electricity from the transmission system and distributed generation to industrial, commercial and domestic users. There are 14 licensed electricity DNOs in the UK, each responsible for a DSA.

1.6. Energy transportation businesses are natural monopolies. Ofgem protects customers' interests by regulating the companies through five-year price controls. These place limitations on the revenue DNOs can collect and provide them with incentives to be efficient, to provide quality of service and to innovate. Distribution businesses establish the structure of their charges for access to and use of their network within the context of these regulated price controls.

1.7. The basis on which DNOs calculate charges for connection to and use of distribution networks has remained largely unchanged from the methodologies established by the Electricity Council in the late 1970s. Our project, started in 2000, to review the structure of charges levied by electricity distribution businesses was driven by two key objectives:

- to protect the interests of consumers by developing robust long-term charging structures to facilitate competition in the generation, distribution and supply of electricity, and
- to ensure that regulated companies provide appropriate incentives to encourage the efficient use of the network.

1.8. Work on the structure of charges project to date has identified the key issues and principles that distribution charges need to address to meet these objectives. These include:

- the need for DNOs to introduce more cost-reflective charging that takes account of both generation and demand customers, and
- the need for distribution charges to address ongoing structural changes within the energy industry, for example:
 - increased focus on and government initiatives to promote renewable and distributed energy
 - the entry of new licensed distribution networks
 - changes to the high-level operating conditions of the industry as more electricity is provided by generators connected to local networks
 - ongoing developments in metering technology.

1.9. Since October 2001 we have granted licences to four independent distribution network operators (IDNOs). IDNOs own and operate smaller networks embedded in the DNO networks. The electricity distribution licence applies to both DNOs and IDNOs.

1.10. The IDNOs operate under a relative price control, and are required to cap charges to domestic customers to the level set by the existing DNO in the relevant DSA. For non-domestic customers, IDNOs may either mimic DNOs' charging methodologies or develop their own charging methodologies. It is our understanding that IDNOs currently cap their charges to all customers (domestic and non-domestic) at the level of the host DNO's charges. Given current practice, we do not think IDNOs need to participate in this project. However, this position could change going forward.

Background to the current consultation

1.11. When we started the structure of charges project, our aim was that DNOs would implement new improved methodologies at EHV level by April 2005. In November 2003 we agreed to delay development due to the impending work on the fourth Distribution Price Control Review. DNOs then introduced interim arrangements from April 2005. These interim arrangements focussed on:

- establishing a common connection charging boundary for demand and generation customers
- removing deep connection charges and the introduction of UoS charges for new generators, and
- a requirement for DNOs to publish charging methodologies and justify their approaches to setting tariffs in accordance with their licence objectives.

1.12. Through a series of workshops and meetings during 2004 and 2005 we indicated that DNOs should look to implement revised methodologies in 2006/07, ahead of the start of the fifth Distribution Price Control Review (DPCR5). We wrote to the CEOs of each DNO in September 2005 expressing concern at the limited progress to date on this issue and called for the DNOs to put revised charging models in place before early 2008.

1.13. From 2005 DNOs began, either individually or in groups, to develop revised UoS charging arrangements. The work completed to date has been beneficial in increasing the level of understanding amongst DNOs of the intentions and requirements of the project but the rate of progress to date has been slow. In April 2007 WPD implemented a revised charging methodology in respect of EHV connected customers for its two DSAs.

1.14. Our April 2007 update letter² reiterated the concerns raised in 2005 at the slow progress of the structure of charges project, and, in particular, the varying stages of charging methodology development by the remaining electricity distributors. The paper set out the need for development across all voltage levels and expressed a desire that revised methodologies be implemented for the remaining DNOs as soon as possible. The letter talked about the need for progress on various issues, for example HV/LV generator charging, charging products and structures, charges to IDNOs and the treatment of generators who currently pay no UoS charges.

1.15. Appendix 2 sets out in more detail the timeline of the structure of charges project to date. It shows the slow progress on the project to date. Appendix 3 sets out DNOs' indicated plans for implementing revised UoS charging methodologies across all the voltage levels. It shows that companies remain at various stages of development and that there is no certainty that revised UoS charges for generators at all voltage levels will be delivered before 2010.

Drivers for the structure of charges project going forward

1.16. We consider delivery of UoS charging methodologies ahead of the next price control in 2010 to be a critical driver. While we recognise that the development of longer term charging methodologies has been an iterative process for the industry and that DNOs have had to develop comprehensive models for their respective networks, companies have had over five years to deliver but remain at various stages and standards of development. DNOs have informally committed to delivering ahead of the next price control period and we therefore see no reason for them to object to the deadlines being formalised.

1.17. Since 2006, the government has launched a major programme setting out its energy policy. In particular, there have been a number of changes in Government and European (EU) policy towards reducing carbon emissions from the electricity industry. This policy context provides new challenges for the DNOs regarding the role the companies could play towards achieving the government's objective for a low carbon economy.

1.18. There are several activities that DNOs could be encouraged to facilitate that would have a positive impact on the environment. In particular, the introduction of more cost reflective charging methodologies for renewable and distributed energy. More cost-reflective charges provide the opportunity for DG to be rewarded for the benefits they may bring to a distribution network. Ofgem and BERR's consultation on distributed low-carbon electricity, and some of the recent responses to this document, highlight that:

- Current distribution UoS charges are a potential barrier to the development of DG and related low-carbon electricity policy measures, and

² Structure of electricity distribution charges: update on progress and next steps, April 2007

- DGs have expressed interest in the development of UoS charging methodologies that reflect the incremental costs generation customers place on the network and allow, in principle, UoS charges to be negative where demand / generation customers reduce or defer network reinforcement costs.

1.19. Although much work has already been conducted on developing cost reflective distribution UoS charges for DG through groups such as the Distribution Charging Methodologies Forum (DCMF)³, only WPD has in place a revised charging method for distributed generation, and this is only at EHV level.

1.20. Our first DPCR5 consultation paper has now been published. A key objective of the price control review is to encourage DNOs to facilitate the connection of DG. Currently DNOs are restricted from recovering costs imposed by DG from demand customers and vice versa. This policy may create distortions, but we consider it is necessary at this time because distribution charges are not sufficiently cost reflective. Until distribution UoS charges are more cost reflective and allow distributed energy to receive any network benefits they produce, we remain inflexible to develop policies to address these issues. Our ability to improve incentives for distributed energy in the commercial framework for DNOs' price controls also remains constrained.

1.21. The experience of DPCR4 has shown that the resource demands of a price control review both on Ofgem and the DNOs will inevitably cause delays to the structure of charges project. We are concerned that not all the DNOs will have revised arrangements in place before April 2010 across all voltage levels. This is particularly concerning given that DNOs' failure to deliver revised generator charges across all voltage levels could act as a potential barrier to renewables and distributed energy.

1.22. As set out in our April 2007 update letter⁴, delivery on improved charging methodologies would also be particularly beneficial for signalling where networks require investment and for understanding the impacts of user behaviour on costs for DPCR5. In the absence of progress on charging methods we will be more dependent on assumptions than we might have been in the delivery of the price control review project.

Overview and structure of the document

1.23. The remainder of this document is structured as follows:

- Chapter 2 considers the high level principles and objectives for the electricity distribution structure of charges project

³ <http://2008.energynetworks.org/distribution-charging-methodol>

⁴

<http://www.ofgem.gov.uk/Networks/ElecDist/Policy/DistChrgs/Documents1/suppliers%20%20letter%20cons%20letter%20030407.pdf>

- Chapter 3 considers two options for taking the structure of charges project forward along with our proposed approach for implementation
- Chapter 4 provides conclusions and next steps for the project.

2. High-level principles

Chapter summary: This chapter sets out high-level UoS charging principles with reference to previous work in this area. We also highlight relevant legislation and economic principles.

