

## Code Governance Review: Governance of charging methodologies: Initial proposals

**Document type:** Consultation

**Ref:** 108/09

**Date of publication:** 26 August 2009

**Deadline for response:** 9 October 2009

**Target audience:** Network operators, network users, consumer representatives and interested parties.

### Overview:

Network owners are required by their licence to develop and have in place charging methodologies which will determine their use of system ("UoS") and connection charges. These charges are levied on users and directly connected customers and therefore are likely to have a significant impact on the siting and operational decisions of these companies. However, currently neither users nor customers (or their representatives) are able to formally raise modifications to these charging methodologies. In September 2008 we consulted on a number of options on how to make the governance of charging methodologies more inclusive for network users, interested parties and consumer representatives. This document sets out our initial proposals for reform of the governance of charging methodologies taking account of the responses to our September document. The document includes an impact assessment, including a cost benefit analysis which indicates that there are benefits in opening up the charging methodologies to change by network users and consumer representatives. We are seeking views on our initial proposals.

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## Context

The Authority is committed to policies and processes that are consistent with better regulation principles and that reduce administrative burden on business while maintaining effective consumer protection.

As part of that commitment, in November 2007 we announced a review of the various industry codes and charging methodology governance procedures ("the Review"). We considered that such a review was timely given the changes that have occurred in the market, where the nature of participation is changing, particularly for new entrants and smaller players. The Authority's role in relation to code modifications has also changed with the introduction of additional statutory duties and the right of appeal to the Competition Commission.

In June 2008, we set out the scope of the review and confirmed that a good governance regime should –

- promote inclusive, accessible and effective consultation;
- be governed by processes that are transparent and easily understood;
- be administered in an independent and objective manner;
- provide rigorous high quality analysis of any case for change;
- be cost effective;
- contain rules and processes that are sufficiently flexible to allow for efficient change management; and
- be delivered in a manner that results in a proportionate regulatory burden.

The Review is considering what changes are required to deliver these objectives. The Review comprises work strands that look at the delivery of major policy reform and self-governance, the role of code administrators, initiatives to support small players, levels of complexity and fragmentation and code objectives.

This second consultation sets out our initial proposals for the governance of the network operators' ("NWOs") charging methodologies.

## Associated Documents

- Open letter announcing review of industry code governance - 284/07, November 2007:  
<http://www.ofgem.gov.uk/Licensing/IndCodes/CGR/Documents1/Open%20letter%20announcing%20governance%20review.pdf>
- Corporate Strategy and Plan 2008 - 2013 - 34/08:  
<http://www.ofgem.gov.uk/About%20us/CorpPlan/Documents1/CORPORATE%20STRATEGY%20AND%20PLAN%2028%20MARCH%202008.pdf>
- Electricity Distribution Licence Review: Conclusions and Statutory Consultation - 50/08, April 2008:

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[http://www.ofgem.gov.uk/Networks/ElecDist/Policy/Documents1/DLR%20Conclusions\\_letter.pdf](http://www.ofgem.gov.uk/Networks/ElecDist/Policy/Documents1/DLR%20Conclusions_letter.pdf)

- Review of industry code governance - scope of review: 92/08, June 2008:  
[http://www.ofgem.gov.uk/Licensing/IndCodes/CGR/Documents1/GovRev\\_Scope%20-%20MF%20Final%2030%20JUNE%2008.pdf](http://www.ofgem.gov.uk/Licensing/IndCodes/CGR/Documents1/GovRev_Scope%20-%20MF%20Final%2030%20JUNE%2008.pdf)
- Delivering the electricity distribution structure of charges project: decision on a common methodology for the use of system charges from April 2010, consultation on the methodology to be applied across DNOs and consultation governance arrangements 104/08, July 2008:  
[http://www.ofgem.gov.uk/Networks/ElecDist/Policy/DistChrgs/Documents1/FINAL%20July%20consultation%20letter\\_22\\_07\\_08.pdf](http://www.ofgem.gov.uk/Networks/ElecDist/Policy/DistChrgs/Documents1/FINAL%20July%20consultation%20letter_22_07_08.pdf)
- Code Governance Review: Charging methodology governance options: 132/08, September 2008:  
[http://www.ofgem.gov.uk/Licensing/IndCodes/CGR/Documents1/CGR\\_CM\\_Sept\\_FINAL.pdf](http://www.ofgem.gov.uk/Licensing/IndCodes/CGR/Documents1/CGR_CM_Sept_FINAL.pdf)
- Next steps in delivering the electricity distribution structure of charges project: 24/09, March 2009:  
<http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=480&refer=Networks/ElecDist/Policy/DistChrgs>

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## Summary

The impacts of the network charging methodologies are becoming increasingly important within the current market and regulatory environment. The energy sector is undergoing significant change, with significant amounts of network investment required over the coming years to help meet security of supply and climate change objectives.

This has been most recently highlighted by the Energy White Paper<sup>1</sup> which sets out the Government's strategy to deliver greenhouse gas emissions reductions of 18% by 2020. To meet these targets there will need to be significant investment in the grid system to facilitate the generation of electricity from renewable resources and new technologies. The Ofgem-DECC co-chaired Energy Networks Strategy Group found that an additional £4.7bn will be required to develop the onshore grid to support the connection of renewable generation coming forward by 2020. Prior to this, as part of the recent 2007-12 transmission price control, Ofgem authorised expenditure for over £5bn in transmission investment for the connection of renewable generation as well as to enable the connection of new storage and gas importation facilities.

In view of these developments, and the impacts of network investment on network charges, we consider that it is increasingly important that users of networks and consumer representatives are able to influence the development of the NWOs' charging methodologies. This is because network charges, at the margin, can have both short term impacts on users' operational decisions, and on long term infrastructure siting decisions (e.g. for electricity generation stations). In addition, the charging methodologies also have significant distributional effects and the charges that they generate also influence greenhouse gas emissions.

At present however, only the NWOs can formally propose modifications to these methodologies. In view of this, we consulted in September 2008 on opening up the charging methodologies to change by network users and consumer representatives. We consulted on four options:

- 1. Retaining the status quo.** The existing arrangements under which only the NWOs can propose changes to the charging methodologies would be retained.
- 2. Refining the existing licence arrangements.** The network licences would be refined to enable network users and consumer representatives to propose modifications to the charging methodologies. The NWOs would assess and consult on these proposals and submit them to the Authority for decision.

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<sup>1</sup> The UK Low carbon Transition Plan- National Strategy for Climate and Energy

- 3. Industry Codes Governance.** The charging methodologies would be transferred into the relevant existing industry codes. Parties to those industry codes would be able to propose changes, which would be submitted to the Authority for decision.
- 4. A new charging methodology change management code.** A new code would be created containing rules and processes for the modification of charging methodologies (by both networks and market participants). Each network would be required to sign up to the code.

The views of respondents to the September 2008 consultation were largely split between NWOs and network users. NWOs indicated that the prevailing arrangements were satisfactory and should not be changed, whilst most users suggested that reforms were necessary in order to enable them to influence a major cost factor in their businesses. In order to inform our initial proposals we have carried out an initial impact assessment ('IA'). This incorporates a quantitative cost/benefit assessment that has been prepared by Frontier Economics, as well as a qualitative assessment. This initial IA indicates that only modest efficiency savings would be required in order to outweigh the quantifiable costs associated with administering multiple change proposals. Our initial IA also indicates that opening up the methodologies to users and consumer representatives should enable innovative proposals to be raised which could increase the cost reflectivity and transparency of the methodologies. We also note that the electricity distribution structure of charges project has recently introduced new licence conditions requiring revised governance arrangements, including the right for users to raise modification proposals, to be introduced for distribution charging methodologies by 1 April 2010.

### **Initial proposals**

In view of the findings of the initial IA we have undertaken our present view is that there are benefits in opening up the charging methodologies to change proposals by network users. We do not, therefore propose to adopt Option 1 but propose to pursue what we believe are the more viable governance options, namely Option 2 or Option 3. In chapter 4 we discuss the advantages and disadvantages of both these options and set out our view that the choice for change is, in our initial view, finely balanced.

Whilst Option 3 provides the benefits of independent code processes and accountability through the Competition Commission appeals mechanism, Option 2 is potentially more straightforward and easier to implement. We would welcome respondents' views on the relative merits of these options. Given the substantial level of medium and proposed longer term investment in the electricity grid and the industry changes taking place to facilitate renewable connections we propose to prioritise reform of the governance of the gas and electricity transmission charging methodologies. In addition, in order to mitigate the potential costs of implementing either Option 2 or Option 3, we have proposed bi-annual or annual change windows. We consider that this should help to reduce the number of charging methodology changes that are proposed and should ensure that changes are assessed together. Similarly, we consider that this mitigation measure should help to minimise the risk of increased charging volatility resulting from the proposed governance reform.

## 1. Introduction

1.1. In June 2008 we published our decision on the scope of the Industry Codes Governance Review ("the Review") and indicated we would consult on options to open up the charging methodologies to change by industry participants. These methodologies govern the way in which transmission and distribution NWOs determine network charges.

1.2. In the short term, charging methodologies developed by networks can have impacts, at the margin, upon the operational decisions of market players on whether to input/offtake gas and electricity. They can also have important impacts, at the margin, on long-term infrastructure siting decisions (e.g. for electricity generation stations, gas storage and production facilities and industrial sites). In addition, the charging methodologies also have significant distributional effects and the charges that they generate also influence long and short term carbon costs and greenhouse gas emissions.

1.3. Under the existing charging methodology governance arrangements, network users are not able to propose modifications to the charging methodologies. However, given the multi-lateral impacts of the methodologies on market participants, we consider that there are strong arguments that market participants and consumer representatives ('non-NWO parties'<sup>2</sup>) should be able to propose changes to the methodologies. In our June 2008 decision on the scope of the Review, we indicated that we would consult on options to enable this to occur.

1.4. In September 2008 we issued our consultation document (the "September 2008 document") that considered a number of governance options to enable non-NWO parties to propose modifications to the NWOs' charging methodologies.

### The Options

1.5. The September document set out 4 options for the governance of the charging methodologies. These were:

- **Option 1 – Retaining the status quo.** This option retains the existing arrangements under which only the networks can raise changes to the charging methodologies.

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<sup>2</sup> Throughout the document we refer to non-network parties (non-NWOs) to identify market participants that are not network operators or network owners. In general terms these parties include generators, suppliers, shippers and consumer representatives. The precise nature of the parties that can raise changes (and in which sector) is however dependent on which option for reform is taken forward. We elaborate on the nature of these parties in Chapter 4 of this document.



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- **Option 2 – Refining the existing licence arrangements.** Under this option, network licences would be refined to enable network users (and customer representatives) to propose modifications to the charging methodologies. The NWOs would be required to assess and consult on these proposals and ultimately submit them to the Authority for decision.
  - **Option 3 – Industry Codes Governance.** Under this option, the charging methodologies would be transferred into the relevant existing industry codes. Parties to the industry codes would be able to raise changes. The changes would then be assessed by the relevant code panel and submitted to the Authority for decision. Parties would have the ability to appeal Authority decisions on code modification proposals relating to charging methodologies to the Competition Commission, under the same process that would apply to any other code modification decision.
  - **Option 4 – A new charging methodology change management code.** Under this option, a new code would be created containing rules and processes for the modification of charging methodologies by NWOs and non-NWOs. Each NWO would be required to sign up to the code. The code would require the creation of a secretariat/administrator as well as code panel arrangements to govern the assessment of change proposals.

1.6. We also undertook a high level initial assessment of options 2, 3, and 4 relative to Option 1 (status quo) against the Review objectives, namely:

- Promotion of inclusive accessible and effective consultation;
- Governed by rules and processes that are transparent and easily understood;
- Administered in an independent and objective fashion;
- Cost effectiveness;
- Rigorous and high quality analysis of the case for and against proposed changes;
- Flexible rules and processes leading to efficient change management; and
- Proportionate regulatory burden.

1.7. Our initial assessment found that there were benefits in terms of inclusivity, accessibility, transparency, effective consultation and improved NWO accountability within Options 2, 3 and 4. In particular, we noted that opening up the charging methodologies to change proposals made by non-NWOs should provide a formal route to enable these parties to bring forward innovative modification proposals to facilitate the better achievement of the charging methodology objectives and address deficiencies in the existing methodologies. This is in contrast to the status quo whereby non-NWOs are reliant on NWOs to bring forward change proposals for consideration by the Authority. In turn the proposed governance changes might lead to improvements in cost reflectivity and transparency, which should in turn promote competition between network users. However, we noted that there could be an increase in costs, for example, in terms of increased administration due to a larger volume of modifications being proposed.

1.8. Our September 2008 document also considered a number of key issues which arise when considering changing the governance of charging methodologies. These included network operator revenue recovery, the relationship between the industry code and charging methodology relevant objectives and appeal mechanisms. We noted that these issues manifest themselves to varying degrees depending on the option being considered. For example, the relationship and potential disparity between the relevant objectives of the charging methodologies and those of the industry codes are primarily an issue when considering Option 3.

1.9. We acknowledged that enabling non-NWOs to propose modifications could lead to an increase in the number of proposals needing to be considered. This could in turn impose additional administrative costs and potentially create greater uncertainty for market participants. As such, we suggested a number of mitigation measures which sought to minimise these costs and any potential uncertainty. In this document we further develop proposals for mitigation measures.

1.10. We also noted that different parts of the industry are currently exposed to different challenges and are underpinned by different licence requirements. Therefore, we questioned whether it was appropriate to pursue potential changes to the governance arrangements within the distribution and transmission sectors (both gas and electricity) together or whether it was appropriate to prioritise one sector of the industry over another.

## **Structure of Charges Project**

1.11. In May 2009 we introduced a licence obligation on electricity distribution network operators ("DNOs") to implement a common methodology and open governance arrangements at lower voltage levels on the distribution networks for 1 April 2010. In July we published licence proposals obliging the DNOs to implement revised charging at the extra high voltage levels for 1 April 2011. We have also published a decision on the governance arrangements applying to the new methodologies which will ensure that the benefits of commonality are preserved, and will ensure that the methodologies respond to changes in the needs of network users.

1.12. The DNOs submitted their governance proposals to us on 15 July and their key recommendation is that the new common charging methodologies (at both the lower and extra high voltage levels) should be incorporated into the Distribution and Connection Use of System Agreement (DCUSA) and therefore be subject to the governance and change control mechanisms of the DCUSA. We have reached the view that the DNOs' proposal would be compatible with the governance obligations specified in the licence.

1.13. However, we do not consider that this should necessarily pre-empt further discussion on the appropriate governance option for transmission, or indeed gas distribution.

## Purpose of this document

1.14. This consultation document sets out a fuller cost benefit analysis of each of the options which builds on the initial analysis contained within our September 2008 document.

1.15. Secondly, this document also sets out our initial proposals which recommend (i) that governance reform to the gas and electricity transmission charging methodologies should be undertaken first, and (ii) that the governance for this reform could be progressed via either Option 2 or Option 3. We are seeking your views on the analysis contained within Chapter 3 and our updated proposals as set out in Chapter 4. In order to assist stakeholder understanding at this stage of the policy development, we intend to publish shortly draft licence changes that would give effect to our proposals for Options 2 and 3 were either of them to be implemented.

1.16. We would welcome written responses to this consultation by Friday 9 October 2009. Further details on how to respond are set out in Appendix 1

## Structure of document

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

- Chapter 2 sets out the responses to our September 2008 consultation document.
- Chapter 3 sets out our initial quantitative cost benefit analysis and a further initial qualitative assessment of the Options. This chapter also includes an assessment of the mitigation measures.
- Chapter 4 sets out our updated proposals in light of the responses to our September 2008 document and the analysis in Chapter 3.
- Appendix 1 consultation response details and questions
- Appendix 2 lists respondents to the September document.
- Appendix 3 sets out our initial quantitative cost benefit analysis.

