

Transmission Access Review – Enhanced Transmission Investment Incentives: Initial Proposals

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Overview:

Ofgem is committed to playing a full role in helping to reduce carbon emissions to tackle climate change. Following completion of the joint Ofgem/Department for Energy and Climate Change (DECC) Transmission Access Review (TAR), we have taken forward work to develop funding arrangements for investments by the electricity transmission owners which anticipate future demand from generators. We are seeking to establish funding mechanisms which facilitate efficient investments to meet current and future demand, whilst protecting customers from having to pay for new capacity that isn't required or from significant cost overruns.

This consultation sets out our Initial Proposals for enhancements to the current funding arrangements, to facilitate additional investment within the current transmission price control period (TPCR4). Taking into account the need to support the delivery of critical investments, current financial market conditions, developments since our previous consultation, and interactions with related work including our ongoing review of regulatory arrangements, we propose to adopt a simple, pragmatic funding approach at this stage. For specific projects, we propose to fund the costs up to the end of TPCR4. We will continue to work to scrutinise the case for funding individual projects before publishing our Final Proposals in Winter 2009.

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Context

Energy plays a critical role in the continued economic prosperity of Great Britain. Increasing the contribution that renewable generation makes to meeting electricity demand is a critical part of Government's energy policy goals.

In the 2007 Energy White Paper, the Government announced a joint review of transmission access by Ofgem and the Department of Trade and Industry (DTI) (now the Department of Energy and Climate Change (DECC)). The Transmission Access Review (TAR) focused on the framework for the delivery of new electricity transmission infrastructure, the management and operation of existing grid capacity, and the operation of the grid. The need for the joint review was driven by the delays that a large volume of renewable and conventional generation face when seeking connection to the transmission system and the potential effects this will have, if not addressed, on achieving the Government's climate change targets and maintaining security of supply.

Following publication of the TAR Final Report in June 2008, a range of measures have been taken forward with the aim of improving access to the transmission network. These measures include actions to address short term impediments to connecting new generation to the grid and actions designed to improve access to the grid over the longer term.

The Transmission Owners (TOs) have identified a considerable amount of further system reinforcement in the run up to 2020, to facilitate delivery of the Government's climate change target. We have been working with the TOs to establish funding arrangements to facilitate this programme of investment, which work we refer to as TO incentives.

The focus of our TO Incentives work is on transmission investment projects which could be commenced within the current transmission price control period (TPCR4). We have taken into account relevant interactions with related work on transmission investment, including our review of the regulatory framework (the RPI-X@20 project) and the setting of the next transmission price control. In developing our Initial Proposals, set out in this document, we have also given consideration to the current condition of financial markets. We think that, at this stage, a simple pragmatic approach to funding is the best way to ensure that critical investment is not delayed.

Associated Documents

Documents relating to Transmission Price Control Review 4 (TPCR4) are listed here: <http://www.ofgem.gov.uk/Networks/Trans/PriceControls/TPCR4/ConsultationDecisionResponses/Pages/Consultationdocumentdecisionsresponses.aspx>

- Transmission Investment for Renewable Generation – Final Proposals. December 2004.
- Transmission Price Control Review 2007-12 – Final Proposals. December 2006.

Meeting the Energy Challenge - A White Paper on Energy. May 2007.
<http://www.berr.gov.uk/files/file39387.pdf>

Final Conclusions Report - GB Queue Management. July 2007.
<http://www.nationalgrid.com/NR/rdonlyres/47B95865-0225-45C2-B3BE-F753821B1E1B/18039/FinalConclusionpaper.pdf>

RPI-X@20 project publications. March 2008 to date.
<http://www.ofgem.gov.uk/Networks/rpix20/Pages/RPIX20.aspx>

Transmission Access Review related documents are listed here:
<http://www.ofgem.gov.uk/Networks/Trans/ElecTransPolicy/tar/Pages/Traccrw.aspx>

TO Incentives documents:

- Transmission Access Review – Initial Consultation on Enhanced Transmission Investment Incentives. December 2008
- Transmission Access Review - Enhanced Investment Incentives Open Letter: Consultation on Short Term Measures. February 2009
- Transmission Owner (TO) Incentives Licence Modification. March 2009
- Transmission Access Review – Enhanced Transmission Investment Incentives: Update and Consultation on Further Measures. September 2009

Other transmission access review documents:

- A Call for Evidence for a Review of Transmission Access. August 2007.
- Short Term Access Governance Report – Report to the Secretary of State. October 2007.
- Transmission Access Review – Interim Report to the Secretary of State. January 2008.
- Transmission Access Review – Analytical Discussion Document. April 2008.
- Transmission Access Review – Final Report to the Secretary of State. June 2008.

Documents relating to Transmission Price Control Review 5 (TPCR5) are listed here:
<http://www.ofgem.gov.uk/Networks/Trans/PriceControls/TPCR5/Pages/TPCR5.aspx>

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Summary

Background

Following publication of the Final Report from the Transmission Access Review (TAR) in June 2008, Ofgem and industry have been working on a range of measures to improve access to the transmission network. An important element of these measures is our work to fund future investments that are likely to be needed to facilitate the achievement of the Government's 2020 targets.

Our work on transmission investments has comprised two major workstrands:

1. The 2020 Transmission System Study, which was produced by the Transmission Operators (TOs) and published under the auspices of the Electricity Networks Strategy Group (the "**ENSG study**"); and
2. Our work on enhanced transmission investment incentives ("**TO incentives**") which provide an appropriate funding framework for anticipatory investment.

Following the completion of the ENSG study, the TOs have requested funding for an investment plan including some 20 projects, including links to the Scottish Islands, with a combined cost of some £5 billion (including both pre-construction and construction activities), that they consider are likely to be required to accommodate new generation connections in the period up to 2020. This is in addition to the £4 billion of investment in new capacity and asset replacement allowed in the current electricity transmission price control; the existing price control (TPCR4) runs from 2007 to 2012. For a significant proportion of the investment put forward by the TOs, construction is currently proposed to commence within TPCR4.

Our work on TO incentives aims to develop appropriate funding arrangements for the projects identified by the TOs, as enhancements to the arrangements under TPCR4. A key aim is to ensure that funding arrangements do not create a barrier to the investment needed to accommodate future generation. We must also ensure that the funding arrangements provide an appropriate mechanism for the transmission companies to invest ahead of signalled need from users, whilst protecting consumers from any additional risk of unnecessary and inefficient investment. We also think it is important that, in developing a funding framework for additional investment within TPCR4, we take account of the prevailing investment climate and interactions with future funding arrangements.

Progress to date

We published our first consultation document on TO incentives in December 2008. Since then, we have considered both **short term measures**, focusing on pre-construction costs in 2009/10, to address immediate barriers to investing ahead of need; and **further measures** to provide an appropriate funding framework to facilitate additional investment within TPCR4. We have investigated the scope to apply new, enhanced financial incentives on the TOs which would be designed to encourage them to anticipate future demand from generators and to invest efficiently to meet that demand. We have also considered an alternative approach where the TO decision to invest follows a needs case assessment by Ofgem.

Our short term measures implemented in April 2009 provided a total of £12.5m of funding for initial pre-construction work in 2009/10 on specific projects which were not already funded during TPCR4. We highlighted that this pragmatic approach, which we made clear did not create any expectation about future funding arrangements, should allow the TOs the opportunity to develop a more detailed needs-case and cost assessment for consideration in the next stage of the TO incentives work.

In September 2009 we published a further consultation paper on our proposed approach to taking forward our TO incentives work. We noted concerns about establishing revised funding arrangements before the conclusion of our 'root and branch' review of the regulatory framework (through our RPI-X@20 review). We proposed and consulted on two approaches that address these concerns.