Question Box

Question 2: Have we considered all the necessary high-level principles and objectives for the structure of charges project going forward?

Question 3: Has the structure of charges work to date highlighted any objectives set out here that are not appropriate for the project going forward?

2.1. This chapter considers the high-level principles and objectives associated with the structure of charges project for electricity distribution. These objectives and principles continue to be our key considerations for the development of distribution UoS charges going forward.

Charging principles and objectives

Licence objectives

2.2. The objective for the structure of charges project is for DNOs to introduce UoS charging methodologies that conform to the objectives currently set out in Standard Licence Condition 4(3). These state that charging methodologies must:

- facilitate the discharge of each DNO's obligations under the Act and its licence
- facilitate competition in supply and generation, and not restrict competition in transmission or distribution
- be cost reflective, as far as is practicable once implementation costs are taken account of, and
- take into account developments in the licensee's distribution business.

These objectives act as the baseline conditions for development of electricity distribution charging methodologies.

Competition Act 1998

2.3. UoS charges should also be developed in accordance with a DNO's obligations under the Competition Act 1998 (CA98). CA98 prohibits agreements between undertakings, decisions by associations of undertakings or concerted practices which

may affect trade within the United Kingdom and have as their object or effect the prevention, restriction or distortion of competition within the United Kingdom. It is for distributors to ensure they comply with CA98.

Economic principles

2.4. UoS distribution charges need to reflect the costs that different customers impose on the distribution system whilst allowing DNO charges to recover their allowed revenue, provide clear pricing signals to customers about the relative costs of using the system (either as a demand customer or as a generator) at different voltage levels and locations on the network and avoid undue uncertainty.

2.5. Our 2005 consultation document on longer term charging frameworks outlined that to achieve efficient development of the networks, DNO charges should give transparent signals as to the cost of locating different loads at different parts of the network. The document also explained that charges should reflect *future* costs to encourage the most economic development of the networks. Past costs are the result of decisions already taken and hence cannot be affected by future network charges. Only future decisions can be influenced and it is important that the decisions about future network use are made on the basis of charges which reflect their cost implications for the network.

Key issues and objectives for a revised charging methodology

2.6. The 2003 structure of electricity distribution charges initial decision document discussed, amongst other things, five high level principles for distribution charges and talked about achieving an appropriate balance between these. These principles were:

- cost reflectivity
- simplicity (at the point of use)
- transparency
- predictability, and
- facilitating competition.

2.7. The 2005 consultation on the longer term charging framework for electricity distribution charges expanded on these issues and objectives for the project. The consultation document set out that central to the development of charging methodologies, was the creation of new charging models which:

- accurately reflect forward looking costs
- incentivise efficient use and development of the network, and

- accommodate the introduction of generator UoS charges better than existing models.

2.8. In early 2005, we commissioned three sets of academics⁵ to consider what type of charging methodology and model they would advocate and what the key features would be. The key principles, issues and academic views at that time are captured below:

- **Incremental cost**

The academics agreed that the efficient charges should be based on the long run cost on a forward looking basis since charges should influence future behaviour and investment decisions in terms of the size and location of loads.

- **Cost drivers**

The academics agreed that understanding cost drivers is fundamental to determining suitable charging models. They draw out various investment-related cost drivers in their reports.

- **Applicability of any model to demand and generation**

The academics considered the symmetry of treatment between demand and generation in any charging model but differed in the extent of the symmetry they considered appropriate. For example it was noted that security requirements may differ between demand and generation as well as the impact of scaling.

- **Locational variation**

Each of the academic reports recognised the importance of reflecting locational influences in a charging model. One report thought locational charges would influence generators more than demand customers. Another suggested assessing costs on a site specific basis.

- **System load flow models**

One of the academic reports advocated using a load flow model to determine on a nodal (i.e. connection point) basis who should pay UoS charges.

2.9. Since the three groups of academics reported there have been a number of further developments on charging principles. For example, work by Bath University to assess the costs and benefits of revising UoS charging arrangements was published in January 2006. This work set out that the benefits at higher distribution voltages (i.e. EHV level) could be significant (potentially in the order of £200m, subject to the assumptions of the study) whereas implementation costs would be relatively small.

⁵ Three academic reports were summarised in our May 2005 consultation on the longer term charging framework. The reports are available on our website.

2.10. Bath University's work, based on a dummy network, confirmed that load flow models could be used to derive nodal charges. WPD's subsequent submission of a modification proposal in December 2006 to revise its charging methodology at EHV level also used a load flow model to deliver nodal level locational charging. WPD's proposal was approved in February 2007 for charges from 1 April 2007.

2.11. When we published Bath University's report we also set out⁶ that DNOs would need to look at the costs and benefits of certain areas not considered in the Bath University work, for example charges at different voltage levels and tariff structures⁷.

Conclusions

2.12. This chapter has considered the high level principles and objectives associated with the structure of charges project for electricity distribution. They reflect the work already completed by some DNOs and the reports commissioned by us from leading industry academics. These principles and objectives continue to be the key considerations for the development of distribution UoS charges going forward. Appendix 4 extends the discussion on the high level principles and objectives for electricity distribution charges set out in this chapter. In particular, it provides further detail and guidance on the requirements and proposals for DNO UoS charging methodologies going forward.

2.13. The next chapter considers options for delivering charging models in line with these principles.

⁶ Ofgem letter, 13 January 2006, 'Electricity distribution use of system charging: Bath University benefit analysis work'.

⁷ Our April 2007 update letter also refers to relevant areas of work concerning the development of revised methodologies and notes DCMF's role in taking these forward.

3. Options for the structure of charges project

Chapter summary: In this chapter we suggest options for taking the structure of charges project forward. We consider that it is necessary to place an obligation on DNOs to deliver charging methodologies that meet our defined principles and objectives. We consider two ways of doing this. We also set out our assessment of the advantages and disadvantages of the two options and our proposed approach for implementing them.

Question box

Question 4: We welcome views on the two options presented in this chapter, including views on the timescales for the various options and how they relate to the forthcoming price control review.

Question 5: We welcome views on the approach for implementing the two options. In particular, we welcome views on whether integrating new licence requirements would be better achieved by amending PLC13 or by inserting a new licence condition into Section B of the Proposed Standard Licence Conditions.

3.1. In this chapter we consider the options for taking the structure of charges project forward. There are two ways of doing this:

- **Option one:** Place a licence obligation on each DNO to develop and have in place cost reflective UoS charging methodologies by 1 October 2009. Under this option we would expect commonality across DNOs where appropriate and to the greatest extent possible but without a formal obligation regarding a common methodology, and
- **Option two:** Place a licence obligation on DNOs to develop and have in place a common distribution UoS charging methodology (i.e. identical charging models across companies) by 1 October 2009.

3.2. The two options are similar in their objective and approach. Both options would set a deadline for the delivery of DNOs' revised methodologies and would require these to accord with a set of common principles and objectives. Detailed principles and objectives are set out in Appendix 4.

3.3. Both options would deliver cost reflective UoS charging methodologies before 2010. However, our preferred option is for DNOs to develop a common UoS charging methodology for all connectees across all voltage levels. This approach would provide the greatest certainty that:

- all DNOs will deliver revised longer term charging methodologies before 2010
- revised arrangements would reflect best practice and the objectives and principles for the project, and

- customers will receive the benefits of consistency in methodology across DNOs.

3.4. It is our view currently that the licence should not prescribe governance arrangements to maintain a common methodology (under option two) post-2010. DNOs would be required to have a baseline methodology in place for October 2009, but the management and amendment from this baseline post-2010 would be on an individual basis. Individual amendment from a common baseline mirrors gas distribution charging arrangements currently in place.

3.5. Given the importance of delivering revised UoS charging methodologies to the deadlines and objectives outlined above, the Authority would consider any failure to comply with any licence obligation that would result from either of the two options very seriously.