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## 2. Summary of Responses

### Chapter Summary

This chapter sets out a summary of responses received to the September 2008 document.

### Summary of responses

2.1. We received twenty-two responses to the September 2008 document including one confidential response. Generally, the responses were mixed. In summary, most NWOs preferred the status quo whilst the majority of users felt that charging governance should be subsumed within industry codes governance, through the Option 3 route.

#### Network Operator views

2.2. NWOs felt that the current governance arrangements were working well. Given that National Grid and the gas transporters already have an obligation to consult users, most NWOs considered that the existing charging methodology arrangements provide the appropriate framework for all users to raise and discuss issues relating to any proposed charging methodology modification.

2.3. Further, NWOs believe that enabling users to raise modifications would significantly increase the administrative costs of managing the perceived increased numbers of modifications that will be presented despite the proposed mitigation mechanism outlined within the September 2008 document.

2.4. NWOs therefore indicated that Ofgem should undertake a formal cost/benefit assessment of the proposals, with a number commenting that the changes would represent a disproportionate step. NWOs also indicated that they were best placed to manage the charging methodology change process.

2.5. National Grid also highlights that the ability of users to raise change proposals jeopardises NWOs' ability to collect revenues efficiently as well as creating risks for network users in terms of changes to charges.

2.6. A specific point was raised in relation to independent gas transporters ("iGTs") and independent distribution network owners ("iDNOs"). Both iDNOs and iGTs are subject to relative price controls ("RPC") and as such the methodology underlying their charging regime is essentially fixed. Two respondents stated that, as they are subject to RPC that it would not be appropriate for their charging methodologies to be opened up to users. In addition, as they are also subject to charges from the upstream networks they believe this would place an inappropriate squeeze on their margins.

**User views**

2.7. The majority of users felt that change was necessary. These users considered that the present arrangements lack transparency and accessibility. The majority of users also considered that charging methodology governance should be subsumed within the industry codes (i.e. the Option 3 approach).

2.8. A number of respondents referred to the significant levels of investment in the networks and considered that users needed to have a say in how these costs are charged back to them. One respondent noted that transmission and distribution costs account for over 20% of a domestic customer's energy bill and also referred to the NWOs' plans to spend over £10billion per annum in the next 5 years on energy networks. The same respondent indicated that it was unsatisfactory in this context that users have no direct influence or authority over charging methodologies.

2.9. Most users believed that Option 3 would provide efficiency gains as industry participants would be able to rely on established procedures and existing change mechanisms. In addition, users felt that this governance regime would promote closer alignment of industry code modifications with associated charging modifications. Some users also noted that under the Option 3 approach, parties would also be able to appeal decisions made by Ofgem to the Competition Commission (to the same extent as they would be able to appeal any other code modification decision).

2.10. Some users however supported an Option 2 approach. One suggested that their preference for change would be Option 2 but with the relevant NWO deciding which user proposal would go forward to Ofgem for decision. Alternatively, one user suggested that Option 2 should be further revised to allow Ofgem to propose changes to the charging methodology in particular circumstances.

2.11. It should be noted that not all users supported the case for change. Some users expressed significant concerns at the potential for increased administration costs arising from large numbers of change proposals being raised. One respondent commented that Ofgem can take licence enforcement action against NWOs if they do not fulfil the charging methodology objectives and, as such, NWOs already have incentives to ensure that they develop robust methodologies.

**Views from Scottish interests**

2.12. It is also important to highlight the views received from parties with Scottish interests including SSE, Scottish Power and Scottish Renewables. Each of these parties has supported an Option 3 approach. These parties' highlighted concerns relating to distribution and transmission charging in Scotland, the alleged deficiencies in transmission charging methodologies, as well as the significant level of transmission investment costs which are passed back to users through charges.

**Prioritisation issues**

2.13. We asked whether Ofgem should consider a common timetable for governance changes or whether specific areas of the industry should be prioritised. Seven respondents answered this question. Two felt that there was no rationale to have varying timetables, and one of these users felt that adopting a varied timetable would create further complexity and uncertainty for users. One considered that the DNO structure of charges project should be progressed before considering the case for any wider change. Another felt that there may be an advantage to considering gas transmission and distribution together to ensure consistency in approach.

2.14. Three respondents felt that transmission governance should be considered first, given their GB-wide application. One user indicated that, given their GB application and the scale of the costs of transmission investment, as well as the potential for charges to create windfall losses and gains, it was important that transmission was considered first. Another user indicated that transmission charging should be considered first and that the transfer of electricity distribution charges into the codes should await the completion of the structure of charges project.

**Cost implications**

2.15. We also asked what the cost implications would be for both NWOs and users should charging methodology governance be opened up. The NWOs provided a wide variation in additional costs. For example, one NWO felt that all options, save the status quo would significantly increase costs. In their view, 3-6 additional modifications would require 1.5 to 6 full time equivalents ("FTE") to assess proposals along with a 10% to 20% increase in administration costs. Another NWO believed that it would cost them £10k to assess each modification proposal plus £15k per annum administration costs.

**Potential volume of change proposals**

2.16. We asked users if they had the ability to raise modifications how many would they propose. Only two users responded to this question. One indicated that it would have raised a number of proposals to all charging methodologies and another said it would have raised one.

**Mitigation measures**

2.17. Of the mitigation measures that were suggested in the September document, respondents in favour of reform either supported bi-annual or annual windows for change proposals and implementation or a minimum threshold of support for a change. The concept of restricting the number of methodology changes was not supported as it provides for change on a first come first serve basis and does not take into account the relative importance of a change proposal.

2.18. Some parties also raised concerns that the concept of a minimum threshold could create barriers to entry for small participants or allow beneficial changes to be suppressed by a group of users who are against the change.

## **Ofgem's position**

2.19. Notwithstanding the potential increase in administrative costs we consider these responses indicate that there is a desire within the industry to progress reform in the governance of charging methodologies. However, we note there was no clear preference for any of the proposed options.

2.20. In addition, some respondents felt that the case for a change in the governance arrangements had not been sufficiently made and that a more comprehensive cost benefit analysis should be undertaken. We have noted this particular concern and have therefore undertaken an initial IA of Options 2, 3 and 4 against the status quo (Option 1). This is set out briefly in Chapter 3, with further details provided in Appendix 3.

2.21. We also noted that the majority of respondents supported the notion of annual/ bi-annual windows for change and implementation or a minimum threshold of support for a change. We note the concern that adopting a minimum threshold of support may be restrictive to smaller participants and we are of the view that annual/bi-annual windows may be a more appropriate mechanism to address the NWOs' concerns about the increased administration and costs any new governance arrangements may pose. This is discussed further in Chapter 4.

2.22. On the issue of prioritisation, a number of respondents felt that reform to the charging methodology governance arrangements should initially take place within the gas and electricity transmission sector of the market. We agree and we discuss why we consider that governance reform should initially take place within the transmission sector in Chapter 4.

## 3. Initial qualitative and quantitative analysis of impacts

### Chapter Summary

This chapter sets out our initial qualitative and quantitative analysis of Options 2, 3 and 4 relative to Option 1. This analysis builds on the qualitative analysis undertaken in our September 2008 document. This chapter also sets out our assessment of the proposed mitigation measures.

### Questions:

**Question 1:** Do you agree with the output from the assumptions made within the quantitative analysis undertaken?

**Question 2:** Are there any factors that you believe should have been considered in this analysis?

### Introduction

3.1. Section 5A of the Utilities Act 2000 places a duty on the Authority to carry out IAs where we are proposing to do anything for the purposes of, or in connection with, the carrying out of any function exercisable under or by virtue of Part 1 of the 1986 Gas Act or Part 1 of the 1989 Electricity Act and we consider that the proposal is important<sup>3</sup>.

3.2. We consider that section 5A applies to the proposals that are the subject of this consultation, and we have therefore undertaken an initial IA which incorporates a qualitative and quantitative analysis of Options 2, 3 and 4 relative to Option 1 as set out in this chapter.

3.3. In our September 2008 document we set out our reasoning as to why we believe there are benefits for non-NWO parties having the ability to raise modifications to charging methodologies. We set out a number of governance options and undertook a high level assessment of these against the objectives of the Review.

3.4. In summary, we found that relative to the status quo Options 2, 3 and 4 all would improve the accessibility of non-NWO parties to the charging methodology change process and promote effective consultation processes. This is because under Options 2, 3 and 4 non-NWO parties would be able to propose modifications to the charging methodologies which would be formally consulted upon and submitted to the Authority for decision. In addition, enabling non-NWO parties to propose charging methodology modifications should improve the accountability of

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<sup>3</sup> Unless the urgency of the matters means, in our view that it would be inappropriate or impracticable to comply with section 5A.



the NWOs over their charging methodologies as it would enable non-NWO parties to bring forward innovative proposals to facilitate the better achievement of the charging methodology objectives and to address deficiencies in existing methodologies. This is in contrast to the status quo whereby non-NWOs are reliant on NWOs to bring forward change proposals for consideration by the Authority. Under the proposals, NWOs (or the relevant code panel in the case of Options 3 and 4) would be required to provide a detailed assessment of competing methodology proposals (including those raised by non-NWOs) before the proposals are formally submitted to the Authority for consideration. As such, Options 2, 3 and 4 should also lead to improvements in the analysis undertaken on change proposals, as the NWOs (or the relevant code panel in the case of Options 3 and 4) will be required to treat all proposals on an equal basis and ensure that they are subject to thorough assessment prior to submission to the Authority. Increased accountability should ensure that methodologies are more robust, and transparent, which should help to promote cost reflectivity and competition, ultimately to the benefit of consumers.

3.5. However, we noted that all the options except the status quo have the potential to increase administrative and regulatory costs due to an increase in the number of modifications likely to be presented. Further, we acknowledge that an increase in the number of modifications could lead to price volatility and the attendant risk of adverse impacts on users.

3.6. Therefore, in our September 2008 document we proposed a number of mitigation measures that sought to manage the potential increased volume of modification proposals effectively so that price stability would be promoted.

3.7. We note from the responses that, although there is a desire to open up the NWOs' charging methodologies, some respondents felt that the case for change was not sufficiently made and that a fuller cost benefit analysis should be undertaken.

3.8. Below we have undertaken an initial impact assessment of the proposed governance options. First, we consider the quantitative costs and benefits followed by a further qualitative assessment of the proposals in light of our statutory duties. As we have noted above, the quantitative assessment has been prepared by Frontier Economics.

## **Quantitative analysis of costs and benefits**

3.9. A key function of the quantitative cost-benefit analysis (CBA) set out below is to test the proportionality of the proposed changes to the charging methodology governance arrangements. CBA can be a useful tool for assessing whether an option's benefits meet or exceed its associated costs and for allowing alternative options to be compared in a meaningful way. However, while it can be important to test the proportionality of these options, not all costs and benefits can easily be quantified. Ofgem does not, therefore, base its proposals in this document on the results of this quantitative CBA alone. In this chapter we set out the high level

conclusions of the quantitative CBA. The full quantitative CBA is set out in Appendix 3.

3.10. As is explained below, it is possible to estimate with reasonable accuracy the costs of implementing Options 2, 3 or 4. The benefits, however, are harder to quantify. As a result, we have attempted to analyse what the level of benefits would have to be, given the identified range of costs, to justify the proposed changes.

3.11. By allowing both NWOs and non-NWO parties to submit their own modification proposals, Options 2, 3 and 4 could each result in more proposals a year than Option 1 (the status quo). This could bring both quantifiable costs and quantifiable benefits.

3.12. The analysis set out below treats Options 2, 3 and 4 as a single group. However it should be noted that Options 2, 3 and 4 each possess their own specific costs and benefits that need to be evaluated. This is considered further in chapter 4.

3.13. In our view, Options 2, 3 and 4 could impose three additional quantifiable costs:

- costs arising from more frequent assessment of modification proposals;
- costs arising from more frequent acceptance and thus implementation of such proposals; and
- costs associated with changes to the mechanism for challenging Authority charging methodology decisions (under Option 3, Authority charging methodology decisions may become appealable to the Competition Commission, where the criteria for such an appeal are met).

3.14. On the benefits side, it is conceivable that Options 2, 3 and 4 could bring about capital expenditure ("capex") efficiency savings that, at least conceptually, should be quantifiable:

- by allowing more parties to submit modification proposals, Options 2, 3 and 4 could create a larger and more varied 'pool' of modification proposals to choose from;
- this greater variety of proposals might allow the Authority to consider a proposed methodology that sets more cost reflective tariffs;
- more cost reflective tariffs might enable network users to make better informed locational siting decisions, locating where there is more spare capacity available on the network, and thereby helping to prevent unnecessary investment and costs to consumers.

3.15. Analysing these costs and benefits, our initial assessment is that only modest efficiency savings would be required in order to outweigh the quantifiable costs. Our analysis has also presented some quantitative evidence to suggest that

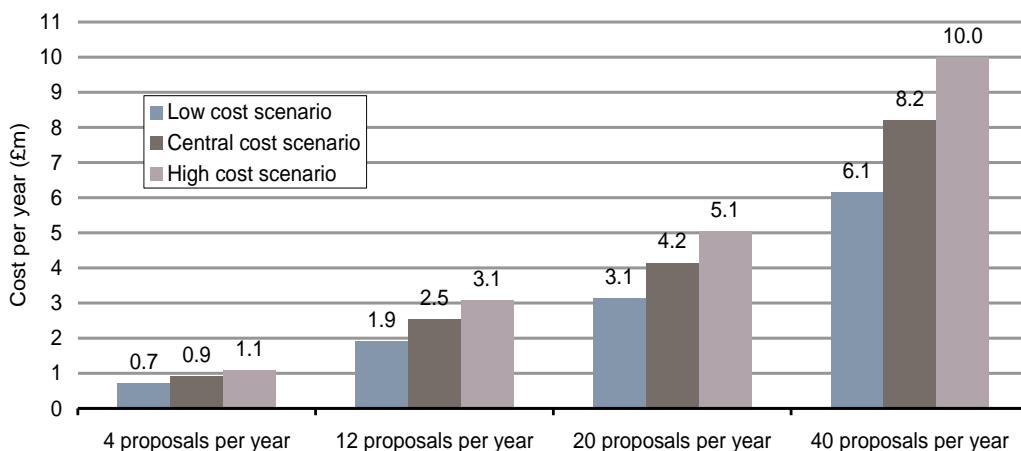
Option 2 could bring about these efficiency benefits at a lower cost than Options 3 and 4.

*Quantification of costs*

3.16. Our analysis made use of cost estimates contained in industry responses to the September 2008 document. We used this information to estimate the costs that would typically be associated with: (i) assessing a modification proposal and (ii) implementing it. This required us to make certain assumptions, for example about the proportion of additional modification proposals that would be implemented. There are three cost scenarios used, namely low, central and high. These different costs scenarios reflect the fact that gas distribution networks ("GDNs") and their users provided us with a range of cost estimates. For more details, please refer to Appendix 3.

3.17. Discussions with industry participants suggested that it would be difficult to predict the extent to which Options 2, 3 or 4 would increase the number of modification proposals a year. As a result, the analysis presents the expected annual costs associated with 4, 12, 20 and 40 additional proposals a year respectively (in each case, it is assumed that proposals would be spread evenly across gas, electricity, transmission and distribution networks). For each of these cases, we present high, central and low cost estimates, based on the range of estimates provided by industry participants. Figure 3.1 presents the results of this analysis.