Initial Proposals

This document sets out our Initial Proposals for the funding of pre-construction costs and critical investments within TPCR4. It also discusses our initial assessment of the projects nominated for funding consideration through our TO incentives work. To support our assessment we have appointed consultants to review the robustness of the overall GB plans and to consider individual projects in more detail.

We have decided to adopt a simple, pragmatic approach to funding at this stage; we do not propose to introduce new, enhanced financial incentives within TPCR4. Instead, we propose to fund efficient costs, up to the end of TPCR4, for pre-construction work for all projects and construction work for specific projects; we will identify these projects based on criteria including the strength of the needs case and the readiness of the TOs to take forward the planned work. If all projects go ahead, including projects where the needs case is uncertain at this time, then our proposals could deliver up to £1 billion of investment in the period to 1 April 2012, representing 20 per cent of the overall ten year investment plan. This underlines our commitment to facilitating the achievement of sustainable development.

Future funding arrangements (beyond TPCR4) will be addressed as part of the next price control review process, which we anticipate to be in line with the conclusions of RPI-X@20. This will protect consumers from unnecessary costs.

We think our proposals will provide clear funding arrangements for priority investments which will ensure these investments are not delayed. We think this approach will allow us to harmonise funding arrangements for transmission investments with the outcome of the RPI-X@20 project. We also think this approach will avoid complex funding arrangements against which the TOs might have found it difficult to raise finance (given current financial market conditions) and which would be difficult to develop and agree with the TOs in a timely way.

Next steps

We invite comments on our Initial Proposals and on the preliminary findings of our assessment so far. Subject to consideration of the responses to this consultation, we intend to publish our Final Proposals this Winter, to allow for implementation of the relevant licence changes in April 2010.

1. Introduction

Chapter Summary

This chapter sets out the background to this document and an overview of our Initial Proposals for enhancements to the existing funding arrangements to facilitate additional investment within the current transmission price control. It also sets out a summary of the structure of the rest of this document.

Question box

There are no questions in this chapter.

Enhanced transmission investment incentives

1.1. The TAR Final Report published in June 2008¹ set out a package of measures that are targeted at helping facilitate the Government's 2020 targets, by reducing or removing grid-related access barriers to connecting new generation. The TAR Final Report described clear steps to remove grid-related access barriers and to create the appropriate regulatory and commercial framework and rules to enhance the speed with which new generation (renewable and conventional) could connect to the transmission system. The TAR package includes individual workstrands targeted at helping facilitate the achievement of the 2020 targets; designing an efficient and enduring solution to transmission access; and speeding up connections in the short term before the other arrangements are in place.

1.2. Long lead times for expanding transmission capacity could prevent the achievement of the Government's renewable targets. To address this challenge we initiated two parallel activities:

1. **2020 Transmission System Study ("ENSG study")** – we asked the three electricity Transmission Owners (TOs) - National Grid Electricity Transmission plc (NGET), Scottish Power Transmission Limited (SPTL) and Scottish Hydro Electric Transmission Limited (SHTL) - to undertake system studies to look at investment scenarios that would be capable of supporting the Government's 2020 targets. These studies were published by the Electricity Networks Strategy Group (ENSG), which is jointly chaired by Ofgem and the Department of Energy and Climate Change (DECC)².
2. **Enhanced transmission investment incentives ("TO incentives")** – this work has focused on the development of appropriate funding arrangements, as enhancements to the arrangements under the current transmission price

¹ For the Transmission Access Review – Final Report, June 2008 please visit the following link: <http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=84&refer=Networks/Trans/ElecTransPolicy/tar>

² Formerly chaired by BERR prior to machinery of Government changes which led to the creation of DECC.

control (TPCR4), to provide funding for critical investments and to encourage the transmission companies to anticipate future investment requirements. We considered that this would help deliver the necessary investment in a timely manner without exposing customers to excessive risk and/or inefficient costs.

1.3. The ENSG study, of which the full report³ was published in July 2009, identified a large number of major transmission system projects designed to support the connection of new generation in each of its areas of investigation. The report highlighted reinforcements which the TOs consider are most likely to commence in the near future and also set out areas where further reinforcements have been identified for potential future consideration. The report estimated that, excluding links to the Scottish Islands, the total investment required to meet the Government's 2020 targets might amount to £4.7 billion.

1.4. The findings of the ENSG study are an important input to our work on TO incentives. However, this work does not supplant the TOs' normal and ongoing programme of transmission system reinforcement work or the scrutiny that we need to apply to the expenditure which the TOs are proposing to incur. In order to take forward our work on TO incentives, we therefore asked the transmission companies to identify and provide further information on those projects they consider require additional or earlier funding during the current transmission price control period. The remainder of this report focuses on the further information provided by the TOs rather than the information contained in the ENSG report. The TOs have put forward a ten year investment plan with a slightly expanded scope to that set out in the ENSG report. The TOs plan involves some £5 billion of investment in both pre-construction and construction work, of which they propose to spend around £1 billion within the next two years.

1.5. Our TO incentives work, which focuses on transmission investment commencing within TPCR4, has had two aims. First, we have sought to ensure funding arrangements do not create a barrier to the investment needed to facilitate achievement of the 2020 targets. Second, we have been looking to ensure that the funding arrangements provide appropriate incentives for the transmission companies to invest ahead of signalled need from users, whilst maintaining appropriate protection to consumers from the costs of inefficient investment. We have investigated the scope to apply new, enhanced financial incentives on the TOs which would be designed to encourage them to anticipate future demand from generators and to invest efficiently to meet that demand. We have also considered an alternative approach where the TO decision to invest follows a needs case assessment by Ofgem.

³ For the ENSG 'Our Electricity Transmission Network: A Vision for 2020' Full Report please visit the following link: <http://www.ensg.gov.uk/index.php?article=126>.

Process to date

December consultation

1.6. Our initial consultation on the TO incentives project was published in December 2008 (referred to as the “December consultation”)⁴. We discussed the current funding arrangements for transmission investment and explained why we consider change is now needed to provide a framework for anticipatory investment. We defined anticipatory investment as capital expenditure based on anticipated future requirements, rather than prevailing contracted requirements.

1.7. The December consultation also discussed a range of issues that would need to be considered in developing a framework for anticipatory investment. We set out our preliminary view that the financial incentives for anticipatory investment could enable the transmission companies to earn higher rates of return where they take on additional risk, complete investments in a timely way and where they deliver projects in a cost-effective manner. Conversely we set out that the companies could earn lower rates of return when they complete investments late, at excessive cost, or where investments are not adequately utilised. We also set out our view that the arrangements should ensure consumers are protected from excessive risk of stranded investment and significant cost overruns.

1.8. The December consultation identified scope for short term work to address immediate blocks to investment, primarily associated with funding for pre-construction works, which we proposed to implement in Spring 2009. We also committed to consider, following further consultation, whether further measures could be introduced in Winter 2009 to facilitate additional investment that could commence within TPCR4.

1.9. Respondents to that consultation generally agreed that there is a need to establish a framework which provided funding for anticipatory investment and supported our proposed approach for taking this work forward. Respondents also supported our proposal to consider both **short term measures** to address barriers to investing ahead of need, and **further measures** to provide an appropriate funding framework for further investment within TPCR4.

Short term measures

1.10. On 27 February 2009 we issued an open letter and statutory consultation (referred to as the “February consultation”⁵) which set out our proposed way forward

⁴ For the Transmission Access Review – Initial Consultation on Enhanced Transmission Investment Incentives, December 2008 please visit the following link:
<http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=94&refer=Networks/Trans/ElecTransPolicy/tar>.