3.6. The Authority has the power to impose a penalty of up to 10% of the licence holder's turnover on any licence holder which has contravened any relevant licence condition or relevant requirement. Any cases of non-compliance regarding the required deadline and principles for UoS charging methodologies could attract significant enforcement action and / or a financial penalty.

Option one – introduce a licence obligation on individual DNOs

3.7. Option one would formally require all DNOs to develop cost reflective UoS charging methodologies across all voltage levels by October 2009. Specifically, we would require DNOs to develop charging methodologies for demand and generation UoS customers across all voltage levels. This is not to say that current arrangements for HV and LV demand charging are inappropriate.

3.8. The licence obligation would require DNOs to deliver by the October 2009 deadline but under this option, commonality across DNOs is not an absolute requirement. However, we would encourage joint development work amongst DNOs and consistency, as far as this is possible, in methodology across DSAs.

3.9. Under this option, we would insert a new provision into DNOs' licences setting a deadline for the delivery of approved revised charging methodologies. This would establish a formal timeline for the structure of charges project and a strict deadline for delivering charging methodologies would provide some certainty to the development process as a whole. We also propose to insert provisions concerning charging principles.

3.10. There are a number of potential advantages for allowing DNOs to continue to work on a more individual basis but with a formal requirement to develop UoS charging methodologies 1 October 2009:

- it would provide certainty that all DNOs will have long-term charging methodologies in place for 2010

- it will ensure all DNOs reach a similar 'point' in the development of longer term charging methodologies. In addition to improving flexibility on linked policy issues for DPCR5, this will allow the industry to properly consider charging arrangements for generators who connected to the system prior to April 2005 and who currently pay no UoS charges
- work on revised methodologies will not be held up by differences between the DNOs.

3.11. We also consider there to be some potential disadvantages with option one:

- Suppliers and customers have consistently emphasised the benefits from the industry adopting consistent charging models and methodologies. Movement towards consistency of charging methodologies could:
 - reduce barriers to entry and aid competition within the electricity industry, and
 - promote connection to particular networks based on sound economic and technical reasons rather than incentives from discrepancies of charging arrangements between DSAs.

3.12. Should this option be taken forward, we would expect DNOs to pursue commonality across companies wherever possible.

Option two - introduce a common methodology for UoS charging across all DNOs

3.13. Option two would mean DNOs share charging models at each voltage level, EHV, HV and LV. DNOs would have a licence obligation to work collaboratively to develop and implement the common methodology by the specified deadline.

3.14. Appendix 5 outlines in more detail, the proposed principles and development process for the common methodology. A common methodology would also be required to accord with the set of charging principles and objectives set out in Appendix 4.

3.15. There are a number of potential benefits from a common methodology approach:

- it would provide greater certainty that all DNOs would have revised longer-term charging methodologies in place at or before April 2010
- it would be a cost and time effective way to achieve a positive outcome within the timescales for the structure of charges project

- it could allow DNOs and Ofgem greater control over resources during the busy price control period
- it could allow the use of consultants in the development and review work of UoS charging methodologies, and
- it would ensure consistency of UoS charging methodologies across Great Britain. This could be of benefit to suppliers, customers, and generators in allowing them greater transparency and understanding of the way in which charges are calculated. Where IDNOs are mirroring DNO charges this approach would also be of benefit to IDNOs.

3.16. Responses to the 2005 longer term charging consultation highlighted some of the benefits from a common methodology approach.

- Central Electric (CE) supported, in principle, the view that there would be benefit in DNOs working together to provide consistent charging models. The company highlighted that:
 - there would be value in having a joint cost allocation / charging model, and
 - commonality between approaches was likely to have benefits for suppliers and customers in understanding the charge-setting process and could only serve to increase transparency in the industry.
- The British Wind Energy Association considered it important that the future treatment of distribution system users did not vary from network to network, as this would avoid individual users becoming subject to incentives to connect to particular networks based only on discrepancies of the charging arrangements rather than for sound economic or technical reasons.
- The Renewable Power Association argued that whilst some regional variations would be inevitable, it did not accept that significant variations in charging models could be justified or cost-reflective when considering the provision of fundamentally comparable services.
- British Energy emphasised the importance of stable, predictable and transparent UoS charges. In order to facilitate this, the company argued:
 - it was vital that DNOs all adopt the same model
 - any modifications made to any models are made to all of them
 - governance processes should be common as well as the charging models, and
 - charging methodologies should also be consistent across voltage levels.
- The Chemical Industries Associates argued that the adoption of consistent charging models would reduce barriers to entry and aid competition within the electricity industry.

- Scottish Power argued it was not in the best interests of customers to have between eight and fourteen different ways of charging for use of system.

3.17. More recently, a number of responses to WPD's January and July 2006 consultations on potential changes to their UoS methodology also highlighted support for a common methodology approach.

3.18. We believe there would be significant value from DNOs developing a common distribution UoS charging methodology. Given DNOs' charging methodologies are currently at various stages of development, we also consider that a common methodology approach would be the quickest of the two options for introducing cost-reflective charges for distributed generation across voltage levels.

3.19. In addition, with the common baseline that this option would deliver, subsequent changes to charging models could be fully debated across the industry by customers as well as by DNOs. Clear and effective timelines and consultation processes for managing charging methodology development going forward could allow network operators to implement consistent charging models where appropriate across networks in a timely and efficient manner.

Concerns raised with the common methodology option

3.20. We recognise that there are concerns with a common methodology approach. DNO responses to the 2005 longer term charging consultation highlighted some of the problems with a common UoS methodology approach.

- Central Networks argued that rigid alignment of different charging methodologies could make it difficult to carry through subsequent changes, and might cause methodologies to effectively 'fossilise'
- EDF Energy believed that a common methodology would stifle innovation
- United Utilities argued that it might be possible to establish common models for both cost attribution and pricing, but there would still be differences between DNOs reflecting local circumstances, customer mix, network design and the nature of the metering stock, and
- WPD agreed that some degree of consistency between DNOs was desirable, but were unclear of how this could be achieved without our leadership.

3.21. In a presentation to the DCMF in November 2007, we proposed the option of the DNOs working together to develop a common charging methodology. Following this presentation we received support in principle from some DNOs, but some concerns were again raised with the common methodology option. In particular:

- there was concern that the DNOs were at various stages of development, and that a common methodology could result in a significant amount of work to date being dismissed in order to start again on a new approach, and
- two DNOs raised concerns with whether a single methodology could meet the needs of a range of customers across a range of networks.

3.22. We do not believe that the common methodology option would result in a significant amount of work being dismissed. The work completed to date has been beneficial in increasing the level of understanding amongst DNOs of the intentions and requirements of the project. Work completed to date would facilitate successful and timely development of a common methodology. For example:

- existing charging models developed by some of the DNOs could act as a blueprint for the common methodology, and
- DNOs have undertaken significant work on power flow analysis, which could be incorporated into a common methodology.

3.23. Instead of disregarding work to date, development of a common methodology would provide the industry with an opportunity to deliver a charging methodology that reflects current best practice from the existing work and which potentially saves on DNO resources going forward.

3.24. A potential impact of a common methodology is that it may constrain DNO innovation by restricting them to a single methodology which may not meet the needs of disparate customers. This was raised in 2005 as one of the reasons for allowing DNOs to develop individual methodologies.

3.25. Given the lack of innovation in charging modifications to date, we no longer consider this to be sufficient reason for continued development of individual UoS methodologies. In fact, common charging methodologies may encourage greater innovation through focussed debate on charging development across all DSAs. We also consider that DNOs have been given the opportunity to develop innovative longer term charging arrangements that meet our objectives and have failed to do so in a timely manner.