**Figure 3.1 - Total forecast assessment/implementation costs associated with additional modification proposals**



Source: Frontier Economics

3.18. Figure 3.1 implies that if, for example, any of Options 2, 3 or 4 were

implemented and were to give rise to four additional proposals a year, this would impose assessment and implementation costs on the industry amounting to £0.9m per annum (in our central cost scenario). Similarly, if the number of proposals increased to twenty per year the costs would rise, under the central cost scenario, to £4.2m a year.

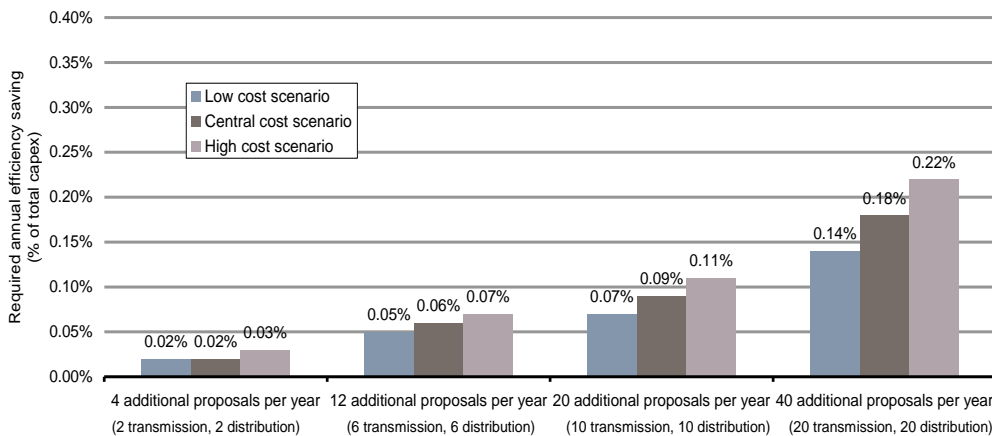
#### *Estimation of required benefits*

3.19. We suggested above that, by allowing both NWOs and non-NWO parties to submit modification proposals, Options 2, 3 and 4 could lead to efficiencies in terms of a quantifiable reduction in required capex.

3.20. In order to determine whether these savings outweigh the quantifiable costs of allowing NWOs and non-NWO parties to submit modification proposals, we identify forecasts of how capex would develop in future years if the existing governance arrangements were retained. The results presented below assume 5% annual capex growth to 2020 for electricity networks and 0% growth for gas networks (see Appendix 3 for further discussion of this assumption). The capex figures were informed by data held by Ofgem, including in the case of the distribution networks capex forecasts from the current electricity distribution price control review (DPCR5).

3.21. Figure 3.2 sets out the results of the quantitative analysis for this scenario. It specifies the minimum efficiency savings that would be required, as a percentage of total capex, to outweigh the forecast costs associated with assessing and implementing additional modification proposals under Options 2, 3 and 4. The results imply that if, for example, there were 12 additional modification proposals a year (six transmission and six distribution), then in the central cost scenario these proposals would collectively need to bring about efficiency savings that reduced annual capex by at least 0.06% or approximately £2.5m in order to offset the additional costs of opening up the charging methodologies to change by network users. These required percentage efficiency savings are therefore quite modest.

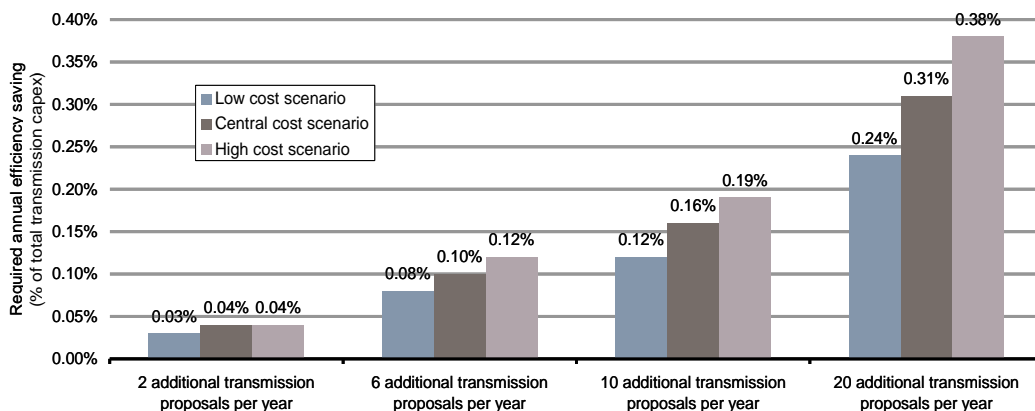
Figure 3.2 - Required annual efficiency savings as a percentage of total capex in each year



Source: Frontier Economics

3.22. As we discuss later in this document, we are of the view that the new governance arrangements could be rolled out in the gas and electricity transmission sector first. Figure 3.3 below presents the results when the analysis is repeated for this transmission-only scenario. The central cost analysis implies that if, for example, there were six additional transmission proposals a year, then these proposals would collectively need to bring about efficiency savings that reduced annual transmission capex by at least 0.1%. When expressed as a percentage of capex, therefore, the required efficiency savings are modest for both the general and the transmission-only scenarios.

Figure 3.3 - Results for transmission-only scenario: required annual efficiency savings as a percentage of total transmission capex.



Source: Frontier Economics

*Quantifying the relative benefits and costs of Options 2, 3 and 4*

3.23. As previously noted, the analysis set out above treated Options 2, 3 and 4 as a single group. However, Options 2, 3 and 4 each possess their own specific costs and benefits that need to be evaluated.

3.24. Quantitative analysis can shed little light on the relative benefits of Options 2, 3 and 4, since these primarily relate to issues of accountability and inclusivity that are difficult to quantify.

3.25. However, the quantitative analysis did provide some insights on the costs side:

- first, there was some industry evidence to suggest that the assessment and implementation costs associated with additional modification proposals might be lower under Option 2 than under Options 3 and 4;
- secondly, Option 2 would not require resources to be spent on establishing a new industry code (as in Option 4) or modifying existing industry codes (as in Option 3);
- thirdly, the cost associated with Option 3 could be higher as a result of charging methodology decisions becoming appealable to the Competition Commission (see Appendix 3 for further discussion on all these points).

*Summary of quantitative analysis*

3.26. The quantitative analysis therefore suggests two conclusions:

- the additional modification proposals that might arise under Options 2, 3 and 4 would only need to bring about modest capex efficiency savings in order to outweigh the corresponding increase in quantifiable costs; and
- there is some evidence to suggest that Option 2 could bring about these efficiency savings at a lower cost than Options 3 or 4.

**Further Qualitative Assessment of the Options**

3.27. In our September 2008 document we undertook a high level qualitative analysis of the options in the context of the objectives of the Review. We suggested that overall there could be benefits in modifying the existing governance arrangements particularly in terms of improving accessibility, effective consultation and transparency. Additionally, there may be benefits in terms of accountability, as NWOs may be required to provide a more detailed rationale for favouring one methodology over suggested alternatives. In particular, we believe that non-NWO parties will also add value to the development of charging modifications by undertaking a critical check function, challenging the views of the NWOs and thereby promoting greater analysis and assessment of a modification proposal (against the charging methodology objectives) prior to it being presented

to the Authority for consideration. We have not changed our previous assessment against the Review objectives as set out in the September 2008 document and as such it is not repeated here.

3.28. Below, we further consider the proposed governance options within the context of their potential impacts on consumers, competition and sustainable development.

#### *Impact on consumers*

3.29. As we have outlined above, we expect significant capital expenditure, particularly on electricity networks which will be recovered via charges levied on network users. In particular, the Ofgem-DECC co-chaired Energy Networks Strategy Group found that an additional £4.7bn will be required to develop the onshore grid to support the connection of renewable generation coming forward by 2020. Prior to this, through the 2007-12 transmission price control, Ofgem has authorised additional expenditure of over £5bn in transmission investment. In view of this it will be important to ensure that the NWOs' charging methodologies are robust and transparent. We consider that enabling non-NWOs, to raise charging methodology proposals and have them assessed by the Authority should lead to innovative proposals being raised that better meet the charging methodology objectives, and to deficiencies in existing charging methodologies being addressed.

3.30. In particular opening up the charging methodologies should lead to more robust, transparent and cost reflective charging methodologies which should better promote the interests of consumers. For example, more cost reflective charging methodologies are likely to produce more efficient siting decisions at the margin for users and generators leading to capex savings (as we have noted earlier in this chapter). The delivery of capex savings should ultimately be reflected in lower network charges for users. In the short term, improved charging methodologies should also promote efficient operational decisions at the margin, for example, on whether and where to offtake from or input gas or electricity into the network. These benefits should also be passed onto consumers.

3.31. A further benefit of Options 2, 3 and 4 is that they also allow a broad range of parties including consumer representatives to raise charging methodology change proposals that are ultimately submitted to the Authority for decision. In chapter 4 we provide details of our proposed approach to defining "affected parties" that could be applied under Options 2 and 3 which would allow the Authority to extend the range of parties who can raise modification proposals to include consumer representatives specifically designated by the Authority. In the case of Option 2, our proposals provide that these parties would need to be designated by the Authority and, in the case of Option 3, parties other than parties to the codes could raise proposals where this is directed by the Authority.

3.32. Notwithstanding the representation of Consumer Focus on the majority of industry code panels and their role as the consumer representative within the industry, we consider that added value can be gained by allowing other industry participants, including large industrial consumers, to influence the development of charging methodologies. This could potentially be achieved under Options 2, 3 and 4.

3.33. Therefore we consider that opening up the governance of charging methodologies to non-NWOs parties under either of Options 2, 3 or 4 would be beneficial to consumers.

#### *Impacts on sustainable development*

3.34. As we have noted above, charging methodologies and the network charges they generate can have major impacts upon the decisions of market participants. In the short term, network charges can impact upon a market participants' willingness or ability to input or off take gas or electricity. In the longer term, the methodologies can influence the siting decisions of electricity generation, gas storage, gas production and industrial facilities.

3.35. To the extent that allowing non-NWO parties to formally raise modification proposals leads to more cost reflective charging methodologies, this should in turn encourage more efficient siting decisions by network users and result in reduced capex on network infrastructure. This should bring accompanying environmental benefits.

3.36. We would also note that Options 2, 3 and 4 would enable renewable interests such as renewable generators, and suppliers who source electricity from renewable generation, to raise modification proposals which are intended to secure sustainable development benefits. In particular, these options should help facilitate the engagement of environmental interests which should further assist in promoting a low carbon economy.

3.37. For the reasons outlined above, we consider that Options 2, 3 and 4 could produce sustainable development benefits.

#### *Impact on competition*

3.38. As we have noted above, we consider that opening up the governance of charging methodologies should help to promote the development of a more open and robust assessment process for charging methodology proposals which should lead to more transparent, robust and cost reflective charging methodologies. In turn, more cost reflective charging should help to secure effective competition between users such as electricity generators, or in the case of the gas networks, gas shippers. For example, the introduction of more cost reflective charging schemes should help to ensure that the costs imposed by network users (for example, in terms of capital and operational expenditure) can be effectively targeted back to those responsible for causing these costs. This should promote



competition between generators and electricity suppliers and in the gas sector, between gas shippers and suppliers.

3.39. Therefore relative to the status quo we consider that Options 2, 3 and 4 may lead to the provision of more robust and cost reflective charging thus promoting competition between network users ultimately leading to consumer benefits.

#### *Impacts on health and safety*

3.40. We have not identified any impacts on health and safety associated with the charging methodology governance proposals.

#### *Risks and unintended consequences*

3.41. As we have noted in our September 2008 document there are some risks associated with enabling network users to raise change proposals. For example, this could lead to large numbers of modifications being brought forward and, in turn, the potential for volatility and uncertainty around network charges with negative consequences for competition.

3.42. We consider that these risks can be managed effectively through mitigation measures that place restrictions on either the number of charge changes that can be raised or which introduce specific time windows for changes to be raised or implemented. These are discussed further in Chapter 4.

3.43. Similarly, there may be risks to NWOs that within year charging changes (that arise as a result of methodology changes) lead to over recoveries of revenues for which NWOs are penalised, under-recovery of revenues or revenue volatility. However, we consider that these risks can also be managed through effective mitigation measures as discussed in Chapter 4.

## 4. Further proposals

### Chapter Summary

This chapter sets out our updated proposals in light of the industry responses in Chapter 2 and the analysis set out in Chapter 3.

**Question 1:** Which governance Option do you consider is the most appropriate for charging methodologies?

**Question 2:** Do you agree that we should initially focus on gas and electricity transmission charging methodologies, with gas distribution potentially to follow as a second phase?

**Question 3:** Do you agree that annual/biannual change and implementation windows are the most appropriate mitigation measures to progress going forward for all the options?

**Question 4:** Do you consider a 3 or 4 month window to be sufficient time to consider modification proposals? Please indicate your preference for either 3 or 4 months.

**Question 5:** Do you agree with our approach to defining "affected parties" who would be entitled to raise modification proposals?

### Introduction

4.1. There are significant changes taking place within the energy industry with important impacts on network businesses and the way in which they charge for the use of these networks. In large part this is being driven by climate change policy, with the increasing entry of renewable businesses, including onshore and offshore wind generation as well as embedded network generation. Similarly, suppliers are also offering environmentally based retail packages to their customers.

4.2. The recent Energy White Paper sets out the Government's strategy to deliver greenhouse emissions reductions of 18% by 2020 and also indicates that the government intends to set out its roadmap to a low carbon UK for the period 2020 to 2050.

4.3. In order to meet the challenges imposed by climate change and the Government targets, significant amounts of investment, particularly in electricity network infrastructure will be required to support the connection of renewable generation.

4.4. In this respect the work undertaken by the Ofgem-DECC co-chaired Energy Networks Strategy Group estimates that an additional £4.7bn will be required to develop the onshore grid to support the connection of renewable generation coming forward by 2020. Prior to this, as part of the 2007-12 transmission price control, Ofgem authorised funding for more than £5bn of investment in Great Britain's gas and electricity transmission network infrastructure. This unprecedented increase in authorised investment is intended to enable network operators to help Britain meet its climate change objectives as well as helping to ensure security of supply.

4.5. In addition to increasing levels of investment, important changes are also occurring to the commercial and regulatory framework governing network access and investment. Recently, the Secretary of State and Ofgem implemented significant changes with the introduction of the new offshore transmission regime to support increasing levels of offshore wind generation. Further, significant reforms to facilitate access to the electricity transmission network, particularly by renewable generators are also being progressed by Government.

4.6. Given the significant level of investment and the changing nature of market participation, the way in which NWOs recover the costs of their investment through their network charges has become increasingly important, particularly in influencing business planning decisions including the siting of key infrastructure such as generation facilities, and gas storage and importation facilities.

4.7. In view of these developments, and in the light of the assessment contained in Chapter 3, Ofgem remains of the view that non-NWO parties should have the ability to propose modification proposals to the NWOs' charging methodologies. We consider that the charges levied on users (and ultimately consumers) will have a significant impact on their business and planning decisions and that, therefore, it would be appropriate for users and interested parties to be able to have some input as to how these charges are determined.

4.8. Below we discuss the merits of Options 2, 3 and 4 in light of the responses received to our September 2008 document and the further analysis set out in Chapter 3.

### **Updated consideration of the Options**

#### *Option 1*

4.9. As previously stated, we consider that there are benefits that may be accrued by allowing non-NWO parties to propose modifications to the NWOs' charging methodologies.

4.10. The analysis in the previous chapter underpins the view that the potential additional costs associated with opening up the governance arrangements of the methodologies are very modest, relative to the network capital expenditure over the next few years. Further, the qualitative benefits discussed in chapter 3 further support the view that there are positive potential benefits of making the governance regime more inclusive.