⁵ For Transmission Access Review - Enhanced Investment Incentives Open Letter: Consultation on Short Term Measures. February 2009 please visit the following link:
<http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=99&refer=Networks/Trans/ElecTransPolicy/tar>.

for the **short term measures**. The consultation detailed the subset of projects identified in the ENSG study which the transmission companies had nominated for funding consideration under our short term measures. The nominated projects were chosen by the TOs on the basis that pre-construction works should start immediately on these projects, in order to retain the widest range of future network options, and that the projects had not been already funded during TPCR4. The February consultation described our intention to provide short term funding for pre-construction work (covering expenditure in the 2009/10 financial year) on the projects nominated by the companies.

1.11. The February consultation document incorporated a statutory consultation on the associated licence changes. In light of the support for our proposed approach, on 1 April 2009 we implemented the licence changes to give effect to our proposed short term measures⁶, which provided a total of £12.5m of funding for initial pre-construction work in 2009/10 for specific projects.

1.12. In allowing funding for pre-construction activities, we highlighted that this did not create any expectation about the future funding arrangements - the focus of our short term measures was on developing a simple, pragmatic approach to providing additional funding for pre-construction works which would allow the TOs to provide a more detailed needs-case and cost assessment for our further consideration in the next stage of the TO incentives work.

September consultation

1.13. We issued a further consultation paper in September (referred to as the "September consultation"), on our proposed approach to taking forward **further measures** under our TO incentives work, to facilitate additional investment within TPCR4. We explained our intention to appoint consultants to support our assessment of projects put forward by the TOs for funding consideration. In discussing the scope and timing of our TO incentives work going forward, towards finalisation of our proposals in Winter 2009, we sought views on two alternative approaches to our work on TO incentives. Both approaches would result in better alignment between our work on TO incentives and other parallel projects (see below). The September consultation and our initial assessment of the projects nominated for funding consideration are discussed further in chapter 2.

Interaction with RPI-X@20 and TPCR5

1.14. A key area of interaction with our work on TO incentives is the 'RPI-X@20' review. The RPI-X@20 review is a major project, initiated by Ofgem in March 2008, to consider the workings of the current approach to regulating GB's energy networks and to develop recommendations for the future direction of regulatory policy. The RPI-X@20 project⁷ is looking fundamentally at the RPI-X regulatory framework,

⁶ For the Transmission Owner (TO) Incentives Licence Modification, please visit the following link: <http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=123&refer=Networks/Trans/ElecTransPolicy/tar>.

⁷ For more information see: <http://www.ofgem.gov.uk/Networks/rpix20/Pages/RPIX20.aspx>.

which has been used to regulate Britain's energy networks for nearly 20 years. Appendix 4 provides further information on the RPI-X@20 project, including its rationale and guiding principles.

1.15. We recognise that stakeholders have discussed a number of issues relating to regulation of investment, including anticipatory transmission investment in the context of the RPI-X@20 review. Our work on the TO incentives project is focussed on the arrangements which will apply to projects that could commence within the current price control period, TPCR4. The RPI-X@20 project is looking to develop recommendations for the way we regulate in the future.

1.16. Our September consultation sought views on different options to ensure consistency between any new funding arrangements introduced under the TO incentives and the emerging thinking of the RPI-X@20 project. Chapter 3 sets out our further thoughts on the interactions between our TO incentives work and the RPI-X@20 project.

1.17. A related area of interaction is the process and timetable for taking forward the next transmission price control review (TPCR5). We are currently consulting⁸ on the optimal timing of TPCR5. We have set out and are seeking views on two options for taking forward TPCR5 with a view to ensuring future funding arrangements fully reflect the conclusions of the RPI-X@20 project. Option 1 is based on implementing TPCR5 from 1 April 2012 and would involve taking forward TPCR5 and RPI-X@20 in parallel. Option 2 would involve adapting and extending the existing price controls by a year so as to allow TPCR5 to commence a year later and to take full account of the RPI-X@20 conclusions. The implications of TPCR5 for our TO incentives work is discussed in chapter 3.

Structure of this document

1.18. The remainder of this document is structured as follows: Chapter 2 discusses developments following our September consultation. Chapter 3 sets out our Initial Proposals for enhancements to the current funding arrangements to facilitate additional investment within TPCR4. Chapter 4 discusses the way forward.

⁸ For the Open Letter on Approach and timetable options for the next Transmission Price Control Review (TPCR5) please visit the following link:
<http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=1&refer=Networks/Trans/PriceControls/TPCR5>.

2. Developments following September consultation

Chapter Summary

This chapter outlines the issues on which we sought views in the September consultation and discusses the responses received. It also provides an update on our assessment of projects nominated by the TOs for funding consideration.

Question box

Question 1: Do respondents consider we have appropriately summarised the views of respondents to our September consultation?

Question 2: Do respondents have any comments on the initial findings of our consultants or views on the issues raised by the TOs?

September consultation

2.1. Our September consultation explained the background to our TO incentives work and set out and sought views on the proposed way forward and timetable for this work.

2.2. We detailed the projects which the transmission companies have nominated for further funding consideration. We also outlined our plans to appoint consultants to review the robustness of the TOs' plans developed following the ENSG study and to consider in more detail the projects nominated by the TOs for further funding through our TO incentives work. We set out our intention to ask the consultants to prioritise their assessment of individual projects to reflect their urgency. We discussed the issues we would need to consider in developing the appropriate funding arrangements for relevant projects, including the scope and form of funding, noting the potential need to take into account differences in the risk profile and urgency of different projects. This included consideration of the extent of funding, e.g. whether to provide full funding including construction funding to a given project, and the potential introduction of new, enhanced financial incentives through adoption of new funding mechanisms providing for an enhanced return if the TO takes on additional risk and successfully anticipates future requirements. We also highlighted the need to take account of any interaction with existing provisions for additional investment through the deep revenue drivers and noted that, for some projects, it will also be necessary to provide an appropriate licensing framework, which we will take forward separately.

2.3. Our September consultation noted that our original timetable envisaged finalisation of our TO incentives proposals in Winter 2009, to allow for implementation of the relevant licence changes in April 2010. It also highlighted that we expected significant overlap between the issues being considered in the context of TO incentives and the issues being considered under the RPI-X@20 review. We set

out concerns about establishing new, enhanced financial incentives in the form of revised funding arrangements lasting over (and potentially beyond) the full construction period of relevant projects before the conclusion of our RPI-X@20 review could lead to a situation where a substantial part of the transmission network and capacity operates under a regulatory framework which differs from that implied by the outcome of the RPI-X@20 review. Ideally, all transmission investment, assets and capacity should be governed by the same regulatory framework.

2.4. With this in mind, we identified two alternative ways forward which would result in better alignment between our work on TO incentives and the RPI-X@20 review, without creating funding uncertainty which would adversely impact on investments:

- Option 1 – delaying publication of our proposals under TO incentives
- Option 2 – reducing the scope of funding provided under TO incentives

2.5. Under Option 1, we could delay our Final Proposals for TO incentives work so as to allow more time to synchronise the development of TO incentives with the output of the RPI-X@20 project. We noted that, because of interactions with the process for setting transmission charges, this approach may not allow for recovery of an additional revenue stream in 2010/11. We noted that, depending on the scale of investment planned to be undertaken in 2010/11, Option 1 could potentially place the TOs under increased financial stress.

2.6. Under Option 2, we could potentially provide for split funding arrangements for projects which will begin before the RPI-X@20 project has concluded. Under this approach, relevant projects would receive partial funding under arrangements which would probably be in line with existing mechanisms. We explained that we would expect any further funding to be provided at a future stage under potentially new risk-based funding mechanisms, consistent with the findings of the RPI-X@20 project. We noted that this approach would have the advantage of removing barriers to allowing the TOs to proceed with priority investment in a timely way whilst allowing the opportunity for any future funding to be provided, where appropriate, in line with the RPI-X@20 conclusions. However, it may potentially create uncertainty as to future funding arrangements. We further noted that under Option 2 it may be necessary to define appropriate breakpoints in the funding of relevant projects, such as completion of pre-construction work.