3.26. We recognise that introducing a common charging methodology could incur short terms costs for DNOs by requiring further development work. However, we consider that the long term benefits of a common methodology would be likely to exceed these costs. Furthermore, we recognise it may not be possible for a DNO to develop its individual charging methodology without incurring many of the similar knock on costs.

3.27. We also believe a single methodology would be able meet the needs of most customers across networks as well as increasing the ability of other stakeholders to contribute to decision making. The revised charging methodologies developed to date

demonstrate that distribution UoS charges can be developed to be flexible for different users of distribution networks.

3.28. An additional concern with option two is that, given the timescales for the project, the common methodology approach would not deliver the revised charging arrangements required by April 2010. Appendix 6 considers the timescales for taking the project forward by the common methodology approach. It shows that implementation by October 2009 is achievable although we recognise that there are some risks to this indicative timeline. In particular, it is key that we receive early and strong commitment from all the DNOs for this option to work.

Conclusions

3.29. Our preference is that DNOs develop a common charging methodology, as this appears to best meet the objectives and drivers of process for the project going forward.

3.30. We would support the industry in delivering charging methodologies under either of these options as long as it results in revised, cost reflective arrangements being in place before the new price controls in 2010. Should option one be taken forward, we would expect cross-DNO discussion and implementation of commonality as far as this is practicable.

Approach for implementing options

3.31. Options one and two would both require revisions to DNOs' existing licences via a collective licence modification (CLM). We consider that it is appropriate to introduce revisions to DNO licences, via a CLM, requiring the DNOs to deliver charging methodologies to a formal deadline.

3.32. A CLM, under either option, would set a deadline for delivering the revised methodologies. It would also prescribe the principles and objectives that should underlie the DNOs revised charging methodologies. We are proposing that the deadline for putting the revised methodologies in place would be 1 October 2009. We recognise that these timescales may be demanding. However, given that all DNOs have begun development work (see Appendix 3) and in the main have already committed to these timescales we do not consider this timescale to be unrealistic.

3.33. Appendix 7 sets out illustrative licence wording and content for option one and option two. The requirements shown in bold correspond to a deadline for delivery of methodologies by 1 October 2009. The licence requirements relating to relevant UoS charging principles and objectives are then outlined via reference to the detailed principles set out in Appendix 4.

3.34. We intend to establish a working group to discuss and develop the drafting of these new licence conditions. We would expect the working group to discuss both the

content of the new licence conditions and how these could be integrated into DNOs' existing licences before the project progresses to statutory consultation.

3.35. This document assumes that the electricity Distribution Licence Review currently underway which proposes to update distribution licences⁹ will be approved in advance of any implementation of changes being made in respect of the proposals set out in this consultation paper. Therefore, in this document the current licence condition regarding UoS charging methodologies (SLC4) is replaced with references to the new proposed licence condition concerning charging methodologies, PLC13.

3.36. Our initial view is a new licence condition could be integrated in to Section B of the Proposed Standard Licence Conditions for all electricity distributors. Placing the new licence obligations in Section B means that they will apply to DNOs and not to IDNOs. An alternative to this would be to include these obligations directly within PLC13. We welcome views on this matter. Under either approach, our current intention is that once revised UoS charging methodologies were in place these new conditions would be removed from DNOs' licences.

3.37. Under either option, we would expect a common approach across all DNOs to the greatest extent possible. In order to promote consistency across DNOs we would expect the industry to involve consultants in any collaborative development work leading up to the 1 October 2009 deadline.

3.38. We do not intend to produce an impact assessment for these proposals. We consider the structure of charges work to be an established and advanced project. This document consults on providing additional guidance to DNOs concerning the principles underlying revised methodologies and provides a timescale for delivery of the project. We will, however, consider whether an impact assessment is required when any charging methodology proposals are submitted.

Competition Commission

3.39. We welcome early indication of DNOs' views on whether there are any significant issues with proceeding with a proposed licence amendment under option one or option two. We consider delivery to the proposed deadline and objectives to be critical. For this reason, regardless of whether option one or two were taken forward, if a sufficient number of DNOs were to object to a proposed licence amendment, we would consider referring the matter to the Competition Commission.

9

<http://www.ofgem.gov.uk/Networks/ElecDist/Policy/Documents1/DLR%20Proposals%20consultation.pdf>

4. Next steps

Chapter summary: In this chapter we set out the next steps for the project.

Question box

There are no specific questions in this chapter.

4.1. This consultation document has considered the high level objectives and options for the distribution structure of charges project going forward in the context of the history of the project to date.

4.2. We have set out two options for the electricity distribution industry to ensure that all the companies have effective charging structures in place by October 2009.

4.3. We will support the industry in delivering charging methodologies under either of these options but consider that the industry must put revised, cost reflective arrangements into place before the new price controls take effect.

4.4. Given the stage of the work completed to date, the benefits from some consistency of methodology across DNOs and the importance of simple, predictable and transparent charges to distribution system users, we consider option one to be the absolute minimum for the project going forward. We recommend option two, implementing a licence obligation, through a CLM, requiring all DNOs to collaboratively develop and implement a common methodology for UoS charging by October 2009, be taken forward.

4.5. Appendix 6 outlines an indicative timeline for developing a common UoS charging methodology through a CLM. We intend to establish a working group in April / May 2008 to discuss and develop the drafting of licence obligations under either option. Once the consultation has closed, we will analyse the responses and consider the way forward. Once the proposed licence conditions for each option have been finalised, we would then expect to proceed to a statutory consultation. The statutory consultation will set out in detail the principles and development process required for UoS charging methodologies by licence. We would also provide a decision on how the CLM would be integrated into each DNO's licence.

4.6. There are a number of areas of the UoS charging methodology requiring review. We expect current work by DNOs on charging methodologies to continue while this consultation period is open. This document sets out our proposals for the structure of charges project going forward, and does not, at present, formally affect DNOs' development work or the formal process for submitting modifications on UoS charging. Any modification proposals to change UoS charging methods will be evaluated against existing benchmarks and will not give any regard to the proposals presented in this document until such time as they are formally recognised in a new

licence condition. However, we would expect DNOs to take this document into account going forward.

4.7. While the current consultation period is open, we will continue to move ahead with areas of work that have been highlighted as requiring further analysis, so that we are in the best possible position to take decisions once consultation responses are received. We expect to progress drafting of the licence condition for discussion in the working group and we will begin to prepare for statutory consultation.

4.8. We welcome interested parties' views on these proposals. A six week period has been allowed for this consultation in which we would encourage interested parties to respond with written submissions. We would especially welcome responses to the specific questions which we have set out at the beginning of each chapter heading and which are replicated in Appendix 1. We request that any such responses are provided by 14 May 2008.

Appendices

Index

Appendix	Name of Appendix	Page Number
1	Consultation Response and Questions	24
2	Project timeline to date	26
3	DNO methodology development work	28
4	Proposed principles for UoS charges	29
5	A common UoS charging methodology	33
6	Indicative timeline for development by CLM	37
7	Illustrative licence drafting for Options 1 and 2	39
8	The Authority's Powers and Duties	41
9	Glossary	43
10	Feedback Questionnaire	46

Appendix 1 – Consultation Response and Questions

1.1. Ofgem would like to hear the views of interested parties in relation to any of the issues set out in this document.

1.2. We would especially welcome responses to the specific questions which we have set out at the beginning of each chapter heading and which are replicated below.

1.3. Responses should be received by 14 May 2008 and should be sent to:

Colette Schrier
Commercial Regulation, Electricity Distribution
9 Millbank, London, SW1P 3GE
0207 901 7341
distributionpolicy@ofgem.gov.uk

1.4. Unless marked confidential, all responses will be published by placing them in Ofgem's library and on its website www.ofgem.gov.uk. Respondents may request that their response is kept confidential. Ofgem shall respect this request, subject to any obligations to disclose information, for example, under the Freedom of Information Act 2000 or the Environmental Information Regulations 2004.