4.11. Therefore, we do not propose to consider this option further.

#### *Option 2*

4.12. Under this option, network licences would be modified to enable non-NWO parties to propose modifications to charging methodologies. The NWOs would be required to have in place arrangements that will facilitate the following:

- provisions to receive modifications proposed by non-NWO parties;
- open consultation on the merits of the proposals and any alternatives;

- full assessment of the proposal and alternatives and consideration of any issues arising from the consultation;
- the production and submission of a detailed report of the modification to be presented to the Authority that sets out:
  - the original proposal and any alternatives;
  - an assessment of the original and alternatives against the relevant objectives;
  - an implementation timetable, and
  - a recommendation to the Authority.

4.13. Although there was little or no support from NWOs for this option we consider there to be a number of advantages as well as disadvantages with this option. In considering this option it should be noted that transmission network owners already have a licence obligation to consult users when proposing charging methodology modifications and this obligation is met via the relevant charging methodology forum.

#### *Advantages*

4.14. This option retains the obligation on the NWOs to ensure that their methodologies are kept under review and ensures that any modification that may be proposed seeks to further the relevant objectives as set out within their licences.

4.15. Maintaining the governance arrangements in the NWOs' licences will allow the industry to use the existing charging methodology forums.

4.16. This option also provides for a broader range of industry participants, including consumer interests groups that may propose modifications, although similar benefits can also be achieved under Option 3 (this is discussed further below). As we have discussed in Chapter 3, we consider that enabling a wider range of industry participants, including consumer representatives, to propose charging methodology modifications could promote transparency and innovation in the design of charging methodologies going forward.

4.17. The conclusion of the analysis in Chapter 3 also suggests that the implementation and assessment costs will be lower under this option than under Options 3 and 4. Specifically, while industry responses to our September 2008 document differed in their opinions about the relative costs of Options 3 and 4, none of the quantitative estimates suggested that Option 2 would be a more expensive alternative.

#### *Disadvantages*

4.18. We note that there may be a number of disadvantages with this option also. A number of respondents felt that having the opportunity to challenge Ofgem decisions to the Competition Commission ("CC") would have a number of positive benefits relating to accountability. In particular an appeals process to the CC may allow for some level of review by the CC of a proposal as part of the review of the Authority's

decision. However, absent changes to legislation an appeal to the CC would not be available and under Option 2.

4.19. Also, under this option the scope for aligning and considering code modifications and charging modifications together may be lost. This may require the industry to ensure that the separate governance forums are kept aware of developments within each so that issues are not reopened within different forums.

4.20. Another potential disadvantage of Option 2 is that the charging methodology change process would not be administered independently, as the NWOs would retain control of the process. This may create risks in terms of ensuring objectivity in analysis as NWOs may have vested interests in pursuing certain outcomes and proposals.

### *Option 3*

4.21. Under this option the charging methodologies and the associated charging statements will become subject to the governance procedure of the relevant industry code. They may form part of the main body of the code or be incorporated as an annex or ancillary document.

4.22. Changes to the charging methodologies would be administered by the code administrator responsible for the code and changes would be subject to code panel assessment procedures and recommendations. Authority decisions on charging methodology proposals would become appealable to the CC where the criteria for such an appeal are met.

4.23. As we noted in our September document, Ofgem does not envisage that charging methodology decisions would become subject to any form of self governance arrangements under the codes, were these proposals to be introduced.

4.24. If an Option 3 approach were to be adopted then it would also be important to ensure that any changes to the charging methodology would continue to be assessed against the relevant charging methodology objectives, which differ to the normal code objectives. For example, the charging methodology objectives include a cost reflectivity objective, which does not appear in the objectives of any of the industry codes.

4.25. The majority of users supported this option.

### *Advantages*

4.26. Users primarily noted that the existing industry code governance arrangements are fully understood by all parties and that, progressing this option would therefore be more cost and resource efficient as it would negate the need to establish new governance arrangements (e.g. via Option 4). We agree with respondents that Option 3 provides the benefit of ensuring that changes to charging methodologies are assessed through rules and processes that are well established. Although, as we note further below, the incorporation of charging methodologies into the codes is

likely to be a more complex process relative to establishing new arrangements in the form of Option 2.

4.27. Users also considered that this option would promote closer alignment of charging methodology modifications with the associated industry code modifications. Notwithstanding the different assessment criteria, this option will allow charging methodology issues to be considered within the same forum as other code modifications and therefore be dealt with holistically, making the change process more streamlined and efficient. Further, our initial view is that charging methodology modification proposals should be subject to the same decision timeframe as industry code modifications, thereby allowing decisions on charging methodology proposals to be aligned with decisions on other related code modifications. We would welcome comments on this.

4.28. Users also noted that one key benefit of Option 3 was that parties would also be able to appeal decisions made by Ofgem to the CC to the extent that the criteria for such an appeal were met. For this reason, Ofgem agrees that Option 3 may provide additional accountability benefits relative to Option 2.

4.29. A further benefit of Option 3 is that it may provide greater comfort that charging methodology modifications would be considered in an objective and independent manner, rather than under a process that is controlled by NWOs (as under Option 2).

4.30. Ofgem notes the benefits highlighted by the user responses and believes that there are some efficiency and qualitative gains by charging methodologies being subject to code governance. In addition, within the wider context of the Review we note that the good practices being developed under the other work-streams will be automatically applied to charging methodologies if they are subsumed into the relevant industry code.

#### *Disadvantages*

4.31. Similar to Option 2, there may be a number of disadvantages with Option 3. The main issue to be addressed is the manner in which the methodologies are subsumed within the codes.

4.32. This Option will require a two stage implementation process. First there will be the necessary licence amendments to establish charging methodologies as a part of the relevant industry codes and, where appropriate, to align the charging methodology modification procedures and related provisions with the code modification procedures. As there are a number of Use of System ("UoS") and connection charging methodologies, consideration would need to be given to the question of which code would be the most appropriate code in which to place the relevant methodology. Following this, the next step would be for modifications to be made to the codes to incorporate the charging methodologies and to establish any necessary additional mechanisms for dealing with charging methodology code modification proposals.

4.33. This process potentially adds further complications (than presented by Option 2) with respect to the alignment of procedures and key terms, including the treatment of the respective relevant objectives for both the codes and the charging methodologies. Not only are the relevant objectives for UoS and connection charging methodology modifications different to each another, they also differ from the relevant objectives for code modifications. As we have noted above, it will be important to retain the objectives for the charging methodologies and to ensure that any panel assessment is against these existing objectives.

4.35. In the light of these issues, there is a risk that under Option 3, different decision criteria will apply to normal code modifications and charging methodology changes. This potentially complicates the process associated with implementing Option 3 and may introduce some complexity within the codes arrangements.

4.36. Notwithstanding this, we consider that there is scope to subsume the charging methodologies within the codes which will allow the relevant objectives of the charging methodologies to be maintained whilst utilising core elements of the code modification change procedures.

#### *Option 4*

4.37. This option would require a new code to be established which would provide the governance arrangements for all charging methodologies. The benefit of this option is that it essentially provides a 'clean slate' whereby a new code could adopt the good practices from existing codes. However, there was very little support for this option.

4.38. Respondents believe that it will be inefficient to establish a new code given that a new legal framework will need to be established along with developing and agreeing the structure and nature of a new code.

4.39. Ofgem also considers that establishing such a code would be disproportionate and impose an excessive burden on the industry and add further complexity and fragmentation to the current industry governance arrangements which is one of the matters the Review seeks to address. In addition, we consider that the benefits that may be realised under a new code could be gained more efficiently under either Option 2 or 3. We do not, therefore, propose to consider this option further.

#### **Ability to raise proposals - affected party definition**

4.40. As we have discussed above we propose that non-NWO parties should have the ability to propose changes to the NWO's charging methodologies.

4.41. In the event that these reforms are implemented, it is also important to determine the nature and class of parties that are able to bring forward modification proposals under either Options 2 or 3. In this respect, Ofgem considers that under both Options 2 and 3 it may be necessary to specifically define, within the licence drafting, "affected parties" that are entitled to raise modification proposals.

4.42. For Option 2, we propose that the Authority be able to designate affected parties who can raise modification proposals. These could include relevant consumer representatives or industrial and commercial consumers. For Option 3, we propose that "affected parties" are those parties who can raise modification proposals as provided for in the relevant code, unless otherwise directed by the Authority. Our proposals governing the definition of "affected parties" are intended to ensure that code parties can raise proposals but also to enable other parties including consumer representatives to raise proposals where they are designated for that purpose by the Authority. We welcome the industry's views on these proposals.

### **Prioritisation of reform**

4.43. In our September 2008 document we asked whether we should consider the governance of charging methodologies across gas and electricity transmission and distribution on a common timetable or seek to prioritise.

4.44. The majority of respondents supported the idea that there should be some prioritisation. However, views varied on which areas should be prioritised.

4.45. Some respondents felt that there was no rationale for reforming the governance arrangements over varying timetables as this would lead to confusion, fragmentation and complexity in the industry, to the detriment of network users.

4.46. We note the concerns raised by respondents with regards to complexity. However, we do not believe that the perceived level of complexity mentioned by respondents is a significant issue and we believe that there is merit in prioritising reform of the charging arrangements in gas and electricity transmission as an initial step. These issues are discussed below.

#### *Electricity and Gas Transmission*

4.47. As we have noted above, we have proposed significant allowances for capital investment of over £5bn over the life of the present transmission price control, in order to support increasing levels of renewable connection to the transmission network. In addition, substantial network investment has been forecast as being required by the ENSG.

4.48. Under the transmission price control we have introduced mechanisms that automatically adjust (upwards or downwards) the revenue allowances of companies in response to demand for capacity by companies and customers that use the network. This additional flexibility could result in the allowed revenues doubling over the five year period.

4.49. The transmission network owners will obtain their allowed revenues through charges for connection and UoS that are derived from charging methodologies and levied on users and directly connected consumers.

4.50. Given the above mentioned level of investment and the ability for capex to increase significantly, we believe that it would be beneficial for the reform of



charging methodology governance to be undertaken in this sector initially and other sectors considered thereafter.

*Gas and electricity distribution*

4.51. We have already noted above in Chapter 1 that reform of the charging methodology governance arrangements in electricity distribution is already underway through the structure of charges project. As such, we do not intend to proceed with any proposals in this area as part of the Review.

4.52. Further, given the significant levels of investment activity at present in transmission, we consider that reform of the transmission arrangements should be treated as a priority relative to gas distribution.

4.53. However, whilst we consider that the reform of the transmission arrangements is most pressing, we would nevertheless welcome views on whether we should also reform the gas distribution arrangements at the same time. Given that reform of the governance charging methodology arrangements for electricity distribution is proceeding separately, focussing reform on the transmission charging methodologies only would mean that the gas distribution charging methodologies remain the only (non IGT/IDNO) methodology that is not subject to change proposals from non-NWOs. Whilst Ofgem's preference remains to prioritise transmission methodologies, there is nevertheless a case for also including gas distribution charging methodologies in the reform process. We would welcome views on this.

*Independent Network Operators*

4.54. The iGTs are subject to 'Relative Price Control' (RPC) arrangements which lead to charges that reflect the charges levied by the upstream GDNs. As such, the RPC is price based and does not relate directly to the costs incurred by the iGT. Therefore this arrangement essentially fixes the charges levied on users of the iGT networks.

4.55. As there is not an underlying charging methodology for iGTs supporting the RPC it would be inappropriate for users and/ affected parties to raise proposals that would, in effect be changing the prices that the iGTs charge. We consider that such a change would be inconsistent with the RPC mechanism as it currently stands.

4.56. Therefore, we propose at this time that the arrangements governing the way in which iGTs charge for network use should not be the subject of the charging methodologies work-strand of the Review. However we intend to keep this issue under review in light of future developments within the iGT sector of the market.

4.57. In the case of electricity distribution, the iDNOs are subject to a charging cap with respect to domestic customers connected to their network. This is similar to the RPC arrangements that apply to the iGTs. Under these arrangements (and the term of their charging methodologies), the IDNOs are restricted in the level of charges they can levy on users in a similar manner to the iGTs.

4.58. For the reasons outlined above, we do not consider that the IDNO charging arrangements should, at this time, form part of the charging methodology work-

strand of the Review. However, as with the iGTs we would intend to keep this under review in the light of future developments within the IDNO sector.

### **Mitigation measures**

4.59. In our September 2008 document we acknowledged that our proposed governance options may lead to an increase in the number of modification proposals being raised. As such, we suggested a number of mitigation measures that included:

- annual or bi-annual windows for change and implementation with Authority discretion to allow changes to be raised outside the window on an exceptional basis. Under this approach, a time window could be created which would allow parties to raise proposals that would take effect in the following year. This would provide sufficient time for proposals to be effectively evaluated and for network users to be provided with sufficient notice of change;
- annual restrictions on the number of changes that can be raised with Authority discretion to allow additional changes to be raised on an exceptional basis;
- modification proposal minimum thresholds for network users (e.g. a proposal could only be progressed where it is supported by, say 40% or 50% of a class of users by market share).

4.60. The responses to our September 2008 document indicated that there was support for annual/ biannual windows for change or the minimum threshold mechanism and no support for the annual restrictions on the number of changes that could be raised.

### *Licence Framework*

4.61. The current licence framework for gas and electricity transmission requires that the network operators keep their charging methodologies under review and, where modifications are proposed, these are then subject to consultation with relevant shippers in the gas regime and CUSC parties within electricity.

4.62. In the electricity sector, electricity transmission licensees have an obligation to inform users should they wish to amend the level of charges "within year". Should an approved charging methodology lead to an in-year charging amendment then the licensee must give the Authority 150 days notice prior to the new charge taking effect<sup>4</sup>. In the electricity regime, under the terms of the CUSC, NGET must also give

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<sup>4</sup> Condition C4 - Charges for use of system: [http://epr.ofgem.gov.uk/document\\_fetch.php?documentid=13436](http://epr.ofgem.gov.uk/document_fetch.php?documentid=13436)  
Standard Special Condition A4 - Charging-general: [http://epr.ofgem.gov.uk/document\\_fetch.php?documentid=6540](http://epr.ofgem.gov.uk/document_fetch.php?documentid=6540)

two months' notice to users of charging changes. This arrangement effectively means that charging changes can only be implemented once within the year.

4.63. Within the gas regime National Grid's gas transmission business and the gas distribution businesses have obligations to use reasonable endeavours to modify charges and charging methodologies only twice a year, and in the case of NTS exit capacity only once a year. Similarly, there is a reasonable endeavours obligation on these parties to give 150 days' notice to the Authority of proposals to change charges.

4.64. As a means of managing this process and to engender a degree of price stability where a number of modifications have been approved that lead to pricing changes, National Grid tends to implement these proposals simultaneously.

#### *Assessment of mitigation measures*

4.65. As with modification proposals to the industry codes, any charging methodology proposal would reasonably be expected to meet a certain standard in terms of the level of detail that the proposer must provide and the degree to which they articulate their arguments. This administrative hurdle should help to act as a mitigating measure, minimising the potential for trivial or vexatious proposals.

4.66. However, notwithstanding this, we consider that there remains a need for specific mitigation measures to be introduced to reduce the risks of significant numbers of charge changes being introduced with consequential increases in pricing volatility. We consider that the adoption of annual and biannual windows for change and implementation would be the most efficient mechanism to manage modifications to the charging methodologies.

4.67. We note that National Grid (gas and electricity) already implements an annual/biannual window for the implementation of modifications that have been approved by the Authority.