2.7. We received eleven responses to our September consultation. The responses are summarised below and discussed in more detail in Appendix 2. The responses have also been published on Ofgem's website⁹.

- Two TOs argued that funding for "low risk" investment should be provided through mechanisms which are consistent with existing funding arrangements. In particular, they argued that funding for "signalled"

⁹ Responses to our September consultation are published on our website at: <http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=166&refer=Networks/Trans/ElecTransPolicy/tar>.

investment should be provided through existing options such as deep revenue drivers or an extension of the existing funding arrangements under the Transmission Investment for Renewable Generation (TIRG) mechanism.

- Two TOs supported the development of bespoke funding arrangements for “higher risk” projects. This would allow TOs to invest in anticipation of demand. Where the asset turns out to be needed once completed, the TOs considered that they should be rewarded for getting it right. Where assets are not needed, TOs would receive a lower return.
- A number of respondents stressed the need to focus on the timely delivery of funding arrangements, rather than attempting to design an overly complex framework. One of these respondents recommended that we provide funding in a simple manner to begin with and develop more sophisticated funding arrangements at a later date.
- Eight respondents stated that the TO incentives timelines should not be aligned to the RPI-X@20 timetable if this was likely to introduce delays into the process of providing funding for the projects identified through the ENSG study.
- All TOs expressed their support for an approach which would deliver Final Proposals in time for setting Transmission Network Use of System (TNUoS) tariffs.
- One respondent argued that the scope of this project should not be limited to the TOs’ nominations. Two respondents stated that an Orkney link¹⁰ should also be considered within the scope of our TO incentives work.
- Four respondents argued that pre-construction works that are needed now should be funded now (regardless of when construction is due). One of these respondents favoured the funding approach adopted for funding for pre-construction costs that were incurred during 2009/10. One TO stated that preference for future pre-construction funding to be based on adding reasonable incurred investment to the transmission regulatory asset base.

¹⁰ The Orkney link project has not been put forward by SHETL for funding consideration through our TO incentives work.

Update on assessment of projects

Assessment approach

Role of consultants

2.8. We have appointed two consultants – KEMA and Parsons Brinckerhoff (PB) – to assist our review of the projects nominated by the transmission companies. KEMA are focusing on the overall robustness of the transmission investment plan proposed by the TOs. Their work includes an assessment of the key assumptions underlying the TOs' assessment of need for transmission capacity, the range of uncertainties the TOs took into account when evaluating this need, and the appropriateness of the methodology used to evaluate the costs and benefits associated with each investment. PB are conducting a detailed review of individual projects for which the TOs have requested funding within the current price control. Their work covers the adequacy of the technical design, the appropriateness of the construction programme, and the TOs' estimate of project costs.

2.9. Although the consultants are assessing and considering the projects on our behalf, they are reporting back to Ofgem so that we can decide whether further details are required before a decision on funding can be made.

Updated total cost information from TOs

2.10. Details of all the latest TO cost estimates for all the projects put forward by the TOs are given in Appendix 3.

2.11. The following table summarises the total pre-construction and construction costs of these projects that are not yet covered by the current price control provisions¹¹ or the TO incentives short term measures implemented in April 2009. Based on the latest costs submission from the TOs, the total costs they are seeking to incur within the current price control (that is, by end of financial year 2011/12), in addition to those already funded by existing provisions, are £75m for pre-construction and £902m for construction and, totalling at £978m. If the current price control is to be rolled over for one year to include financial year 2012/13, then these costs for pre-construction and construction would arise to £100m and £1730m respectively, totalling at £1830m.

¹¹ The table includes projects for which the relevant trigger conditions under existing deep revenue drivers have not yet been met.

Additional funding required (£m)	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	Total
NGET	0	31	32	25	17	4	2	0	0	111
SPTL	0	6	5	0	0	0	0	0	0	11
SHETL (excl offshore hub)	0	0	1	0	0	0	0	0	0	2
Total Pre-construction	0	37	38	25	17	4	2	0	0	124
NGET	0	36	184	349	624	786	601	315	79	2973
SPTL	0	5	55	139	220	198	83	0	0	700
SHETL (excl offshore hub)	19	307	296	339	174	97	119	129	79	1560
Total Construction	19	349	534	827	1018	1081	803	444	158	5233
Total Pre-Construction and Construction	19	386	573	852	1035	1085	805	444	158	5357
Total to 2011/12	978									
Total to 2012/13			1830							

Focus of assessment on individual projects to date

2.12. Our initial focus is on assessing funding needs in order to identify projects for which there is justification for further detailed assessment of appropriate funding arrangements for construction work. We aim to establish appropriate funding arrangements for these projects as part of our Final Proposals for implementation in April 2010. Subject to consideration of responses to this consultation, those arrangements will be based on our Initial Proposals set out in the next chapter.

2.13. The first stage of our assessment is focused on projects (or self-contained elements of a project) where it is anticipated that construction costs will begin to be incurred before or during 2010/11. By focusing on these projects first, our intention has been to provide funding clarity sooner for projects with a greater urgency to proceed. This approach has also allowed us to target our work on projects where there is more detailed information. The initial list of relevant projects for the first stage of our assessment was derived from the TOs' proposed construction programme. In identifying projects eligible for construction funding before or during 2010/11 we may adjust this list if we take a different view on the appropriate timing for the commencement of construction of the projects.

2.14. We will extend this assessment to the remaining projects, including projects where it is anticipated that construction costs will begin to be incurred at a later stage within TPCR4, in order to identify further projects eligible for construction funding within TPCR4. If information from the TOs has allowed our analysis to progress sufficiently, then we will set out our preliminary views as part of our Final Proposals document. Otherwise, we plan to carry on with a review of relevant projects and set out funding proposals, potentially on a case-by-case basis, through 2010/11 and beyond, as set out in chapter 4.

Criteria for initial assessment

2.15. Our examination of the projects assessed so far has focused on the following key areas: **need case; scope; timing; planning consent;** and **technical readiness**. These key areas are discussed in more detail below.

2.16. **Need case**, where the consultants have been focussing on whether the case for the investment is clear and certain at this time. Our consultants have been undertaking a comprehensive review of the TOs' system-wide development plans, including the ENSG study; the contents of the TOs' funding submission; and through in-depth and ongoing discussions with the TOs' technical teams. In assessing the drivers for investment, they are examining the TOs' assumptions about the range of potential scenarios of future generation and demand development, the range of uncertainties that were taken into account by the TOs when evaluating the need for transmission capacity, the relative weighting given to such uncertainties, and the way such uncertainties were treated in the forming of the investment plan. They are also assessing the fundamental guiding principles of the investment plan, for example the role of the deterministic planning criteria of the Security and Quality of Supply Standard (SQSS) versus cost-benefit analysis, least-cost investment versus life-time operational costs, and conventional investment solution versus potential innovative alternative asset or operational measures.

2.17. **Scope**, where the consultants have been considering whether the scope of the investment is appropriate and represents an efficient response to the need. In essence, for a given needs case, our consultants have been examining whether a particular project is scoped appropriately against future uncertainties and whether it is coordinated with all other planned or proposed changes on the system. In particular, where there could be a range of required capacity at a certain location, they are exploring how the choice of the investment scope balances the need to optimise over a range of scenarios and to keep options open. They are also looking at alternative ways of providing the same capacity and assessing how TOs consider the relative merits of each option. In assessing the appropriate scope of the investment, our consultants are also seeking to clarify elements of the proposed investment projects that could achieve self-contained benefits; these elements may or may not be linked with the need case originally identified for the purpose of the TO investment incentives work.