1.5. Respondents who wish to have their responses remain confidential should clearly mark the document/s to that effect and include the reasons for confidentiality. It would be helpful if responses could be submitted both electronically and in writing. Respondents are asked to put any confidential material in the appendices to their responses.

1.6. Any questions on this document should, in the first instance, be directed to Colette Schrier.

CHAPTER: One

Question 1: Do you consider that it is necessary to place a licence obligation on DNOs to deliver use of system charging methodologies that meet the required principles and objectives by 1 October 2009?

CHAPTER: Two

Question 2: Have we considered all the necessary high level principles and objectives for the structure of charges project going forward?

Question 3: Has the structure of charges work to date highlighted any objectives set out here that are not appropriate for the project going forward?

CHAPTER: Three

Question 4: We welcome views on the two options presented in this chapter. In particular, we welcome views on the timescales for the various options and how they relate to the forthcoming price control review.

Question 5: We welcome views on the approach for implementing the two options. In particular, we welcome views on whether integrating the new licence requirements would be better achieved by amending PLC13 or by inserting a new licence condition into Section B of the Proposed Standard Licence Conditions.

CHAPTER: Four

There are no specific questions in this chapter.

Appendix 2 – Project timeline to date

1.1. This Appendix considers the timeline for the structure of charges project to date. The key stages of the project and other related industry milestones are shown in the table below. Documents referred to can be found at:

- Distribution Charges
<http://www.ofgem.gov.uk/Networks/ElecDist/Policy/DistChrgs/Pages/DistChrgs.aspx>
- Distribution Price Control Review 5
<http://www.ofgem.gov.uk/Networks/ElecDist/PriceCtrls/DPCR5/Pages/DPCR5.aspx>
- Distribution Price Control Review 4
<http://www.ofgem.gov.uk/Networks/ElecDist/PriceCtrls/DPCR4/Pages/DPCR4.aspx>
- Department for Business, Enterprise and Regulatory Reform - energy policy
<http://www.berr.gov.uk/energy/index.html>

Date	Structure of charges project milestones	Other industry milestones
2000	Launch of Structure of Charges (SoC) project / Initial consultation paper	
Oct 2002	SoC update document published	
Feb 2003	SoC ongoing development work	Energy White Paper 'Creating a Low Carbon Economy' published
July 2003		DPCR4 initial consultation
Nov 2003	SoC decision document published	
Apr 2004	Statutory consultation launched: interim charging methodologies	DPCR4 ongoing development work
June 2004	Notice of interim charging arrangements by CLM	DPC4 initial proposals
Apr 2005	Implementation of interim charging arrangements	Implementation of DPCR4 price controls
May 2005	Ofgem consultation on longer term revised charging framework	
Sept 2005	Ofgem letters to DNO CEOs on SoC project	
End 2005	Launch of individual DNO development of revised UoS charges	

Delivering the electricity distribution structure of charges project

2 April 2008

Date	Structure of charges project milestones	Other industry milestones
Jan 2006	Launch of collective DNO development project for revised charges	
Jan 2006	WPD initial consultation on proposed revised charging methodology	
Feb – July 2006	Collective DNO consultation and workshops on revised charging methodologies	DTI 'Energy Review Consultation'
July 2006	WPD consultation on proposed revised charging methodology	DTI 'Energy Review: The Energy Challenge' published
Nov 2006		First Ofgem sustainable development report published
Dec 2006	Collective DNO final conclusions paper on revised longer term charging framework	
Dec 2006	Ofgem consultation on WPD revised charging proposals	
Feb 2007	Ofgem non-veto decision on WPD revised charging proposals	DTI / Ofgem Distributed Energy call for evidence
Apr 2007	Implementation of WPD long term revised charging proposals	
Apr 2007	Ofgem update letter on SoC project	
May 2007	First meeting of Distribution Charging Methodology Forum	Energy White Paper published DTI / Ofgem Review of DG published
June 2007 – present	Ongoing DNO development of revised UoS charges	Ofgem & BERR Distributed Energy initial proposals / Energy Bill introduced into House of Commons
Apr – May 2008	Ofgem consultation on delivering the SoC project	DPCR5 initial consultation paper published

Appendix 3 – DNO methodology development work

1.1. This Appendix sets out where DNOs (by DNO group) have got to in the development of their UoS methodologies.

Company	UoS charging methodology development work
CE Electric	Early development work underway on revised EHV charging arrangements and on developing generator charges at lower voltages
EDF Energy	Model at advanced stage of development for revised EHV charging arrangements in one distribution network area (SPN) with proposals to roll out to LPN and EPN areas later. Work underway on developing generator charges at lower voltages
Central Networks / Scottish Power / SSE (working together as 'G3')	Model at advanced stage of development considering charges at all voltage levels although model not populated across all DSAs
United Utilities	Revised EHV charging arrangements under development. Work underway on developing generator charges at lower voltages
Western Power Distribution	Revised EHV charging arrangements implemented from 1 April 2007. Work underway on developing generator charges at lower voltages.

Appendix 4 – Proposed principles for UoS charges

1.1. This appendix extends the discussion on the high level principles and objectives for electricity distribution charges set out in Chapter 2. In particular, it provides further detail and guidance on proposals for DNO UoS charging methodologies going forward.

1.2. As set out in Chapter 2, the high-level principles and objectives for electricity distribution charges have been developed in consultation with DNOs, other interested parties and a series of academic reports commissioned by us. The principles and objectives outlined in this appendix reflect this work in more detail.

1.3. The 'formal' wording for the relevant principles set out below reflects the potential for these principles to be captured in the distribution licence. Square brackets distinguish option one from option two. Illustrative licence drafting is provided in Appendix 7. We would expect the drafting of any new licence provisions to be fully discussed and developed by an industry working group.

The Relevant Principles

1. The Relevant Principles in relation to the Charging Methodology are:

- (a) [a common charging model for all Distribution Service Providers¹⁰;

A common charging model shall include all material terms necessary to calculate electricity distribution use of system charges. It will comprise a common charging / cost allocation model that will use individual DNO network cost and use of system data.

[The model shall be common in the following respects:

- i) it shall be collectively developed and managed by all Distribution Service Providers;
- ii) all relevant Distribution Service Providers shall have joint ownership of the common charging model [during the development phase]; and
- iii) all Distribution Service Providers shall use the model for calculating distribution use of system charges.]

- (b) a [common] charging model for both generation and demand customers;

¹⁰ As defined in PLC1 and PLC35, i.e. any Electricity Distributor in whose Electricity Distribution Licence the requirements of Section B of the standard conditions of that licence have effect (whether in whole or in part).

The [common] charging model [, as set out in paragraph 1 (a),] shall be applicable to both generation and demand distribution network users. In this respect, the charges for demand and generation customers shall conform to the following principles:

- i) the [common] charging model, and all other [common] material terms necessary to calculate UoS charges, shall be used by the DNO to calculate distribution use of system charges for both demand and generation customers;
- ii) the distribution use of system charges applied to demand and generation users of the distribution networks, shall be calculated on an equitable basis, where cost drivers, as set out in paragraph 1 (d), are the same.

- (c) a forward looking incremental cost model;

The [common] charging model [, as set out in paragraph 1 (a),] shall be a forward looking incremental cost model. In this respect, the [common] model shall reflect:

- i) future costs, as in costs going forward, delayed or avoided, from future development of the distribution network; and
- ii) marginal / avoidable reinforcement costs from an increment / decrement in load or generation on the distribution network.

- (d) the charging model should reflect all significant cost drivers;

The [common] charging model, to be used to calculate all use of system tariffs, should reflect all significant cost drivers. In this respect, the charges calculated by the charging model should be levied in line with what drives network costs.