4.68. However, we consider that it would also be beneficial to adopt either an annual or biannual window during which time modification proposals can be raised. Adopting a change proposal window would allow for proposals to be considered within a specific timeframe. This will allow for the targeting of resources enabling the industry to rationalise multiple modifications that may be tackling the same issue.

4.69. We consider that a fixed change window should lead to an overall reduction in assessment costs and in combination with the implementation window help to reduce the effects of volatility in prices. In addition, the introduction of change windows should also help NWOs manage risks to within year revenue volatility.

4.70. We note that there was some concern that this arrangement may restrict innovation by holding back proposals that miss the change window. There may also be urgent circumstances that require changes to be raised outside of the change window. As such, as we indicated in our September document we are also proposing that modifications can be considered outside of the change window with the Authority's agreement.

4.71. We consider that a 3 or 4-month change window would provide sufficient time for modifications to be raised. Given the notice period required to inform the Authority of a charging change and the notice period that has to be given to users of such a change, a 3 or 4-month time frame will allow in-year charging changes should they be necessary.

4.72. We consider that the dates for this 3 or 4-month window should be determined by the NWO but with sufficient notice given to interested parties of these dates. We would welcome the industry's views on this proposal.

4.73. We consider that the alternative mitigation mechanisms of restricting the number of proposals that may be raised in a year and threshold of support would not be appropriate for a number of reasons.

4.74. Restricting the number of proposals may unnecessarily restrict innovative proposals coming forward. Further, as noted by some respondents, having to meet a threshold of support by industry parties may be a significant barrier especially for small participants and/or may lead to the suppression of a beneficial proposal by a small number of participants.

4.75. Although both the latter mitigation measures would restrict the number of modification proposals being presented and in turn reduce administration and assessment costs we are of the view that both these mitigations measures may lead to further exclusion of non-NWO parties and restrict the development of innovative proposals.

4.76. We would therefore welcome industry views on our proposal for biannual or annual change and implementation windows.

### **Ofgem's initial proposals**

4.77. Having considered the views of the respondents and the issues we have highlighted in the previous chapter, we consider that the most viable governance options are either Options 2 or 3, supplemented by change and implementation windows as a mitigation measure. We also propose to prioritise reform of the governance of the gas and electricity transmission charging methodologies, although we welcome views on whether we should also address gas distribution.

4.78. The choice between these options is in our initial view finely balanced. Whilst Option 3 provides the benefits of independent code processes and the potential for increased accountability through the CC appeals mechanism, Option 2 is potentially more straightforward and easier to implement.

4.79. We note the merits and disadvantages of both options and we welcome views from the industry of the feasibility and viability of each option and the merits of progressing one of these options.

## Appendices

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## 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 9 October 2009 and should be sent to:

Jenny Boothe  
Industry Codes and Licensing  
3rd Floor, Ofgem, 9 Millbank, London SW1P 3GE  
020 7901 7122  
[industrycodes@ofgem.gov.uk](mailto:industrycodes@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](http://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. Next steps: Having considered the responses to this consultation, Ofgem intends to issue final proposals in early 2010. Any questions on this document should, in the first instance, be directed to:

Jenny Boothe  
Industry Codes and Licensing  
3rd Floor, Ofgem, 9 Millbank, London, SW1P 3GE  
020 7901 7122  
[industrycodes@ofgem.gov.uk](mailto:industrycodes@ofgem.gov.uk)

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### **CHAPTER: Three**

**Question1:** Do you agree with the output from the assumptions made within the quantitative analysis undertaken?

**Question2:** Are there any factors that you believe should have been considered in this analysis?

#### **CHAPTER: Four**

**Question1:** Which governance Option do you consider is the most appropriate for charging methodologies?

**Question2:** Do you agree that we should initially focus on gas and electricity transmission charges, with gas distribution potentially to follow as a second phase?

**Question3:** Do you agree that annual/biannual change and implementation windows are the most appropriate mitigation measures to progress going forward for all the options?

**Question4:** Do you consider a 3 or 4 month window to be sufficient time to consider modification proposals? Please indicate your preference for either 3 or 4 months.

**Question5:** Do you agree with our approach to defining "affected parties" who would be entitled to raise modification proposals?

## Appendix 2 – List of respondents to the September 2008 document

1.1. Below is a list of the non-confidential respondents to the September 2008 document:

- Association of Energy Producers
- British Energy
- CE Electric (UK)
- Centrica
- EdF Energy
- Energy Retail Association
- Envoy
- E.on UK
- GTC
- Electricity North West
- International Power (UK)
- National Grid
- Northern Gas Networks
- RWE npower
- Scottish Power
- Scottish Renewables
- Scottish & Southern Energy
- Statoil (UK)
- Wales and West Utilities
- Welsh Power
- Xoserve



## Appendix 3 - Quantitative Analysis

### Introduction

1.1. Frontier Economics was commissioned by Ofgem to conduct a quantitative cost-benefit analysis of the proposed changes to charging methodology governance arrangements. This appendix sets out Frontier's analysis.

1.2. This analysis seeks to test the proportionality of the costs associated with the proposed changes to the governance arrangements when considered alongside the potential benefits. Not all costs and benefits can be quantified. Nonetheless, this cost-benefit analysis does yield some useful insights.

1.3. By allowing both network operators (NWOs) and other interested parties (henceforth referred to as non-NWO parties) to submit their own modification proposals for decision, Options 2, 3 and 4 could result in more proposals a year than Option 1. This could bring both quantifiable costs and quantifiable benefits.

1.4. **Quantifiable benefits-** it is conceivable that Options 2, 3 and 4 could bring about efficiencies that manifest themselves in the form of a quantifiable reduction in required capital expenditure by NWOs:

- by allowing more parties to submit modification proposals, Options 2, 3 and 4 could create a larger and more varied 'pool' of modification proposals to choose from;
- this greater variety of proposals might give the Authority an opportunity to approve a proposed methodology that sets more cost reflective tariffs;
- more cost reflective tariffs would encourage network users to internalise, more accurately, the costs that their decisions impose on the network. All else being equal, this might lead network users to locate where there is more spare capacity available on the network or where the cost to meet additional demand is lower, thereby reducing required investment;
- in this way, options 2, 3 and 4 could ultimately therefore bring about capex efficiency savings which, at least conceptually, should be quantifiable.

1.5. **Quantifiable costs-** several costs associated with the proposed governance arrangements can in principle be quantified. Chief among these quantifiable costs are:

- costs arising from more frequent **assessment** of modification proposals;
- costs arising from more frequent **implementation** of modification proposals; and
- costs associated with utilising the **appeal arrangements** (under Option 3, Authority decisions would be appealable to the Competition Commission).
- 

1.6. The analysis set out below focuses on estimating these sets of costs and benefits. Again, though, it should be remembered that there may exist some other costs and benefits that are inherently difficult to quantify. For example, allowing non-

NWO parties to submit their own modification proposals under Option 2, 3 and 4 could lead to less predictable changes in final tariffs in the absence of mitigation measures. On the other hand these modification proposals could lead to more transparent and simplified methodologies being developed, which some have said they would find beneficial. These unquantifiable costs and benefits should not be overlooked in the final assessment.

1.7. The analysis required a substantial amount of industry-wide and participant-specific information. Several industry participants provided information about the quantifiable costs identified above in their responses to Ofgem's September 2008 consultation document. We have made use of this cost information wherever possible. We also spoke to some of these participants where we required further clarification about these estimates.

1.8. However, no such industry information was available in relation to the benefits. This meant that any analysis of the benefits had to be more assumption-driven. Thus, utilising the available information, we focus on the costs and work backwards to evaluate whether the benefits that would be required to justify these costs seem plausibly attainable.

1.9. Following this approach, we find that, under a broad range of scenarios, the benefits associated with new arrangements would only need to be modest in order to outweigh the quantifiable costs. We also find some quantitative evidence to suggest that Option 2 will be able to bring about these benefits at a lower cost as compared to Options 3 and 4.

1.10. The remainder of this appendix is split into three sections.

- In the first section, we first discuss how some of the **benefits** associated with allowing non-NWOs to submit their own modification proposals can, at least conceptually, be quantified. We also evaluate these potential benefits under different scenarios in order to gain an idea of their sensitivity to different assumptions.
- In the second section, we seek to quantify the **costs** that would be associated with allowing non-NWOs to submit their own modification proposals. Where possible, we make use of cost information gathered from industry participants.
- The final section brings together these twin analyses of the costs and benefits to estimate the **minimum (quantifiable) benefit** that would be required to justify the (quantifiable) costs associated with allowing non-NWO parties to submit their own modification proposals.

## Quantitative benefits

### Introduction

1.11. Under the existing arrangements, only NWOs can submit charging methodology proposals. Non-NWO parties can only comment on proposals already being considered.

1.12. Adoption of any of the proposed governance arrangements (i.e. Options 2, 3 or 4) would mean that these parties (including customer representatives) will be able to propose fully or part developed methodologies. We evaluate these proposals for change in view of high-level charging objectives set in the network licenses; namely:

- **Promoting competition** - Complex and opaque methodologies create risks and costs that could deter entry. Therefore, in the interest of better promoting competition, methodologies should, where possible, seek to be simpler, more transparent and predictable
- **Cost reflectivity** - Forward-looking, cost reflective tariffs would encourage network users to internalise more accurately the costs that their decisions impose on the network. This might lead users to locate where there is more spare capacity available, thereby ensuring that the network's resources are used more efficiently.

1.13. In our view, it is conceivable that by allowing non-NWOs to submit their own modification proposals Options 2, 3 & 4 could potentially lead to enhanced competition and cost reflectivity. However, only the latter of these potential benefits is amenable to quantification.

- We envisage that non-NWOs would have an incentive to push for more simple, transparent and predictable charges, thereby promoting competition. This is because simple, transparent and predictable charges would reduce the costs and risks to which they are exposed. However, it is difficult to conceptualise how these benefits, particularly those associated with simplicity and transparency, can be quantified. Thus, while potentially important, these benefits are not considered in the quantitative analysis.
- On the other hand, as discussed earlier, it is also possible that non-NWOs could propose a charging methodology that is more cost reflective. Everything else being equal, more cost reflective charges would encourage users to locate where they impose lower costs on the network, thereby reducing the need for capital expenditure by the network owner. This reduction in expenditure could, in principle at least, be one quantifiable measure of the benefits arising from allowing non-NWOs to submit their own modification proposals.

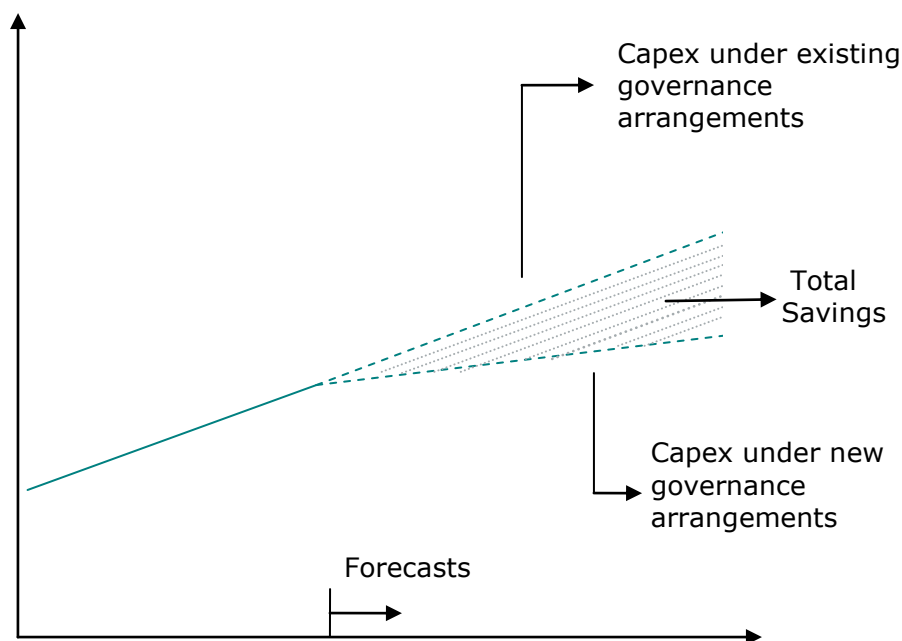
1.14. We consider that these arguments about capex efficiency savings can be applied equally to each of the proposed options for change (Options 2, 3 and 4), since all three options would allow non-NWOs to submit modification proposals. We therefore do not differentiate between the Options 2, 3 and 4 in our analysis of the quantifiable benefits that follows.

## Estimation

1.15. It should be noted from the outset that attempting to forecast the efficiency savings discussed above requires various assumptions to be made. Nonetheless, it is useful to look into the magnitude of capex savings that might arise under different scenarios.

1.16. The reduction in the capital expenditure as a result of the new governance arrangements can be calculated as the difference between forecasted capital expenditure under the status quo and that under the new governance arrangements. This is illustrated in the figure below.

**Figure 1. Estimation of Capex Savings**



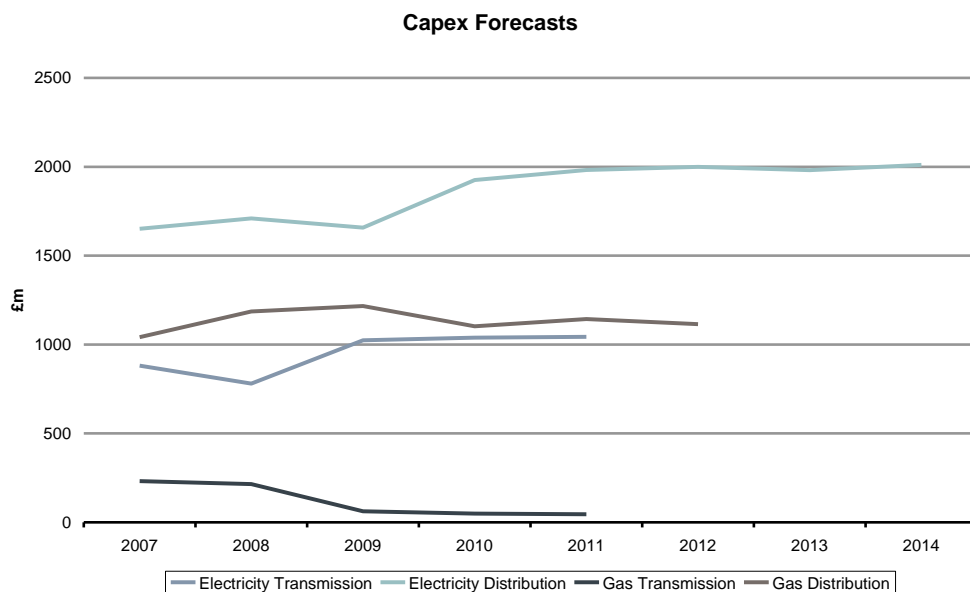
1.17. The estimation process involves four steps which we consider below:

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*Step 1: Forecast capex under status quo*

1.18. Capex forecasts under the current governance arrangements were obtained from the forecasts provided by Ofgem<sup>5</sup> and the latest Price Control Review<sup>6</sup>. These are plotted in the chart below

**Figure 2. Capex Forecasts**



1.19. For the purposes of our analysis we look at the period from 2009 to 2020. The forecasts above do not cover this entire period. Therefore, we extrapolate the cost series to 2020 by assuming an annual average rate of growth of capital expenditure.