2.18. **Timing**, where our consultants have been assessing whether the timing of the investment (especially the proposed commencement of construction) is appropriate. For a project where our consultants are satisfied that there is a needs case and where they consider that the scope of the investment is appropriate, they are reviewing the relevant delivery strategy proposed by the TOs, taking into account factors such as the level of complexity of the investment, internal and external resources implications, network outage restrictions, and any potential planning requirement. For projects that we are focusing on at this first stage, a particular focus is on establishing whether it is appropriate to commence the construction by 2010/11.

2.19. **Planning consent**, where our consultants have been checking whether full planning consent for the construction is needed and, if so, whether the required consent is in place. For projects that are yet to acquire necessary consents, our consultants are looking at the likely timetable for this to be achieved and the checking the consistency with the construction programme proposed by the TOs.

2.20. **Technical readiness**, where our consultants have been assessing whether the TOs are technically ready to commence construction. Here our consultants are looking in more detail at the status of the project including the design details, delivery strategy, contractual arrangements and availability of resources. Essentially, they are seeking to form a view about whether the TOs are likely to be ready to commence construction during 2010/11.

2.21. The answer to the above questions for a particular project will help to inform our decisions about the need for setting up funding arrangements for construction costs for 2010/11 (and beyond) for each project. Our assessment is ongoing, and the initial findings from the projects which have been assessed so far are set out below. We will set out our further views in our Final Proposals document, taking into account our further assessment and responses to this consultation.

2.22. At this stage our assessment has not covered the TOs' estimates of project costs. For the avoidance of doubt, all the construction and pre-construction costs quoted in this document are based on the TOs' submissions and are potentially subject to adjustment following the conclusion of our ongoing review and efficiency assessment. As such the information on project costs set out in this document should not be taken as representing our proposed revenue allowances. We will put forward our views on efficient costs in the next consultation document.

Initial views on projects TOs proposed to start by 2010/11

2.23. Initial views based on our consultants' work are summarised in Table 2.1 below. This table lists separately the relevant composite parts of each project in cases where construction for at least one of its composite parts is anticipated before the end of 2010/11. For completeness, Table 2.1 lists all components of the projects identified, including those on which the TOs are not expected to incur costs until later and for which the TOs may not have submitted sufficient information to allow assessment at this stage.

2.24. Table 2.1 provides information on the relevant construction costs indicated by the TOs up to the end of 2012/13. We have tabulated information on the TOs' projections of construction costs up to 2012/13 because funding for this year may also fall within the scope of the arrangements set out in this document if we were to decide to delay the start of the next price control by a year¹².

¹²Please see relevant consultation document on Ofgem's website:
<http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=1&refer=Networks/Trans/PriceControls/TPCR5> .

2.25. In Table 2.1, the letter “Y” indicates that our consultants consider the relevant component of the project meets the criteria and “Q” implies that our consultants have questions, at this stage, about whether the project meets the criteria identified above. Where our consultants have questions they are seeking further information from the TOs.

Table 2.1 – Construction costs and initial views of projects assessed so far

(a) NGET

Project Name	Composite scheme description	Construction cost during TPCR4* (£m)				Total construction cost (£m)	Initial views**				
		2009/10	2010/11	2011/12	2012/13		Need case	Appropriate scope	Appropriate timing	Full planning consent	Technical readiness
East Anglia	Reconductor Norwich Main - Walpole - Bramford	0.0	10.0	48.3	30.0	368.0	Y	Y	Y	Y	Y
	Extend & reconfigure Bramford Substation	0.0	5.9	20.0	27.1					est Jan 2010	Y
	2 QBs in Norwich - Walpole circuit	0.0	0.0	0.0	0.0						
	New Bramford - Twinstead T 400kV OHL	0.0	0.0	0.0	5.0						
Western HVDC link (with SPTL)	West Coast HVDC Link	0.0	0.0	25.0	49.0	274.0	Q	Q	Q	> mid 2012	Q
	New Deeside 400kV substation	0.0	20.4	22.4	24.3	105.7	Q	Q	Q	Y	Y

(b) SPTL

Project Name	Composite scheme description	Construction cost during TPCR4* (£m)				Total construction cost (£m)	Initial views**				
		2009/10	2010/11	2011/12	2012/13		Need case	Appropriate scope	Appropriate timing	Full planning consent	Technical readiness
SPTL - NGET interconnection	6 fixed series compensators	0.0	5.0	15.0	27.0	85.0	Q	Q	Q	Q	Q
Western HVDC link (with NGET)	West Coast HVDC link including onshore work	0.0	0.0	25.0	74.0	400.0	Q	Q	Q	> mid 2012	>2yrs
Hunterston - Kintyre link (with SHETL)	Hunterston - Kintyre Submarine link***	0.0	0.0	0.0	0.0	61.0	Y	Q	Q	apply Jan 2010	Q

(c) SHETL

Project Name	Composite scheme description	Construction cost during TPCR4* (£m)				Total construction cost (£m)	Initial views**				
		2009/10	2010/11	2011/12	2012/13		Need case	Appropriate scope	Appropriate timing	Full planning consent	Technical readiness
Beauly - Blackhilllock - Kintore	Reconductor 275kV	5.1	13.0	3.0	11.2	81.0	Y	Y	Y	Y	Y
Beauly - Dounreay	2nd 275kV circuit on existing towers; QBs on 132kV circuits Beauly - Shin; Dounreay 275kV substation	0.0	21.3	24.0	26.0	71.3	Y	Y	Y	Y	Y
Knocknagael	Knocknagael substation	5.9	24.9	10.0	0.0	40.7	Y	Y	Y	Y	Y
Western Isles link	HVDC submarine link including Lewis infrastructure	8.0	101.9	106.1	75.2	301.8	Q	Q	Q	Q	Q
Shetland link	HVDC submarine link	0.0	123.6	117.7	190.5	547.0	Q	Q	Q	Q	Q
Hunterston-Kintyre link (with SPTL)	132kV submarine link	0.0	22.8	34.9	36.5	61.0	Y	Q	Q	apply Jan 2010	Q

Notes:

* End of TPCR4 is currently 2011/12, but could be 2012/13 if it is rolled over for one year.

** "Y" indicates initial positive case subject to further detailed review; "Q" indicates further information or evidence is required to make convincing case.

*** Costs of Hunterston-Kintyre link are shared by SPT and SHETL. No breakdown has been submitted, except for that all £22.8m in 2010/11 will be incurred by SHETL. For the time being, all annual costs are entered in SHETL's row and total costs split evenly between SPTL and SHETL.

2.26. At this point in time, for the purposes of our assessment of funding needs, we have identified **two lists of projects**: projects where our consultants consider there is a sufficiently strong justification for further detailed assessment of funding arrangements for construction work; and projects where our consultants remain to be convinced, at this point in time, about the strength of the case for providing construction funding in 2010/11. In the case of the latter projects, we and our consultants will be working closely with the TOs over the next few weeks to gather additional information and to test the initial views that the consultants have reached.

2.27. We invite the TOs and other interested parties to provide views and information to assist in our assessment of all of the projects. Further, as set out in chapter 4, respondents are invited to indicate their interest in participating in a stakeholder workshop following completion of our consultancy work.

2.28. Given the nature of many of the planned investments, it is possible that further information will become available for individual projects following the publication of our Final Proposals document. As discussed in chapter 4, we plan to evaluate such information as and when it comes available and may therefore make further proposals to fund projects during the course of 2010/11.

Projects with a strong justification for further detailed assessment

2.29. Based on the initial views of our consultants and the information we have received to date, the projects that have a sufficiently strong justification for further detailed assessment for funding consideration in 2010/11 and beyond (including an assessment of efficient costs) are as set out below.