The licensee shall, [in conjunction with all Distribution Service Providers,] set out in the [common] use of system charging methodology, the key cost drivers for distribution networks and how these are accommodated in the [common] charging model. A [common] UoS charging model shall give regard to:

- i) time of day and seasonal influences where this is a significant cost driver;
- ii) reactive power, where this is a significant cost driver;
- iii) fault levels, where this is a significant cost driver; and
- iv) relevant growth rate(s) for the distribution service areas where this is a relevant cost driver.

- (e) the charging model and use of system tariffs shall accurately reflect network costs incurred;

The charging model and use of system tariffs shall accurately reflect the costs incurred by customers' use of the network. In this respect, charges and network costs should be levied and attributed in line with customers' actual use of the distribution system, where this is practicable.

- (f) the [common] charging model shall recognise the costs and benefits of using the system;

The [common] charging model [, as set out in paragraph 1(a),] shall give regard to the fact that the incremental cost of distribution capacity expansion and reinforcement in a given network can vary within the service area of a given network. In this respect, the [common] charging model shall:

- i) calculate use of system charges that reflect the incremental costs generation customers place on the network, as set out in paragraph 1 (c);
- ii) allow, in principle, use of system charges to be negative where generation customers' future use of the system reduces or defers network reinforcement costs; and
- iii) ensure that EHV charges vary by location in line with where use of system is causing or deferring network reinforcement.

- (g) the [common] charging methodology shall use a scaling approach that minimises distortion of cost signals;

Where a set of charges produced by the [common] use of system charging model does not derive a DNO's allowed revenue, as determined by the relevant licensee's price control, these prices will be adjusted or scaled to ensure that the licensee ultimately receives its allowed revenue.

In terms of how this adjustment should be applied, the [common] methodology shall use an approach that minimises the distortion of incremental cost signals.

- (h) where it is practicable, the [common] charging methodology shall use power flow modelling;

Where it is practicable, the [common] use of system charging methodology shall apply power flow modelling to estimate forward looking costs from incremental use of distribution networks.

- (i) predictability;

The [common] methodology shall allow use of system charges to be predictable to network customers. This will be facilitated by the

methodology including a [common] charging model that is predictable, useable and understandable to network customers. In this respect:

- i) simulation of demand growth on the network should be modelled in a predictable way based on realistic growth assumptions; and
 - ii) addition of load or generation to a DNO network should be modelled in a predictable way going forward.
- (j) Transparency and predictability;

Any assumptions or principles used in creating price signals shall be clearly stated in the [common] use of system charging methodology.

The methodology for the selection of network reinforcement methods within the [common] charging model shall be made clear.

As far as commercially possible, data used for the calculation of the marginal and other costs used in the [common] charging model should be publicly available. As far as commercially possible, the results from any charging calculations or [common] charging model shall also be publicly available.

The [common] model shall be provided in a form which allows a customer to make use of it to estimate their approximate contribution to use of system charges.

Appendix 5 – A common UoS charging methodology

1.1. This appendix proposes a process for developing a common methodology. The DNOs would need to deliver their proposed methodology to the Authority for consideration as a formal modification proposal.

Scope of a common charging methodology

1.2. A common UoS charging methodology would be a combination of parts developed by DNOs individually (i.e. due to different network data) and on a common basis. Specifically:

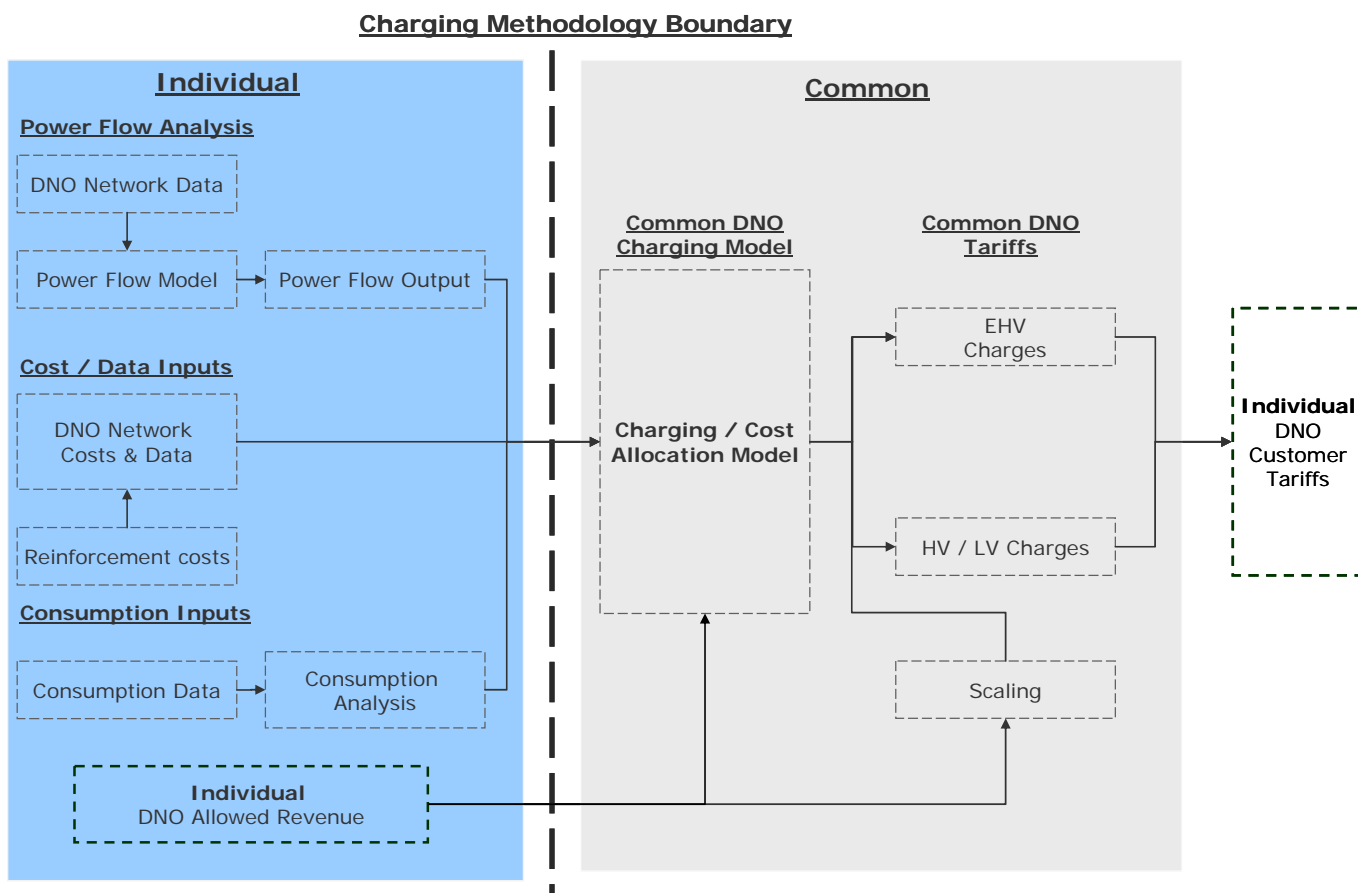
- There would be a generic format of network cost and data inputs that feed into the charging / cost allocation model. Values and collection of these inputs would be determined by DNOs individually
- The methodology for power flow modelling would be at the discretion of individual DNOs and will utilise individual DNO network data
- Values and collection of DNO consumption data and analysis would be completed by DNOs individually and will feed into the cost allocation / charging model
- The cost allocation / charging model would be common across all DNOs, and
- The structure (but not the level) of UoS tariffs would be common across all DNOs.