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5 Transmission Price Control Review: Final proposals 2006/06

<http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=191&refer=Networks/Trans/PriceControls/TPCR4/ConsultationDecisionsResponses>

Gas Distribution Price Control Review Final proposals 285/07

<http://www.ofgem.gov.uk/Networks/GasDistr/GDPCR7-13/Documents1/final%20proposals.pdf>

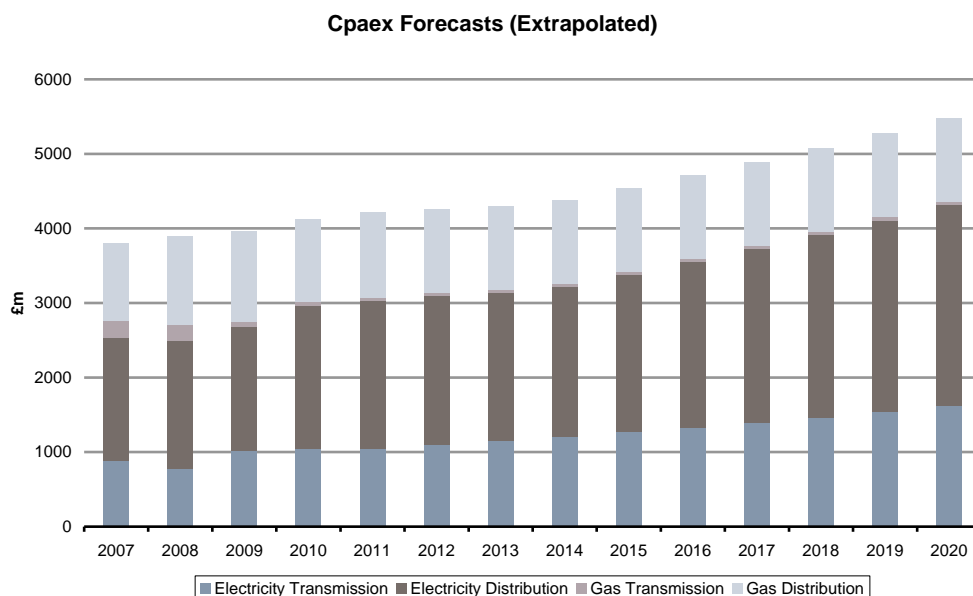
6 Distribution Price Control Review: Final Proposals 265/04

<http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=51&refer=Networks/ElecDist/PriceCtrls/DPCR4>

1.20. There could be several plausible capex growth rates over the forecast period. In the exposition that follows, we consider one set of assumptions here for illustration purposes.

1.21. Assumptions of future capex growth rates can be derived from available forecasts. Official forecasts contained in figure 2 indicate that in the short run (2011-2014) electricity capex would grow modestly whereas gas capex would remain fairly constant. Therefore, using the trend growth in planned capex, we may assume that electricity capex (both distribution and transmission) would continue to grow annually by 5% and gas capex would stay constant (0% rate of growth) in the future. The figure below illustrates what the capital expenditure under the status quo would be if this were the case.

**Figure 3. Capex Forecasts (Extrapolated)**



Source: Frontier analysis

1.22. Alternative capex growth rate assumptions are considered in section 1.29.

*Step 2: Estimate capex under new governance arrangements*

1.23. As discussed earlier, it is possible that the new governance arrangements could result in more cost reflective charging methodologies, which might, everything else being equal, reduce capital expenditure by the network owner. To model this effect, we simply assume that Options 2, 3 or 4 would reduce the forecast capex in each year by a fixed percentage.

1.24. This benefit of capex reduction is assumed to accrue from 2011 given that it is proposed the new charging governance arrangements will come into effect April 2010.

1.25. It is difficult to predict the extent to which the proposed changes might result in more cost reflective charges and in turn reduced capex, as this will, by definition, be subject to the proposals that are brought forward. Therefore, we estimate the benefit for a range of saving rate assumptions.

*Step 3: Calculate annual savings*

1.26. Capex saving is calculated as the difference between the capital expenditures under the two regimes.

*Step 4: Calculate gross benefit*

1.27. The estimation of the gross benefit (i.e. the net present value of capex savings between 2011 and 2020) requires that these annual savings be discounted. We use a standard discount rate of 6.9%.

**Forecast efficiency savings under different scenarios**

1.28. As noted above, it is difficult to predict, ex-ante, what the capex growth and saving will be under the new arrangements. We thus estimate the benefit under a range of different assumptions:

- Capex growth - We consider two alternative assumptions for capex growth to 2020:
- As in the illustration above, we use a growth rate of 5% for electricity network expenditure and 0% for gas. These figures were derived based on current planned capital expenditure
- It is questionable whether these capex growth rates are likely to be sustained until 2020. One possibility is that the capital investments could level off or even fall in the coming years if the rate of demand growth for the use of networks slows (for example as a result of the growth of distributed generation). To analyse such a scenario, we repeat our analysis with the assumption that gas capex grows at the negative annual rate of -5% and electricity at 0%.
- Saving rate- As discussed earlier, it is difficult to predict percentage saving in capex. Therefore, we illustrate our approach under a range of scenarios:
- 1% reduction in annual capex
- 0.1% reduction in annual capex

- 0.1% saving on load-related capex and 0% for non-load related capex<sup>7</sup>

1.29. The estimate of benefit under these assumptions is listed in the table below.

#### NPV of total savings under changed assumptions

Scenario	Capex Growth (Electricity, Gas)	Savings Rate	Benefit = NPV of Total Savings (£m)
Scenario 1	5%,0%	0.1%	30.6
Scenario 2	5%,0%	1%	305.7
Scenario 3	5%,0%	LR-0.1%, NLR-0%	18.4
Scenario 4	0%,-5%	0.1%	26.7
Scenario 5	0%,-5%	LR-0.1%, NLR-0%	16.0

Source: Frontier analysis

1.30. As Table 1 above indicates, estimates of benefit are not very sensitive to assumptions about rate of growth of capex. These estimates, however, are very sensitive to the savings rate assumption. For the range of saving rate scenarios considered, the benefit estimates vary from £18.4m (with an assumed savings rate of 0.1% on load related capex only) to £305.7m (for a 1% savings rate on all capex). This observation is more evident from the chart below.

1.31. Since, the benefit estimates are highly sensitive to the savings rate assumption and it is difficult to predict what this rate would be, it is also difficult to predict with reasonable accuracy what the benefit is likely to be. We therefore follow the methodology laid out earlier and identify the costs that are associated with allowing non-NWOs to submit modification proposals. We then work backwards to identify the minimum required capex savings that would be required to justify these costs.

### Quantification of costs

1.32. Ofgem's September 2008 consultation document and the responses from industry participants identified two broad categories of cost associated with moving away from the existing governance arrangements in favour of the arrangements set out in Options 2, 3 and 4. These were:

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<sup>7</sup> It seems plausible that more efficient locational signals would affect both load-related and non-load-related capex requirements. Non-load related capex requirements may be reduced if locational signals could persuade participants to locate elsewhere and reduce the need to replace or maintain assets that might otherwise have been required. Nonetheless we look at a scenario where this does not hold and benefits are only accrued with regard to load-related capex



- Reduced predictability. By allowing non-NWOs to submit modification proposals, Options 2, 3 and 4 may result in more frequent and less predictable changes to charging methodologies than under the existing arrangements. Since these changes would increasingly reflect changes in charging methodologies (rather than changes 'on the ground') it might ultimately become more difficult for end users to forecast the direction and extent of tariff movements.
- Costs associated with assessing and implementing additional modification proposals. Industry participants would face an increased administrative burden associated with reviewing and evaluating non-NWO modification proposals. There would also be costs associated with implementing the subset of these additional proposals that are approved by the Authority. Finally, there may be additional costs associated with new appeal arrangements (under Option 3, Authority decisions may become appealable to the Competition Commission).

1.33. While potentially important, the costs associated with reduced predictability are inherently difficult to quantify. Industry responses to Ofgem's September 2008 consultation document suggested that there is little agreement about the extent of any effect that Options 2, 3 and 4 might have on the timing, frequency and extent of charging methodology changes. It would also be difficult to quantify the extent to which end users value predictable charges or the extent to which more predictable charges might encourage market entry and promote competition.

1.34. The quantitative analysis set out below therefore focuses on the latter category of costs - that is, those costs associated with assessing and implementing additional modification proposals. This analysis makes use of quantitative information from both industry responses to Ofgem's September 2008 consultation and subsequent interviews with industry participants about the assumptions that informed some of these cost estimates.

1.35. Note that we do not distinguish between the cost estimates provided for Options 2, 3 and 4 at this stage (we have simply taken average values). We consider the relative benefits of Options 2, 3 and 4 later in the analysis.

1.36. In what follows, we summarise these cost estimates for four categories of industry participant:

- transmission operators;
- central agencies;
- GDNs and DNOs; and
- network users.

### **Transmission operators**

1.37. National Grid provided detailed cost estimates in its response to Ofgem's September 2008 consultation document. Assuming that non-NWOs have an

unlimited ability to raise additional modifications, but only actually submit three proposals a year for each class of network, National Grid forecasts that this would:

- increase the number of FTEs required to assess gas transmission modification proposals by 40% (from 4 to 5.6);
- increase the number of FTEs required to assess electricity transmission modification proposals by 50% (from 6 to 9); and
- increase the number of FTEs required to carry out additional administrative functions for electricity transmission by 30% (from 0.5 to 0.65).

1.38. For calculation purposes, we assume that 1 FTE is equivalent to £60,000 per annum. This implies that allowing non-NWOs to submit modification proposals would:

- increase National Grid's costs associated with assessing gas transmission modification proposals by £96,000 per annum;
- increase National Grid's costs associated with assessing electricity transmission modification proposals by £180,000 per annum; and
- increase National Grid's costs associated with additional administrative functions for electricity transmission by £9,000 per annum.

1.39. As these annual cost forecasts were provided on the assumption that there would be three additional modification proposals per year, this implies that National Grid would face the following cost per additional modification proposal:

- Electricity transmission: £63,000 per modification proposal;
- Gas transmission: £32,000 per modification proposal.

1.40. These estimates relate to costs associated with assessing each additional modification proposal. In addition, National Grid would be likely to face costs associated with implementing proposals that are subsequently approved by the Authority. Clearly implementation costs will vary depending on the nature of the changes that are required. However, from subsequent discussions with National Grid, we understand that, on average, implementation costs per proposal approved by the Authority are likely to be about the same as assessment costs per modification proposal. We therefore used the following transmission operator cost estimates in our analysis:

<b>Network type</b>	<b>TO assessment cost per modification proposal</b>	<b>TO implementation cost per modification approved by the Authority</b>
Electricity transmission	£63,000	£63,000
Gas transmission	£32,000	£32,000

1.41. These are the cost estimates used in the quantitative analysis. However, two important points should be noted. First, these cost estimates were calculated on the assumption that the costs faced by National Grid are directly proportional to the number of modification proposals. In practice, however, there might be economies of scale that come into play where a large number of modification proposals are assessed simultaneously. Indeed, National Grid's own cost estimates suggest that this might be the case.

1.42. It is therefore possible that our cost estimate might to some extent overestimate the additional costs actually faced by National Grid in a scenario where new governance arrangements lead to a large number of additional proposals a year.

1.43. Secondly, National Grid's cost estimates do not differentiate between the administrative burdens that would be associated with Options 2, 3 and 4. Under Options 3 and 4, a portion of the administrative burden currently borne by National Grid could be transferred to the code administrators in electricity or gas such as ELEXON. We therefore need to be careful to avoid double counting when considering cost estimates provided by these central agencies.

### **Central agencies**

#### *Electricity transmission and distribution*

1.44. We assume that there are no direct costs in this category that have not already been covered by costs estimates assumed for National Grid.

- ELEXON has confirmed that under current governance arrangements it faces no direct costs relating to charging methodologies.
- It is possible that there would be a cost impact on ELEXON if, under Option 3, charging methodologies were placed under the BSC. However, it is also possible that methodologies would be transferred under the CUSC, in which case National Grid would bear all these costs. To avoid double counting, therefore, we have not included separate cost estimates for ELEXON under this option either.

#### *Gas transmission and distribution*

1.45. In its response to Ofgem's September 2008 consultation, xoserve stated that "typical costs for direct resources and bought in services for each pricing methodology change are £50,000 for a full change analysis and a further £250,000 where the proposal is taken through to change delivery". We have used these two cost figures directly in our quantitative analysis.

1.46. We assume that these costs would be incurred for both gas transmission and gas distribution modification proposals.

1.47. It is possible that The Joint Office of Gas Transporters could incur some secretariat costs under the proposed changes to governance arrangements. However, we assume that these would be relatively immaterial.

## **GDNs and DNOs**

### *GDNs*

1.48. More than one GDN provided assessment cost estimates in their responses to Ofgem's September 2008 consultation document.

- One network operator estimated that for Options 2, 3 and 4 (when compared to Option 1) the analysis required and attendance of additional subgroups may impose an additional cost of £60,000 per year. Additionally, the network operator stated that the new arrangements might take up substantive management time at a cost of £100,000 per year. This takes the total cost estimate to £160,000 per year. From subsequent discussions with this network operator, we understand that this cost estimate would be consistent with the assumption that Options 2, 3 or 4 could result in three or four additional gas distribution modification proposals a year. This implies an assessment-cost-per-modification-proposal estimate in the region of £40,000.
- Another network operator provided assessment cost estimates on the assumption that there would be three non-NWO proposals a year and that non-NWOs would have an unlimited ability to raise additional modifications. In this scenario, the network operator forecast that allowing non-NWOs to submit modification proposals would increase the number of FTEs required to assess modification proposals from 1.5 to 2.4. For calculation purposes, we assume that 1 FTE is equivalent to £60,000 per annum. This implies an additional cost of £54,000 per annum. As these forecasts assume that there would be three non-NWO proposals per year, this implies that the network operator would face an assessment cost of £18,000 per proposal.

1.49. The cost estimates provided by the two GDNs therefore differ quite substantially. To ensure we consider the full range of possibilities, the cost analysis below will look at three scenarios:

- a high cost scenario, using the £40,000 cost estimate;
- a low cost scenario, using the £18,000 cost estimate; and
- a central cost scenario, which takes the average of the two cost estimates.

1.50. These estimates relate to GDN costs associated with assessing non-NWO proposals. In the case of gas distribution, however, GDNs are likely to face additional costs associated with implementing any proposals that are subsequently approved by the Authority. Clearly implementation costs will vary depending on the nature of the changes that are required. However, from subsequent discussions with these GDNs, we understand that on average implementation costs per proposal approved by the Authority are likely to be about the same as assessment costs per modification proposal.

1.51. We therefore used the following GDN cost estimates in our analysis

<b>Network type</b>	<b>Cost scenario</b>	<b>Assessment cost per GDN and per modification proposal</b>	<b>Implementation cost per GDN and per modification approved by the Authority</b>
Gas distribution	Low	£18,000	£18,000
	Central	£29,000	£29,000
	High	£40,000	£40,000
Gas transmission	Low	£18,000	£0
	Central	£29,000	£0
	High	£40,000	£0

1.52. As the table makes clear, our cost analysis assumes that GDNs would continue to be involved in (and hence spend resources on) assessing both gas distribution and gas transmission proposals under Options 2, 3 and 4. By contrast, we assume that GDNs would, of course, only be involved in implementing gas distribution modifications.

#### *DNOs*

1.53. One electricity DNO provided quantitative assessment cost estimates in its response to Ofgem's September 2008 consultation document. It considered that it would potentially face an internal cost of approximately £10,000 to review and evaluate each additional modification proposal. In addition to this, however, the DNO states that it would also expect each DNO to face annual administrative costs for managing any new additional distribution forum (i.e. workshops/groups, panel meeting and secretariat support) of approximately £15,000.