TO	Project Name	Construction cost during TPCR4 (£m)					
		2009/10	2010/11	2011/12	2012/13	Total to 2011/12	Total to 2012/13
NGET	East Anglia	0.0	16.0	68.3	62.1	84.3	146.4
SHEL	Beaulieu - Blackhillock - Kintore	5.1	13.0	3.0	11.2	21.1	32.3
	Beaulieu - Dounreay	0.0	21.3	24.0	26.0	45.3	71.3
	Knocknagael	5.9	24.9	10.0	0.0	40.7	40.7
Total		11.0	75.2	105.3	99.4	191.4	290.8

Projects on which we have not yet reached a view

2.30. Our consultants remain to be convinced, at this point in time, about the strength of the case for providing construction funding in 2010/11 for other projects. In the case of these projects, we and our consultants will be working with the TOs to gather further information to help inform our judgements about the need for the investment. We may conclude that it would be appropriate to allow funding for all or part of some of these projects despite the fact that the case for the projects remains uncertain. We may conclude that, for example, this would be in the interest of existing and future consumers and the achievement of sustainable development. For each project we set out below the areas that our consultants indicated the need for further information.

2.31. **NGET's and SPTL's joint project western HVDC link.** This comprises work in relation to the proposed HVDC submarine cable itself, NGET's work at the Deeside substation and SPTL's onshore work. Whilst our consultants consider there to be reasonable certainty of the need to expand the transmission capacity between Scotland and England & Wales, they believe there is uncertainty over the level, timing and location of the expansion required. They plan to carry out a further in-depth review of the TOs' analysis to determine whether the presented need and timing for this project provides the most appropriate solution, given potential future developments in generation. In particular they are looking at relative merits in terms of alternative solutions identified/proposed by the TOs, including how these solutions would sit alongside other developments on the system, such as further downstream in North Wales.

2.32. One component of the western HVDC link project is the works to establish a new Deeside substation. This is the only component of this scheme that NGET plans to begin construction work on in the period to the end of 2010/11; the first year's proposed spend is £20.4m. Our consultants will give additional consideration to the potential benefit and appropriate scope of advancing asset replacement, regardless of the justification for the associated western HVDC link project.

2.33. **SPTL's fixed series compensation project.** Our consultants consider there to be reasonable certainty in the need to increase the transmission capacity and, specifically, to raise the limit posed by system stability concerns. However, they are still looking into the relative merits of the proposed works against alternative solutions, and are considering how the proposed solution would work in coordination with other network reinforcements. They are also reviewing the appropriate timing for incurring construction costs given the outstanding questions on the planning status of individual compensation schemes and the need to progress detailed system studies further.

2.34. **SPTL's and SHETL's joint project Hunterston to Kintyre link.** Our consultants consider there to be strong certainty of the need case for strengthening the export capacity from the Kintyre peninsula. However, SHETL and SPTL are yet to carry out work to confirm the cable route and the location of the new substation. Given that the application for planning consent is expected in January 2010, there could be delay to the construction programme. We propose to review this project again when further information comes available.

2.35. **SHETL's Western Isles link project.** Whilst there is substantial generation seeking connection in the Western Isles, our consultants note that planning consent has been granted to only a limited amount of the potential generation which would utilise this link. This creates uncertainty about the scope and timing of the link required. They also note that SHETL plan to submit to Ofgem updated design details towards January 2010 and that there are currently some outstanding planning issues on the proposed works. As for the Hunterston to Kintyre link, we propose to consider this project again after submission of the detailed design information.

2.36. **SHETL's Shetland link project.** Our consultants note that relevant details regarding the proposed works and cost profiles for this project are only planned to be submitted to Ofgem in early 2010. Whilst they are not in a position to review the project in detail, they note that provided that if planning consent is provided in 2010, there is a likelihood that SHETL will incur construction costs in 2010/11. Again, we propose to consider this project when SHETL submit further information to Ofgem.

Pre-construction costs

2.37. The assessment discussed above for *construction* costs has focused on establishing the list of projects that would require funding in 2010/11. In Table 2.2 below we provide updated information for all projects submitted by the TOs on the anticipated *pre-construction* costs up to the end of this price control period (TPCR4). We have again included costs up to 2012/13 because funding for this year may also

fall with the scope of the arrangements set out in this document if we were to decide to delay the start of the next price control by a year.

2.38. Of the projects listed in Table 2.2, those pre-construction costs that the TOs are seeking funding for in addition to those already provided for under TPCR4 or TO incentives short term measures are costs incurred from 2010/11 onward and include those on: all NGET's projects, SPT's western HVDC link and SHETL's eastern HVDC link. Therefore, we would need to consider additional funding of £37.2m up to 2010/11, £75.4m to 2011/12, or £100.5m up to end of 2012/13.

Table 2.2 – Pre-construction costs of all projects proposed by the TOs

(a) NGET

Project Name	Composite scheme description	Pre-construction cost during TPCR4* (£m)				Total costs (£m)
		2009/10	2010/11	2011/12	2012/13	
Anglo Scottish Increment	Reconductor Harker-Hutton-Quernmore T circuits	0.5	2.0	2.0		4.5
	Series Compensation Harker-Hutton circuits	0.3	3.0	3.0	1.0	7.3
Central Wales	New Central Wales - Ironbridge 400 kV circuit	0.5	2.0	2.0	2.0	8.5
	New Central Wales Substation		0.2	0.8	1.0	2.0
East Anglia	Reconductor Norwich Main-Walpole-Bramford	0.7	0.8			1.5
	Extend & reconfigure Bramford Substation	1.8	2.0	1.2	1.0	6.0
	2 QBs in Norwich - Walpole circuit	0.1	1.0			1.1
	New Bramford - Twinstead T 400kV OHL	0.4	1.0	2.0	2.0	5.4
Eastern HVDC Link	Eastern Anglo-Scottish HVDC Link	0.2	0.8	1.4	0.2	2.5
	400kV substation at Hawthorn Pit and associated			0.2	0.8	5.0
Humber	HVDC Link Humber-Walpole	0.3	1.5	3.0	5.0	14.8
	Substation works at Humber and Walpole		0.5	0.5	2.0	5.0
London	Hackney to Waltham Cross 400kV upgrade	0.1	3.0	2.0		5.1
	Tilbury to Warley to Elstree 400kV upgrade					2.0
North Wales	Second Pentir to Trawsfynydd 400 kV circuit	0.1	2.0	1.0	1.0	4.1
	Extension of Pentir 400kV substation		0.2	0.8	1.0	3.0
	Penisarwaun substation		0.2	0.8	1.0	2.0
	Replace SPT (Manweb) 132 kV circuits	0.1	1.0			1.1
	New Wylfa-Pentir circuit	0.7	1.6	2.8	1.0	6.1
	New Wylfa 400kV substation		0.2	0.8	2.0	5.0
	SComp Pentir-Deeside &Trawsfynydd-Treuddyn	0.2	0.2	1.0	1.0	2.4
	Reconductor Trawsfynydd-Treuddyn T 400kV	0.2	0.5			0.7
South West	South West new line and reconductor	0.7	2.0	2.0	2.0	7.7
	South West new 400kV substation				1.0	5.0
Western HVDC Link	New Deeside 400kV substation	0.6	0.7			1.3
	Western Anglo-Scottish HVDC Link (NGET/SPTL)	2.5	5.1	4.4		12.0
Total		10.0	31.4	31.7	25.0	121.0