1.3. A common methodology would therefore require DNO collection and maintenance of network costing and UoS data to be on an individual basis but the charging model and the high-level structure of charges would be common for all DNOs. The common model would comprise all material terms necessary to calculate yardstick electricity distribution tariffs across DSAs but the relevant aspects of the model for each DSA would be 'switched on' for calculating individual DNO customer tariffs. Figure A.1 provides a simple diagrammatic overview of this approach.

Governance and administration of the common methodology

1.4. It is not our view currently that the licence should prescribe governance arrangements to maintain a common methodology post-2010. We are proposing, via a CLM, that all DNOs jointly develop a common methodology. Once the common methodology were put in place the management and modification of DNO charging methodologies would be on an individual basis.

Figure A.1: Charging methodology boundary



Process for development of the common methodology

1.5. The subsections below outline the key elements we consider appropriate for the development process of a common UoS charging methodology. The proposed process should be considered in parallel with the proposed timeline for the project to be implemented by October 2009 as set out in Appendix 6.

Development stage of the common methodology

1.6. We would expect the DNOs to develop the common UoS charging methodology between themselves. In this respect, the DNOs would be responsible for establishing a forum for the development work and for making arrangements for taking the work forward.

1.7. We would expect the DNOs to make arrangements for establishing a working group which would be responsible for delivering the work and administering the project during development of the common methodology. The working group could be developed as a sub-group of the DCMF.

1.8. The working group would oversee the development work of the common methodology and we would expect the DNOs to appoint consultants to assist with this work (in particular during the development of a charging model). We expect this development stage would make use of the work completed to date on revised distribution UoS charging methodologies.

Consultation

1.9. Where appropriate, consultation will need to occur during the development stages of the common methodology. DNOs would be required to ensure that relevant parties are able to respond, and their views taken into account. This would need to be led by the DNOs and should specifically cover early indications of arising tariff disturbances, to the extent that this is indicative of likely proposals.

1.10. We would expect the DNOs to engage and consult with interested industry parties early during the key development stage of the common methodology and to ensure the detail of proposals is clear. In particular, DNOs need to provide early notice to interested parties of possible tariff disturbances arising from the DNOs adopting a common methodology.

1.11. DNOs would also be required to consult with interested parties and the Authority on the impact proposed changes might have on the commercial framework required for DPCR5. We expect DNOs to ensure charging methodologies and indicative tariffs are transparent and predictable to enable interested parties to contribute to the development of any proposals linked to the price control process.

1.12. Following formal submission of proposed modifications by each DNO, the Authority will undertake full formal consultation on the proposals. This will allow all interested parties the opportunity to consider and respond to the proposals and to assess the impact that they will have.

Implementation

1.13. The DNOs will be required to implement the revised methodology in place of their existing methodologies by the date specified in the CLM (1 October 2009).

Role of Ofgem

1.14. We expect to be invited and involved in the development stages of the common methodology, although our involvement will be limited to attendance and observation. DNOs would be required to provide any information on the development

Delivering the electricity distribution structure of charges project

2 April 2008

of a common methodology to the Authority if requested and general guidance will be provided where appropriate.

1.15. Each DNO will need to submit modification proposals for the implementation of the revised methodology. These will be submitted to the Authority for consideration, and the Authority will issue a decision. We anticipate that we will consult on any proposals received.

Appendix 6 – Indicative timeline for development by CLM

1.1. This appendix sets out an indicative timeline for development of a common methodology by a collective licence modification (CLM). The table below sets out the key tasks and the indicative dates for the project.

Tasks	Dates
Stage 1: Consultation & licence condition drafting	
Consultation to develop through CLM	April - May 2008
Establishment of licence drafting working group	April / May 2008
Ofgem to consider responses to this consultation	May 2008
Develop and draft licence conditions with working group	May – July 2008
Stage 2: Statutory consultation	
Statutory consultation	Jul 2008
Ofgem to consider responses to statutory consultation	Aug 2008
Stage 3: Issue Modification & implement licence condition	
Ofgem to issue Modification to licensees and implement licence condition	Sept 2008
Stage 4: Development of common methodology	
Industry to establish common methodology working group	Sept 2008
Working group to appoint consultants	Sept 2008
Industry to develop and consult on common methodology, including development of charging models across DNOs. Work led by working group and external consultants.	Oct 2008 – Mar 2009
Stage 5: Delivery / implementation	
All DNOs to submit modification proposals to Ofgem along with indicative charges	Apr 2009
Consultation on methodology modification proposals	May – Jul 2009

Delivering the electricity distribution structure of charges project

2 April 2008

Tasks	Dates
Authority decision on modification proposals	Jul 2009
Industry to issue final indicative charges for 1 October 2009	Aug 2009
Implementation of revised methodology along with revised UoS charges	1 Oct 2009

Appendix 7 – Illustrative licence drafting for Options 1 and 2

Overview of the proposed collective licence modifications

1.1. The main part of this document has set out two options for the electricity distribution industry to ensure that all distribution network operators (DNOs) have revised use of system charging methodologies in place in advance of the commencement of the next price control in 2010. It has also outlined our expectations of the objectives and principles for revised use of system methodologies (see Appendix 4).

1.2. This appendix provides some illustrative drafting of how these objectives and requirements could be integrated into DNOs' electricity distribution licences. The requirements would be additional to existing licence provisions. As set out in the main document, we expect the principal changes to be as follows:

- The new licence requirements and objectives shall apply to DNOs with a distribution services area; i.e. the new licence requirements *shall not* apply to independent distribution network operators.
- The DNOs shall be required to prepare and have in force a revised use of system charging methodology by a deadline of 1 October 2009, as specified by the Authority. This deadline will be specified in revised licences going forward.
- The inclusion of a relevant set of principles and objectives in relation to which a DNO's revised use of system charging methodology must comply.

1.3. We are currently reviewing the Standard Licence Conditions of the electricity distribution licence as part of its drive towards Better Regulation. As set out in chapter 3, we anticipate that additional requirements in relation to use of system charging methodologies would be integrated into the new, rather than the current, distribution licence. Therefore, in this document the current licence condition regarding UoS charging methodologies (SLC4) is replaced with references to the new proposed licence condition concerning charging methodologies, PLC13¹¹.

1.4. The sub-sections below provide illustrative licence drafting of the main proposals set out above. These have been drafted to be relevant to either of the options for integration into DNOs' licences. Where licence provisions are only relevant to option one or option two, this is highlighted in italics.

11

<http://www.ofgem.gov.uk/Networks/ElecDist/Policy/Documents1/DLR%20Proposals%20consultation.pdf>

Illustrative licence drafting

Requirements for Charging Methodology

Option one only

1. **[In addition to the requirements in PLC13], the licensee shall, by 1 October 2009, prepare and have in force a revised use of system charging methodology that delivers use of system charges which the Authority has approved on the basis that this achieves the Relevant Objectives and Relevant Principles set out in paragraphs 2 and 3 in relation to demand and generator use of system charges across all voltage levels.**

Option two only

1. **[In addition to the requirements in PLC13], the licensee shall, by 1 October 2009, in conjunction with all other distribution services providers, prepare and give effect to a revised charging methodology that delivers use of sytem charges which the Authority has approved on the basis that this achieves the Relevant Objectives and Relevant Principles set out in paragraphs 2 and 3 in relation to demand and generator use of system charges across all voltage levels.**

The Relevant Objectives

2. The Relevant Objectives in relation to the Charging Methodology are:
 - (a) that compliance with the methodology facilitates the discharge by the licensee of the obligations imposed on it under the Act and by this licence;
 - (b) that compliance with the methodology facilitates 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 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 methodology, as far as is reasonably practicable, properly takes account of developments in the licensee's Distribution Business.