1.54. In addition to the assessment costs reported above, it is likely that DNOs would face costs associated with implementing any electricity distribution proposals that are subsequently approved by the Authority. The cost analysis set out below assumes that that, on average, implementation costs per proposal approved by the Authority are likely to be about the same as assessment costs per modification proposal. This assumption has not been confirmed by the DNO, but it is consistent with the assumptions we have made for transmission operators and GDNs.

1.55. We therefore used the following electricity DNO cost estimates in our analysis:

<b>Network type</b>	<b>DNO assessment cost per modification proposal</b>	<b>DNO implementation cost per modification approved by the Authority</b>
Electricity distribution	£10,000 per proposal plus a fixed cost of £15,000	£10,000

## Network users

### *Large network users*

1.56. Two large suppliers provided assessment cost estimates in their responses to Ofgem's September 2008 consultation document. In addition to this, subsequent discussions with a third large supplier yielded a further set of cost estimates.

- The first supplier provided detailed cost estimates in its response to Ofgem's September 2008 consultation document. Like National Grid, this supplier was of the view that the assessment cost per proposal would diminish as the number of proposals being considered increased. Our analysis simply assumes that one modification proposal is considered at a time (we consider the implications of this later in this appendix). Under this scenario, the supplier estimated that Option 2 would lead to 5 additional man days of effort, while Option 3 would lead to 10 additional man days and Option 4 would lead to 7 additional man days. On the assumption that 1 FTE is equivalent to £60,000, this implies that Option 2 would lead to an additional cost of about £800 per proposal, Option 3 would lead to an additional cost of £1,600 per proposal and Option 4 would lead to an additional cost of £1,200 per proposal. The average cost estimate across the three options is about £1,200 per modification proposal.
- The second supplier estimated that Options 2 and 3 could require the employment of 2 FTE regulatory analysts, while Option 4 could require 3 FTE regulatory analysts. On the assumption that 1 FTE is equivalent to £60,000 per annum, this implies that Options 2 and 3 would each cost £120,000 per annum, while Option 4 would cost £180,000. From subsequent discussions with this supplier, we understand that these estimates were made on the assumption that Options 2 and 3 would lead to 30 more charging methodology modification proposals a year (spread across electricity, gas, transmission and distribution), while Option 4 would lead to 35 more proposals a year. This implies a cost of £4,000 per modification proposal under Options 2 and 3 and about £5,100 under Option 4. The average cost estimate across the three options is about £4,400 per modification proposal.
- The third supplier was of the view that the assessment cost would be higher still - about £6,000 per modification proposal. This estimate was based on the assumption that each additional modification proposal could require 4 or 5 full-day workshop meetings, plus additional time to prepare for these meetings and consult internally.

1.57. As for GDNs, therefore, larger suppliers provided a broad range of cost estimates. To ensure we consider the full range of possibilities, the cost analysis below will again look at three scenarios:

- a high cost scenario, using the £6,000 cost estimate;
- a low cost scenario, using the £1,200 cost estimate; and
- a central cost scenario, which takes the average of the three supplier cost estimates (i.e. £3,900 per modification proposal).

1.58. Note also that we do not distinguish between the cost estimates provided for Options 2, 3 and 4 at this stage (we have simply taken average values). We consider the relative benefits of Options 2, 3 and 4 later in the analysis.

1.59. No large generators or shippers provided quantifiable cost estimates in their responses to Ofgem's September 2008 consultation document. Nonetheless, it seems likely that large generators and shippers would also face costs associated with assessing additional modification proposals. The cost analysis set out below therefore assumes that a large generator or shipper would face assessment costs in the same order of magnitude to those faced by a large supplier.

1.60. We therefore used the following electricity cost estimates for large network users in our analysis:

<b>Cost scenario</b>	<b>User assessment cost per modification proposal</b>	<b>User implementation cost per modification approved by the Authority</b>
Low	£1,200	£0
Central	£3,900	£0
High	£6,000	£0

1.61. As the table above indicates, our analysis assumes that network users will not incur any material costs in relation to implementing modification proposals that are approved by the Authority. We consider this to be a plausible assumption, save in exceptional cases where a modification might require changes to the structure or frequency of final tariffs.

#### *Smaller network users*

1.62. No smaller network users provided quantitative cost estimates in their responses to Ofgem's September 2008 consultation document. However, from subsequent discussions with some small network users, we understand that any costs incurred they would incur in relation to assessing additional modification proposals are likely to be negligible.

#### *Combining this cost information: three cost scenarios*

1.63. The three tables below summarise the assessment and implementation cost assumptions used in the quantitative analysis. As outlined above, GDNs and large network users provided a range of cost estimates. As a result, we analyse three cost scenarios (high, central and low). Since we only have a single set of cost estimates for other industry participant groups (transmission operators, central agencies and DNOs), costs for these groups do not vary across the three scenarios.

**Low cost scenario**

Industry Participant Type	Gas Transmission		Gas Distribution		Electricity Transmission		Electricity distribution	
	Asses. Cost (£)	Impl. Cost (£)	Asses. Cost (£)	Impl. Cost (£)	Asses. Cost (£)	Impl. Cost (£)	Asses. Cost (£)	Impl. Cost (£)
xoserve	50,000	250,000	50,000	250,000	0	0	0	0
TOs	32,000	32,000	0	0	63,000	63,000	0	0
DNs	18,000	0	18,000	18,000	0	0	10,000*	10,000
Large users	1,200	0	1,200	0	1,200	0	1,200	0
Small users	0	0	0	0	0	0	0	0

**Central cost scenario**

Industry Participant Type	Gas Transmission		Gas Distribution		Electricity Transmission		Electricity distribution	
	Asses. Cost (£)	Impl. Cost (£)	Asses. Cost (£)	Impl. Cost (£)	Asses. Cost (£)	Impl. Cost (£)	Asses. Cost (£)	Impl. Cost (£)
xoserve	50,000	250,000	50,000	250,000	0	0	0	0
TOs	32,000	32,000	0	0	63,000	63,000	0	0
DNs	29,000	0	29,000	29,000	0	0	10,000*	10,000
Large users	3,900	0	3,900	0	3,900	0	3,900	0
Small users	0	0	0	0	0	0	0	0

**High cost scenario**

Industry Participant Type	Gas Transmission		Gas Distribution		Electricity Transmission		Electricity distribution	
	Asses. Cost (£)	Impl. Cost (£)	Asses. Cost (£)	Impl. Cost (£)	Asses. Cost (£)	Impl. Cost (£)	Asses. Cost (£)	Impl. Cost (£)
xoserve	50,000	250,000	50,000	250,000	0	0	0	0
TOs	32,000	32,000	0	0	63,000	63,000	0	0
DNs	40,000	0	40,000	40,000	0	0	10,000*	10,000
Large users	6,000	0	6,000	0	6,000	0	6,000	0
Small users	0	0	0	0	0	0	0	0

Notes:

Assess. Cost = assessment cost per organisation and per modification proposal



Impl. Cost = implementation cost per organisation and per modification approved by the Authority

\* In addition to this cost of £10,000 to assess each modification proposal, we assume each DNO faces an fixed annual cost of £15,000 under Options 2, 3 and 4.

#### *Assumed number of industry participants*

1.64. In order to calculate the total cost per modification proposal, we need to make assumptions about the number of industry participants that would take an active role in assessing and implementing each modification proposal. The two tables below set out these assumptions:

1.65. Number of industry participants actively involved in assessing each modification proposal

<b>Industry Participant type</b>	<b>Gas Transmission</b>	<b>Gas Distribution</b>	<b>Electricity Transmission</b>	<b>Electricity distribution</b>
xoserve	1	1	0	0
TOs	1	0	1	0
DNs	4	4	0	7
Large users	10	10	10	10
Small users	0	0	0	0

#### **Number of industry participants actively involved in implementing each modification that is approved by the Authority**

<b>Industry Participant type</b>	<b>Gas Transmission</b>	<b>Gas Distribution</b>	<b>Electricity Transmission</b>	<b>Electricity distribution</b>
xoserve	1	1	0	0
TOs	1	0	1	0
DNs	0	4	0	7
Large users	0	0	0	0
Small users	0	0	0	0

1.66. As the tables above indicate, our analysis assumes that, on average, ten large network users will actively participate in assessing modification proposals. This assumption is based on recent historical experience, where the six largest suppliers have all tended to take active roles, along with a handful of large generators and shippers. Other assumptions have already been discussed. In particular, we are assuming that:

- no users would incur material costs associated with implementing modification proposals that are approved by the Authority; that
- no small users would incur material costs associated with assessing proposals; and that
- GDNs would continue to be involved in assessing both gas transmission and gas distribution modification proposals (but would only be involved in implementing gas distribution modifications).

1.67. We use this information to calculate the total costs associated with assessing and implementing each modification proposal. For example:

- in our central cost scenario, it costs a GDN £29,000 to assess each modification proposal;
- we assume that there are four DNs actively involved in assessing each gas distribution modification proposal;
- therefore, we estimate that, in total, GDNs spend  $£29,000 * 4 = £116,000$  on assessing each gas distribution modification proposal in our central cost scenario.

*Assumed proportion of modification proposals that are approved by the Authority*

1.68. We are looking to identify the total expected cost associated with each additional modification proposal. Simply adding up the assessment and implementation costs would overestimate this total expected cost because not all modification proposals would be approved by the Authority. We therefore need to make an assumption about the percentage of modification proposals that are approved by the Authority. We assume this proportion to be 20%, based on recent historical experience.

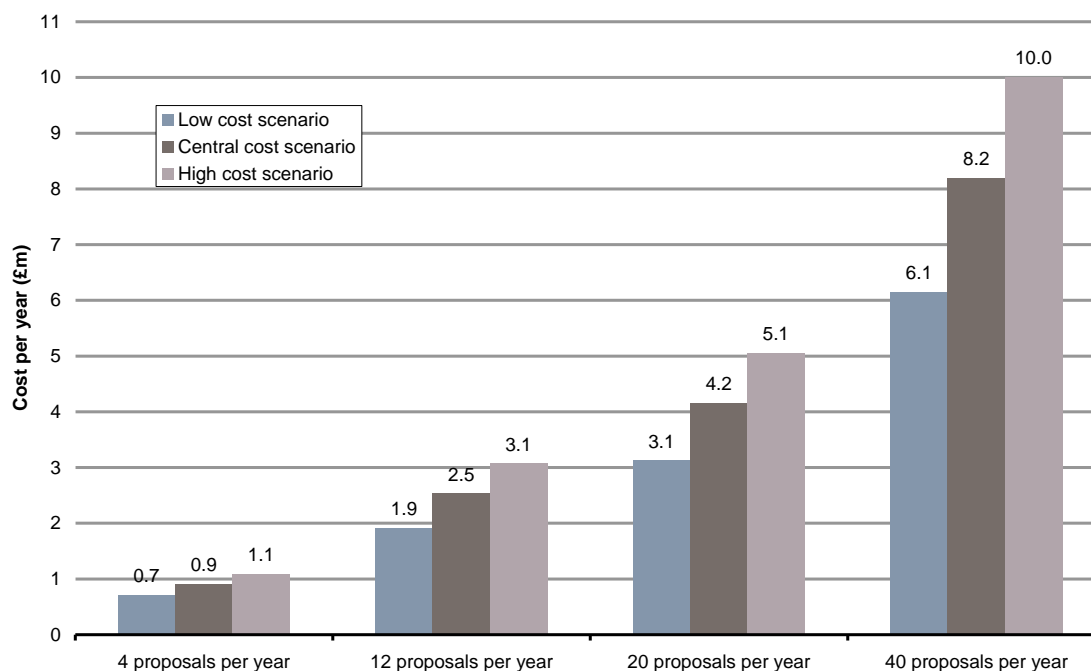
### **Total estimated costs per year**

1.69. One important further piece of information is required for the cost analysis, namely the number of modification proposals per year that non-NWOs would be likely to submit under Options 2, 3 and 4.

1.70. It is difficult to predict this variable with any certainty (discussions with industry participants suggest that there is a very wide range of opinions on this point). As a result, the analysis presented below presents the expected annual costs associated with four scenarios. These scenarios assume that there would be 4, 12, 20 and 40 non-NWO modification proposals a year respectively. In each of these scenarios, we assume that the non-NWO modification proposals are spread evenly across network types (so, for example, the four-proposal scenario assumes one proposal for each of the gas transmission, gas distribution, and electricity transmission and electricity distribution networks).

1.71. . The resulting cost forecasts for these scenarios are presented in Figure 4 below.

### **Figure 4 - Total forecast annual assessment and implementation costs associated with non-NWO modification proposals**



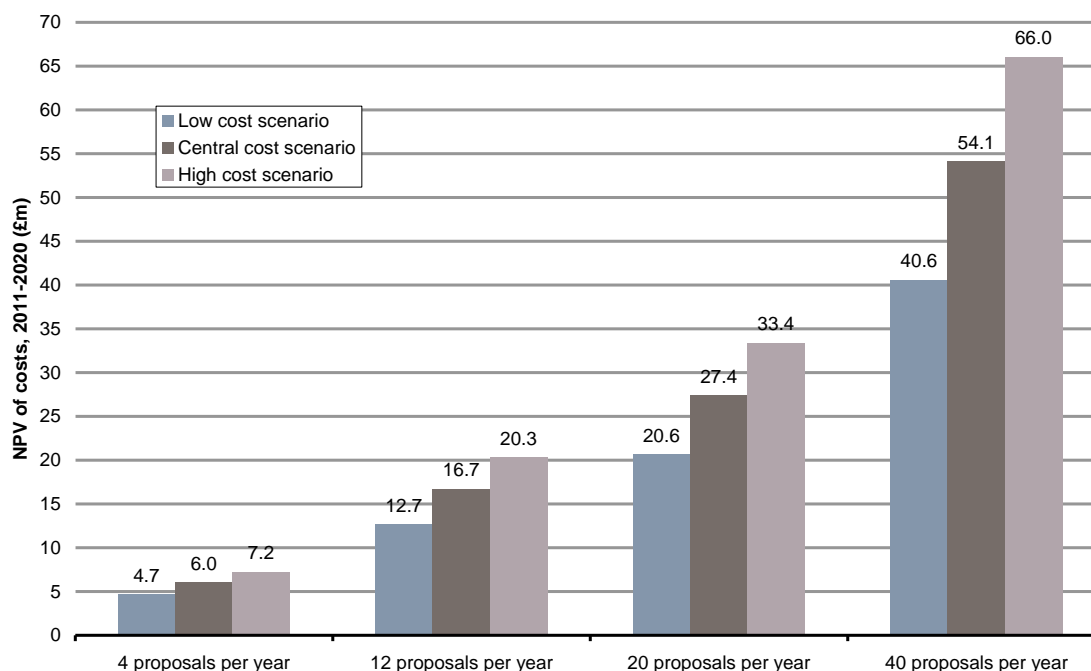
1.72. Figure 4 implies that if, for example, Options 2, 3 or 4 were to give rise to four non-NWO proposals a year, our central cost scenario would forecast that this would impose assessment and implementation costs on the industry amounting to £0.9m per annum. If, on the other hand, Options 2, 3 or 4 were to give rise to 12 non-NWO proposals a year, the central cost forecast would be £2.5m per annum.

1.73. As can be seen from Figure [xx], total forecast annual assessment and implementation costs are nearly directly proportional to the assumed number of modification proposals a year.

1.74. Just as for the benefits analysis, we want to estimate the NPV of these forecast annual costs between 2011 and 2020. Assuming a 6.9% discount rate, the corresponding NPV values are listed in the Figure [xx] below:

1.75. We summarise these results in Figure 5 below:

**Figure 5 - NPV of forecast assessment and implementation costs associated with non-NWO modification proposals between 2011 and 2020**



1.76. Figure 5 implies that four non-NWO proposals a year, for example, would impose assessment and implementation costs with an NPV of £6.0m for the 2011-2020 period in our central cost scenario. If, on the other hand, Options 2, 3 or 4 were to give rise to 12 non-NWO modification proposals a year, the central cost scenario NPV forecast would rise to £16.7m.