(b) SPTL

Project Name	Composite scheme description	Pre-construction cost during TPCR4* (£m)				Total costs (£m)
		2009/10	2010/11	2011/12	2012/13	
SPT-NGET interconnection		0.3	0.6	2.0		2.9
East Coast upgrade		0.2	0.4	1.3		1.9
East-West upgrade		0.2	0.5	1.9		2.6
Western Anglo-Scottish HVDC Link (NGET/SPTL)		2.5	5.5	5.0		13.0
Hunterston-Kintyre Link (SHETL/SPTL)**						0.0
Total		3.2	7.0	10.2	0.0	20.4

(c) SHETL

Project Name	Composite scheme description	Pre-construction cost during TPCR4* (£m)				Total costs (£m)
		2009/10	2010/11	2011/12	2012/13	
Knocknagael						0.0
Beaulay-Blackhillock-Kintore		1.2	1.1			2.3
Western Isles link including Lewis infrastructure		0.4	0.0			0.4
Shetland link		0.4	0.3			0.7
<i>Shetland link including offshore hub****</i>		<i>0.6</i>	<i>1.1</i>			<i>1.6</i>
Beaulay-Dounreay		1.2				1.2
Eastern HVDC Link		0.1	0.4	1.4	0.2	2.0
Hunterston-Kintyre Link (SHETL/SPTL)		0.9				0.9
Total (excluding offshore hub)		4.1	1.8	1.4	0.2	7.5
All TOs total (excluding offshore hub)		17.3	40.2	43.3	25.1	148.9

Notes:

* End of TPCR4 is currently 2011/12, but could be 2012/13 if it is rolled over for one year.

** Costs of Hunterston-Kintyre link are shared by SPT and SHETL. No breakdown has been submitted, except for that all £22.8m in 2010/11 will be incurred by SHETL. For the time being, all annual costs are entered in SHETL's row and total costs split evenly between SPTL and SHETL.

**** This involves an additional scheme and is subject to SHETL securing partial funding from the European Commission. Our current assumptions only includes the base design.

3. Initial Proposals

Chapter Summary

This chapter sets out our Initial Proposals for enhancements to the current funding arrangements to facilitate additional transmission investment within TPCR4. We propose to fund efficient costs, up to the end of TPCR4, for pre-construction work for all projects identified by the TOs and construction work for specific projects which we will identify based on criteria including the strength of the needs case and the readiness of the TOs to take forward the planned work. We will work with our consultants to scrutinise the case for funding individual projects and to assess the TOs' cost estimates before setting out our Final Proposals.

Question box

Question 1: Do respondents have any comments on our proposed funding framework for additional investment within TPCR4?

Question 2: Do respondents have any views on the appropriate funding mechanism for provision of pre-construction funding?

Question 3: Do respondents have any views on our proposed approach to identifying projects eligible for construction funding?

Question 4: Do respondents have any views on our proposal to fund construction costs up to the end of TPCR4 for specific projects? Do respondents agree that it may be appropriate to provide funding up to an earlier end date for projects in certain circumstances?

Question 5: Do respondents agree that the same rate of return should apply as for other investment undertaken within TPCR4?

Question 6: Do respondents have any views on the appropriate treatment of projects beyond TPCR4 or on any interaction with our decision on the timing of TPCR5?

Question 7: Do respondents have any comments on any other aspect of our Initial Proposals?

Rationale

Focus of TO incentives work to date

3.1. Our work on TO incentives aims to develop appropriate funding arrangements, as enhancements to the current funding arrangements, to facilitate further investment within TPCR4. Our particular focus is on ensuring that the investment needed to facilitate the achievement of the government's 2020 targets can be delivered in a timely way while also ensuring that consumers have adequate

protection from any additional risk of unnecessary and inefficient investment which is undertaken in anticipation of future requirements. A useful input to this work is the work undertaken by TOs to develop a vision for the way in which the network needs to be changed to meet the Government's 2020 targets, which was published in the ENSG study. Following on from the ENSG study, the TOs have continued work to develop a ten-year investment programme, including proposed links to the Scottish islands, with a current estimated total cost of around £5 billion of which some £978m is expected to fall within the current price control period.

3.2. The TOs have stressed the need to commence work on this investment programme now in order to maintain planned delivery timescales, and have requested funding as part of our TO incentives work. However, given the strategic nature of the ENSG study, many of the projects have, until recently, been at an early stage of development. Working with the TOs, we have been exploring the scope to develop an enhanced incentive regime for funding investment undertaken on an anticipatory basis within TPCR4. Taking into account differences in risk profile of individual projects, this work has included consideration of approaches based on adoption of new, enhanced financial incentives through new funding mechanisms reflecting asset utilisation risk. We have also considered an alternative approach based on endorsement of investment following a needs case assessment by Ofgem.

Justification for adoption of simple, pragmatic approach

3.3. As discussed in chapter 2, our September consultation set out two options for the way forward for our TO incentives work:

- Option 1 – delaying publication of our proposals on further measures to address the funding for construction spend under TO incentives
- Option 2 – reducing the scope of funding provided under TO incentives

3.4. In developing our Initial Proposals, we have decided to pursue Option 2 above. We do not propose to introduce new, enhanced financial incentives at this time. In reaching this decision we have taken account of the views of respondents to our September consultation document, ongoing discussions with the TOs and the initial findings from the work of our consultants. We consider this is the right approach for five reasons.

3.5. First, this approach will help to ensure better alignment between our TO incentives work and the outcome of our RPI-X@20 review. We consider that this will be in the interest of existing and future consumers, and that this will be consistent with our duty to contribute to the achievement of sustainable development. Our TO incentives work is focussed on investments taken forward within TPCR4, while the RPI-X@20 review will inform future price control reviews. It is likely that the construction period of some of the projects funded through the TO incentives work will overlap with projects covered by funding arrangements which are determined at TPCR5 in line with the conclusions of RPI-X@20. It would be undesirable for investments which are taken forward in parallel to be under potentially radically

different regulatory regimes. We also consider it would be undesirable if assets which are constructed to facilitate the 2020 targets, which might amount to some £5 billion under current projections, are funded under different arrangements to the rest of the regulated asset base (which was valued at £7.4 billion at the end of 2007/08). These considerations lead us to conclude that it is appropriate to limit any funding provided at this stage to costs incurred up to the end of TPCR4, with a view to considering future funding as part of the next transmission price control review process (TPCR5).

3.6. Second, we are concerned that it may prove difficult to agree enhanced incentives with the TOs, given the current state of the financial markets. As discussed in the December consultation, the capital market uncertainty may make it more difficult and/or expensive for network businesses to raise finance. We note that this difficulty may be exacerbated where investment is undertaken in a funding environment in which future returns are uncertain, for example, because funding is provided via a risk-based incentive mechanism. This may have the opposite effect to that intended – the implementation of sophisticated incentives may result in investment being delayed, rather than encouraging the TOs to bring forward investment. In this context we note that the Scottish TOs have expressed a marked preference to avoid an approach which involves the introduction of enhanced incentives and we observe that, in the period up to the end of 2011/12, 76% of planned construction spend under the proposed ten year investment programme will be taken forward by the Scottish TOs.

3.7. Third, we are concerned that it may be difficult to define and agree with the TOs the parameters of an enhanced incentive mechanism, based on the information currently available. In the case of a number of projects, work on the design of the transmission solutions is at a relatively early stage which would make it difficult to define a regime which provides appropriate efficiency incentives and reflects the different risks associated with anticipatory investment. We are concerned that agreeing a sophisticated incentive regime may create delays in the provision of funding for critical projects.