The Relevant Principles

3. [as set out in Appendix 3]

Appendix 8 – The Authority's Powers and Duties

1.1. Ofgem is the Office of Gas and Electricity Markets which supports the Gas and Electricity Markets Authority ("the Authority"), the regulator of the gas and electricity industries in Great Britain. This Appendix summarises the primary powers and duties of the Authority. It is not comprehensive and is not a substitute to reference to the relevant legal instruments (including, but not limited to, those referred to below).

1.2. The Authority's powers and duties are largely provided for in statute, principally the Gas Act 1986, the Electricity Act 1989, the Utilities Act 2000, the Competition Act 1998, the Enterprise Act 2002 and the Energy Act 2004, as well as arising from directly effective European Community legislation. References to the Gas Act and the Electricity Act in this Appendix are to Part 1 of each of those Acts.¹²

1.3. Duties and functions relating to gas are set out in the Gas Act and those relating to electricity are set out in the Electricity Act. This Appendix must be read accordingly¹³.

1.4. The Authority's principal objective when carrying out certain of its functions under each of the Gas Act and the Electricity Act is to protect the interests of consumers, present and future, wherever appropriate by promoting effective competition between persons engaged in, or in commercial activities connected with, the shipping, transportation or supply of gas conveyed through pipes, and the generation, transmission, distribution or supply of electricity or the provision or use of electricity interconnectors.

1.5. The Authority must when carrying out those functions have regard to:

- The need to secure that, so far as it is economical to meet them, all reasonable demands in Great Britain for gas conveyed through pipes are met;
- The need to secure that all reasonable demands for electricity are met;
- The need to secure that licence holders are able to finance the activities which are the subject of obligations on them¹⁴; and
- The interests of individuals who are disabled or chronically sick, of pensionable age, with low incomes, or residing in rural areas.¹⁵

1.6. Subject to the above, the Authority is required to carry out the functions referred to in the manner which it considers is best calculated to:

¹² entitled "Gas Supply" and "Electricity Supply" respectively.

¹³ However, in exercising a function under the Electricity Act the Authority may have regard to the interests of consumers in relation to gas conveyed through pipes and vice versa in the case of it exercising a function under the Gas Act.

¹⁴ under the Gas Act and the Utilities Act, in the case of Gas Act functions, or the Electricity Act, the Utilities Act and certain parts of the Energy Act in the case of Electricity Act functions.

¹⁵ The Authority may have regard to other descriptions of consumers.

- Promote efficiency and economy on the part of those licensed¹⁶ under the relevant Act and the efficient use of gas conveyed through pipes and electricity conveyed by distribution systems or transmission systems;
- Protect the public from dangers arising from the conveyance of gas through pipes or the use of gas conveyed through pipes and from the generation, transmission, distribution or supply of electricity;
- Contribute to the achievement of sustainable development; and
- Secure a diverse and viable long-term energy supply.

1.7. In carrying out the functions referred to, the Authority must also have regard, to:

- The effect on the environment of activities connected with the conveyance of gas through pipes or with the generation, transmission, distribution or supply of electricity;
- The principles under which regulatory activities should be transparent, accountable, proportionate, consistent and targeted only at cases in which action is needed and any other principles that appear to it to represent the best regulatory practice; and
- Certain statutory guidance on social and environmental matters issued by the Secretary of State.

1.8. The Authority has powers under the Competition Act to investigate suspected anti-competitive activity and take action for breaches of the prohibitions in the legislation in respect of the gas and electricity sectors in Great Britain and is a designated National Competition Authority under the EC Modernisation Regulation¹⁷ and therefore part of the European Competition Network. The Authority also has concurrent powers with the Office of Fair Trading in respect of market investigation references to the Competition Commission.

¹⁶ or persons authorised by exemptions to carry on any activity.

¹⁷ Council Regulation (EC) 1/2003

Appendix 9 – Glossary

A

Authority

The Authority is the governing body for Ofgem, consisting of non-executive and executive members.

B

BERR

UK Government department responsible for business, enterprise and regulatory reform. The department was created in 2007 when it replaced the Department of Trade and Industry.

C

Competition Act 1998

The Competition Act 1998 (CA98) gives the Office of Fair Trading and the sector regulators powers to apply and enforce Articles 81 and 82 of the EC Treaty as well as the Chapter I and II prohibitions of CA98 using their concurrent powers. Article 81 and the Chapter I prohibition prohibit agreements which have the object or effect of preventing, restricting or distorting competition. Article 82 and the Chapter II prohibition prohibit conduct by one or more undertakings which amounts to the abuse of a dominant position in the market.

Competition Commission

This is an independent public body which conducts in-depth inquiries into mergers, markets and the regulation of the major regulated industries.

D

DCMF

Distribution Charges Methodology Forum: A group which meets every six to twelve weeks to consider and progress policy relating to DNOs' charging methodologies.

Distributed Energy / Distributed Generation

Any generation which is connected directly into the local distribution network, as opposed to the transmission network, as well as combined heat and power schemes of any scale. The electricity generated by such schemes is typically used in the local system rather than being transported for use across the UK.

DLR – Distribution Licence Review

A review of the SLCs of the electricity distribution licence, which aims to improve the clarity and ease of use of the licence without making substantive policy changes to the licence.

DNOs - Distribution Network Operators

A licensed distributor which operates electricity distribution networks in distribution service areas but which can also compete to operate networks anywhere within the UK.

Distribution Price Control Review 5 (DPCR5)

DNOs operate under a price control regime, which are intended to ensure DNOs can, through efficient operation, earn a fair return after capital and operating costs while limiting costs passed onto customers. Each price control typically lasts five years at a time. The existing price control will expire 31 March 2010. DPCR5 will be the fifth review of the price control work and the first consultation paper on this project was published on 28 March 2008. The resulting price control is planned to commence on 1 April 2010.

DSA – Distribution services area

A geographic area in which DNOs are obliged by their licence to provide specific electricity distribution services. There are 14 such areas in Great Britain served by 7 DNO group companies.

E

The Electricity Council

The Electricity Council was a governmental body set up in 1957 to oversee the United Kingdom's electricity supply industry. The Council was formally wound up by The Electricity Council (Dissolution) Order 2001.

EHV

Term used to describe the parts of distribution networks that are extra high voltage.

H

HV

Term used to describe the parts of distribution networks that are high voltage.

I

Independent Distribution Network Operators (IDNOs)

A licensed distributor which does not have a distribution services area and competes to own and operate electricity distribution networks anywhere within the UK.

Implementation Steering Group (ISG)

The purpose of the structure of charges ISG was to facilitate discussion about the commercial, regulatory and technical aspects of Ofgem's proposals for changes to the electricity distribution charges regime. This group has since been replaced by the Distribution Charging and Methodologies Forum (DCMF).

L

LV

Term used to describe the parts of distribution networks that are low voltage. Domestic customers are connected to the LV network.

P

PLC – Proposed Licence Condition

Term used to describe the SLCs which the Electricity Distribution Licence Review is proposing, as opposed to those SLCs which are already in use.

S

SLC - Standard Licence Condition

These are conditions that licensees must comply with as part of their licences. SLCs can only be modified in accordance with Section 11A of the Electricity Act. Failure to comply with SLCs can result in financial penalties and/or enforcement orders to ensure compliance.

U

UoS Charges

Use of System Charges: Charges paid by generators and suppliers for the use of the electricity distribution network.

Appendix 10 – Feedback Questionnaire

1.1. Ofgem considers that consultation is at the heart of good policy development. We are keen to consider any comments or complaints about the manner in which this consultation has been conducted. In any case we would be keen to get your answers to the following questions:

1. Do you have any comments about the overall process, which was adopted for this consultation?
2. Do you have any comments about the overall tone and content of the report?
3. Was the report easy to read and understand, could it have been better written?
4. To what extent did the report's conclusions provide a balanced view?
5. To what extent did the report make reasoned recommendations for improvement?
6. Please add any further comments?

1.2. Please send your comments to:

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