### Factoring in costs associated with potential changes to appeal arrangements

1.77. The cost estimates set out above relate only to the costs associated with assessing and implementing modification proposals submitted by non-NWOs. However, there are other costs that could potentially be quantified. In particular, there may be additional costs that would be associated with new appeal arrangements. Option 3 may deliver increased accountability as there would be a "ready-made" appeal mechanism to the Competition Commission in instances where the Authority's decision diverged from the code panel recommendation. However, such appeals could also impose costs on all parties involved.

1.78. It is useful to think about what order of magnitude the costs associated with these new appeal arrangements might be. We envisage that the Option 3 governance arrangements might, on average, give rise to one additional Competition Commission appeal every five years. For the sake of argument, we assume that, on average, each appeal process might impose a collective cost of £1m on parties involved (this is not far out of line with recent historical experience). The expected annual cost associated with these new appeal arrangements in this scenario would therefore be £200,000. The NPV of this expected cost for the 2011-2020 period would be just over £1.3m. This £1.3m cost should therefore be added to each of the

cost estimates presented in Figure [xx] in order to estimate the total quantifiable costs associated with Option 3 over the 2011-2020 period.

## Conclusions

1.79. In this section we draw together the quantitative analyses of the costs and benefits to see what conclusions can be drawn. As explained above, only some of the likely costs and benefits associated with the new governance arrangements are amenable to quantification. This should be borne in mind when considering the results presented below.

1.80. Our analysis set out to quantify:

- benefits that may result from non-NWO modification proposals leading to more cost reflective charges and hence capex efficiency savings; and
- costs that would result from assessing, implementing and appealing such non-NWO modification proposals.

1.81. As our analysis makes clear, the costs associated with assessing and implementing non-NWO modification proposals can be estimated with a higher degree of confidence than the benefits associated with potential efficiency savings. We have therefore attempted to estimate these costs, and then calculate what efficiency savings would be required in order to make these necessary costs worthwhile. In this concluding section of the analysis, therefore, we estimate the minimum efficiency saving that would be required in order to justify a move away from the existing governance arrangements.

1.82. The results presented below have been calculated on the assumption that electricity capex would grow at an annual rate 5% out to 2020 under the existing governance arrangements, while gas capex would grow at an annual rate of 0%. However, it should be noted that the results are very similar under the more conservative scenario that assumes 0% annual growth in electricity capex and -5% annual growth in gas capex (please refer back to the benefits section above for further discussion of these two growth scenarios).

## Overall results

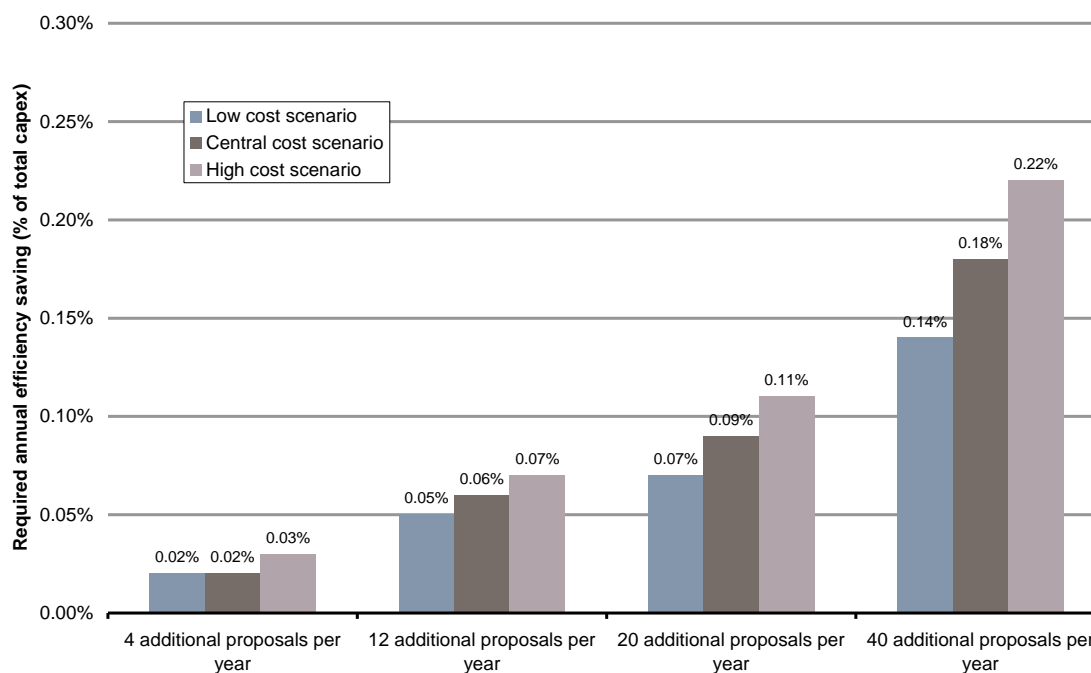
1.83. The table below sets out the results of the quantitative analysis. It specifies the minimum efficiency savings that would be required, both in absolute terms and as a percentage of total capex, to outweigh the forecast costs associated with assessing and implementing non-NWO modification proposals under Options 2, 3 and 4.

### Minimum annual efficiency savings required to outweigh quantifiable costs under Options 2 and 4

Cost scenario	4 non-NWO proposals per annum		12 non-NWO proposals per annum		20 non-NWO proposals per annum		40 non-NWO proposals per annum	
	Annual absolute capex saving required	Annual % capex saving required	Annual absolute capex saving required	Annual % capex saving required	Annual absolute capex saving required	Annual % capex saving required	Annual absolute capex saving required	Annual % capex saving required
Low	£0.71m	0.02%	£1.92m	0.05%	£3.13m	0.07%	£6.15m	0.14%
Central	£0.91m	0.02%	£2.53m	0.06%	£4.15m	0.09%	£8.20m	0.18%
High	£1.10m	0.03%	£3.08m	0.07%	£5.06m	0.11%	£10.01m	0.22%

1.84. These minimum required capex savings set out in this table are illustrated in Figure 6 below:

### 1.85. Figure 6 - Minimum annual efficiency savings (as a % of total capex\*) required to outweigh the quantifiable costs under Options 2 and 4



\*Note that the estimates presented here have been rounded to the nearest second decimal place.

1.86. This cost analysis implies that if, for example, there were 12 non-NWO proposals a year, then in the central cost scenario these proposals would collectively need to bring about efficiency savings that reduced annual capex by at least 0.06%.

1.87. When expressed as a percentage of total capex, therefore, these required efficiency savings are modest.

1.88. Moreover, as noted earlier, some industry participants indicated that in practice economies of scale might come into play if multiple proposals were considered simultaneously. If this were the case, the costs (and hence the required benefits) might even lower for scenarios involving large numbers of modification proposals.

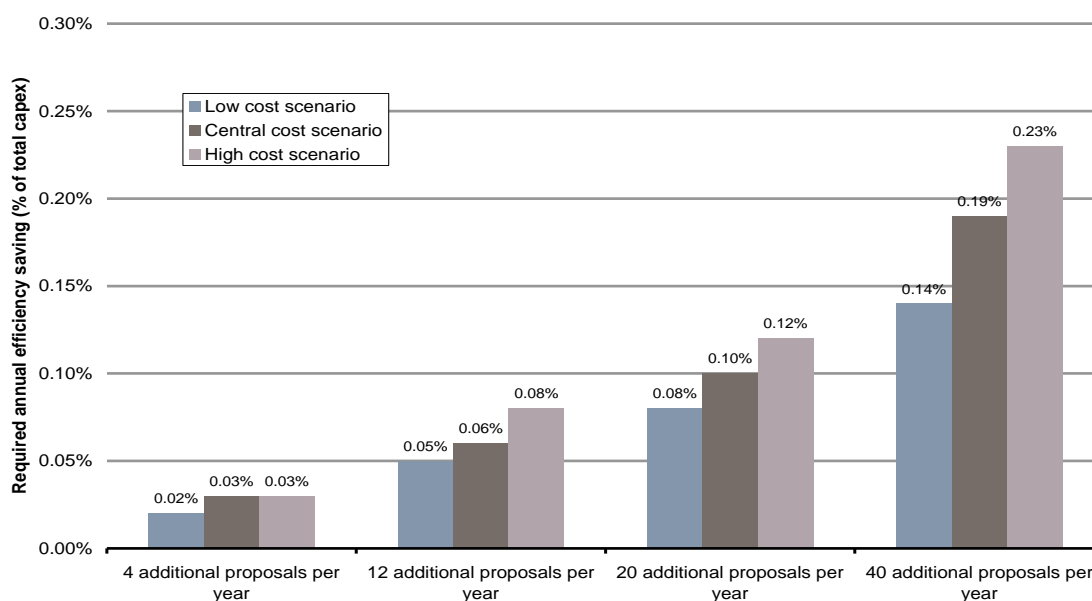
1.89. The results presented above do not include the annual cost of £200,000 that might be associated with new appeal arrangements under Option 3. The table below presents the annual efficiency savings that would be required once these hypothesised appeal costs are factored into the analysis.

**Minimum required annual efficiency savings in absolute terms (£m) and as a percentage of total capex in each year when potential new appeal costs are also taken into consideration**

Cost scenario	4 non-NWO proposals per annum		12 non-NWO proposals per annum		20 non-NWO proposals per annum		40 non-NWO proposals per annum	
	Annual absolute capex saving required	Annual % capex saving required	Annual absolute capex saving required	Annual % capex saving required	Annual absolute capex saving required	Annual % capex saving required	Annual absolute capex saving required	Annual % capex saving required
Low	£0.91m	0.02%	£2.12m	0.05%	£3.33m	0.08%	£6.35m	0.14%
Central	£1.11m	0.03%	£2.73m	0.06%	£4.35m	0.10%	£8.40m	0.19%
High	£1.30m	0.03%	£3.28m	0.08%	£5.26m	0.12%	£10.21m	0.23%

1.90. These minimum required capex savings set out in this table are illustrated in Figure 7 below:

**1.91. Figure 7 - Minimum annual efficiency savings (as a % of total capex\*) required to outweigh the quantifiable costs where Authority decisions are appealable to the Competition Commission (possibly Option 3)**



1.92. As Figure 7 illustrates, the required capex savings continue to look modest even after the costs associated with potential new appeal arrangements are factored into the analysis.

### Focus on transmission

1.93. The results presented above assume that Options 2, 3 or 4 would apply equally to both transmission and distribution charging methodology governance arrangements. However, it is also helpful to consider how the costs and benefits would compare if Options 2, 3 or 4 were only rolled out for transmission charging methodology governance arrangements.

1.94. The tables below set out the minimum efficiency savings that would be required to outweigh the forecast assessment and implementation costs in these transmission-only scenarios. We look at scenarios involving 2, 6, 10 and 20 non-NWO proposals respectively, but where these proposals are spread evenly across gas and electricity transmission charging methodologies.

Required annual efficiency savings in scenario where non-NWOs can only submit proposals for transmission methodologies\*.

Cost scenario	2 non-NWO transmission proposals per annum		6 non-NWO transmission proposals per annum		10 non-NWO transmission proposals per annum		20 non-NWO transmission proposals per annum	
	Annual absolute capex saving	Annual % capex saving required	Annual absolute capex saving	Annual % capex saving required	Annual absolute capex saving	Annual % capex saving required	Annual absolute capex saving	Annual % capex saving required



	required		required		required		required	
Low	£0.31m	0.03%	£0.93m	0.08%	£1.55m	0.12%	£3.10m	0.24%
Central	£0.41m	0.04%	£1.22m	0.10%	£2.04m	0.16%	£4.08m	0.31%
High	£0.49m	0.04%	£1.48m	0.12%	£2.47m	0.19%	£4.94m	0.38%

### Three caveats about these findings

1.95. The analysis set out above has focused on the quantifiable costs and benefits that may be stem from allowing non-NWOs to submit modification proposals. It suggests that Options 2, 3 and 4 would only need to bring about modest efficiency savings in order to outweigh the costs associated with assessing and implementing additional modification proposals. While informative, this quantitative analysis is nonetheless limited in three respects.

1.96. First, the analysis has only focused on those cost and benefits that offer some prospect of being quantified. It is important to bear in mind that there may be additional costs and benefits that cannot be quantified. In particular:

- on the benefits side, it is conceivable that non-NWOs might also seek to submit modification proposals that place greater emphasis on simplicity, transparency and predictability than on cost reflectivity; and
- on the costs side, allowing non-NWOs to submit modification proposals may result in more frequent and less predictable changes to charging methodologies than under the existing arrangements.

1.97. Secondly, the quantitative estimates derived above were calculated on the assumption that the costs associated with assessing and implementing non-NWO modification proposals would be directly proportional to the number of modification proposals submitted<sup>8</sup>. However, some industry participants indicated that in practice economies of scale might come into play where multiple proposals are considered simultaneously. If this is the case, then the costs (and hence the required benefits) set out above might be unrealistically high for scenarios involving large numbers of modification proposals.

1.98. Thirdly, the analysis set out above for the most part treated Options 2, 3 and 4 interchangeably. This makes sense to the extent that we are interested in

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<sup>8</sup> The sole exception was for DNOs, where the analysis did assume a modest fixed cost element (see earlier)

evaluating whether non-NWOs should be allowed to submit their own modification proposals. However, Options 2, 3 and 4 each possess their own specific costs and benefits which need to be considered and evaluated.

- The quantitative analysis could shed little light on the relative benefits of Options 2, 3 and 4, since these primarily relate to issues of accountability and inclusivity that are conceptually difficult to quantify.
- However, the quantitative analysis did provide some insights on the costs side:
- first, there was some industry evidence to suggest that assessment and implementation costs associated with non-NWO modification proposals might be lower under Option 2 than under Options 3 and 4. Specifically, while industry responses to Ofgem's September 2008 consultation document differed in their opinions about the relative costs of Options 3 and 4, none of the quantitative estimates suggested that Option 2 would be a more expensive alternative.
- secondly, Option 2 would not require resources to be spent on establishing a new set of industry codes (as in Option 4) or modifying existing industry codes (as in Option 3).
- thirdly, as discussed above, we consider that the appeal arrangements associated with Option 3 could impose a collective additional expected cost of £200,000 a year. This could therefore increase the costs associated with Option 3 relative to those associated with Options 2 and 4.

1.99. The quantitative analysis therefore provides some evidence to suggest that Option 2 would incur fewer costs than Options 3 and 4.

## Appendix 4 – 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.<sup>9</sup>

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 accordingly<sup>10</sup>.

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 existing and future consumers, 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 inter-connectors.

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 them<sup>11</sup>;
- the need to contribute to the achievement of sustainable development; and
- the interests of individuals who are disabled or chronically sick, of pensionable age, with low incomes, or residing in rural areas.<sup>12</sup>

9 entitled “Gas Supply” and “Electricity Supply” respectively.

10 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.

11 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.

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:

- promote efficiency and economy on the part of those licensed<sup>13</sup> 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; 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 Regulation<sup>14</sup> 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.

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<sup>12</sup> The Authority may have regard to other descriptions of consumers.

<sup>13</sup> or persons authorised by exemptions to carry on any activity.

<sup>14</sup> Council Regulation (EC) 1/2003

## Appendix 5 - 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:

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

1.2. Please send your comments to:

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London  
SW1P 3GE  
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