3.8. Fourth, the approach we intend to adopt (Option 2) will make it easier to provide funding in the case of projects where the need case is uncertain at this time. In the previous chapter of this document we referred to the questions that our consultants have about the merit, at this point in time, of some of the projects nominated by the TOs. Under Option 1, we would now need to commit to funding all of the construction activities associated with these projects. This would potentially expose consumers to substantial costs in relation to investments where the need remains uncertain. Option 2 only requires us to make a decision now about a proportion of the total cost of the projects, whilst allowing us to keep options open. It will be easier to justify funding of this proportion of the total expenditure. To illustrate this point, as set out above, our consultants currently have questions about the merit of the Western HVDC link. The total construction cost of this project is projected to be £780m, but the construction spend up the end of 2011/12 is only anticipated to be £93m. Option 1 would require us to consider funding £780m under enhanced incentive arrangements. In contrast, Option 2 only requires us to consider the funding of £93m at this time. We may conclude that it would be appropriate to allow funding of this type, despite the fact that the case for the projects remains

uncertain. We may consider that, for example, this would be in the interest of existing and future consumers and the achievement of sustainable development.

3.9. Finally, we consider that Option 2 would allow for a better alignment with the conclusion of the ongoing work to define and implement changes to the transmission access arrangements. Work on transmission access reforms is being taken forward by DECC. An important aspect of this work relates to the extent to which the arrangements will require users to make a long-term financial commitment to secure access to the grid. The way in which these commitments are defined will impact on the information that is available to the TOs when they consider the case for particular investments. In addition, some models for access reform involve the targeting of short-run access costs onto those market participants whose actions give rise to these costs. The adoption of such models may impact on the utilisation of some of the investments proposed by the TOs.

3.10. Consideration of these factors leads to the view that, while we still see merit in introducing risk-based incentive mechanisms, it may be more appropriate to adopt a simple, pragmatic approach to the funding of priority investments at this time. We recognise that by reducing the exposure of the TO to risks associated with anticipatory investment, this approach transfers risks to the consumers. However, on balance, we consider that this disadvantage is offset by the advantages set out above.

Key principles of proposed approach

3.11. With these factors in mind, our Initial Proposals are targeted at delivering simple and pragmatic arrangements which provide funding for priority investments.

3.12. We propose to fund pre-construction costs for all projects raised by the TOs and construction costs in relation to specific projects identified on the basis of need case and TO readiness. Funding will be based on annual allowances set on an *ex ante* basis.

3.13. We propose to provide funding for each project up to an appropriate project-specific end point. In general we consider that this end-point should be the end of TPCR4, unless there is an earlier date beyond which deliverables cannot be defined and costs cannot be assessed.

3.14. We propose to implement this framework starting in April 2010. At the same time, we will determine annual allowances to provide funding for eligible projects up to end of TPCR4, so far as practicable based on the information from the TOs. Further, as discussed in chapter 4, we will review further information on projects as and when it becomes available and may grant additional funding on the same terms at a later stage within TPCR4.

3.15. Future funding of relevant projects (i.e. beyond TPCR4) will be addressed as part of the next price control review process, which we expect to be aligned with the output from our RPI-X@20 review.

Framework for funding

Funding of pre-construction costs

3.16. As discussed in chapter 2, the TOs have indicated that they expect to spend a further £37.2m on pre-construction costs in 2010/11 and a total of £75.4m up to the end of the current price control period (or £100.5m up to the end of 2012/13). These costs are in addition to those already covered by the allowance made in the current price control and the TO incentives short term measures implemented in April 2009.

3.17. In the September consultation, we sought views on the scope of pre-construction funding. We outlined two options on the specification of the funding of preconstruction works. Under the first option, funding would be provided for the full range of projects. This would have the benefit to keep open a range of options for the future network. Under the second option, funding for pre-construction costs would only be provided for those projects which have secured construction funding. This would minimise the risk of inefficient spend due to wasted pre-construction works, but also narrow down options for network investment at an earlier stage. Respondents indicated that funding was required for pre-construction works due to begin during this price control. They stated that this funding should be provided when it was needed, regardless whether or not construction is due to commence during this price control.

3.18. Our current view is that there is merit in allowing efficient pre-construction costs for the full range of the projects identified by the TOs, even when there is uncertainty about the need to carry out the related construction activities. We consider this is important to ensure we keep open the widest range of options for future infrastructure work, thereby minimising the risk of delay to critical investments. Of course, it is important for such activities to be carried out efficiently. Therefore we will assess the level of costs proposed and activities covered before deciding on revenue allowances. It will be important, particularly for projects that we would only provide pre-construction funding during the current price control period, that we define clearly the scope of work and deliverables associated with the funding. We also note that in allowing funding of pre-construction activities this does not create any expectation about future funding arrangements.

3.19. There are two potential approaches to addressing the funding of pre-construction activities:

- Capex treatment – under this option, the investment would be funded as capex and recovered over the relevant life of the assets together with a return on the investment, and
- Opex treatment – where the expenditure would be treated as opex, resulting in an immediate adjustment to allowed revenue which is equal to the full amount of the investment.

3.20. Our short term measures, implemented in April 2009 following our February consultation, adopted an opex treatment based on ex ante allowances. We considered this approach to be appropriate for these specific circumstances of our short term measures, taking into account the materiality of the costs. However:

- We note that going forward our framework for funding pre-construction costs will apply for the remainder of the current price control period, and potentially for a further year under the rollover option for TPCR5 timing. It could therefore cover costs just over £100m. We have concerns about treating the remaining larger amount of pre-construction costs as opex. We note that treating these costs as opex is likely to have a larger impact on the step change in TNUoS tariffs from one year to the next, compared to treating these costs as capex. For example, treating an annual amount of £50m of pre-construction costs (which is just above the maximum level indicated by the TOs) as opex would imply an increase of TNUoS of around 3% against the current TNUoS charge level around £1.5b, whereas treating these costs as capex (assuming 40 year depreciation and 6.25% return on capital) would only result in an increase of TNUoS tariffs of around 0.3%.
- Adopting a capex approach for pre-construction costs would be consistent with the approach to be adopted for construction costs, and would permit an approach where all additional investment within TPCR4 is remunerated in the same way. We note that for projects eligible for both pre-construction funding and construction funding within TPCR4, adoption of a different funding mechanism for pre-construction costs would necessitate definition of an appropriate breakpoint between pre-construction work and construction work.

3.21. We continue to prefer an *ex ante* approach to the setting of pre-construction funding allowances, linked to the completion of defined deliverables, for the same reasons as those underlying the approach adopted in our short term measures, namely, greater regulatory certainty and a degree of implicit efficiency incentivisation for the TOs.

Funding for construction costs

Scope of funding

3.22. In determining the scope of funding for individual projects we will consider both the prevailing needs case and the current state of progress by the TO. We propose to identify a list of specific projects which will be eligible for construction funding, for which costs up to the end of TPCR4 will be funded on the basis set out below.

3.23. As discussed in chapter 2, our consultants have so far focused on the following key areas in identifying projects on which to focus for detailed assessment of construction funding: need case; scope; timing; planning consent; and technical readiness. Consistent with the approach that has been adopted by our consultants, we propose to allow funding of the construction costs for projects or aspects of projects where:

- We are satisfied there is a sufficiently strong need case to justify further detailed assessment for funding consideration; or where we conclude that it would be appropriate, in the interest of existing and future consumers and the achievement of sustainable development, to allow funding despite the needs case being uncertain; and
- The project either has, or does not need, planning permission.
- There is a sufficiently advanced technical design against which we can define deliverables and assess forecast costs.

3.24. Where this applies, we propose to fund all construction expenditure up to the appropriate end point, linked with clear deliverables and subject to determination of efficient costs. As discussed above, in general, we consider this is likely to be the end of TPCR4, unless there is an earlier date beyond which deliverables cannot be defined and costs cannot be assessed. In such cases, as discussed in chapter 4, we may provide further funding on the same terms at a later stage within TPCR4, when the projects are more advanced and when we are able to take account of updated information. For projects which are ready to commence construction, have all planning consents and are due for completion within TPCR4, it may be appropriate to provide full funding at this stage.

Form of funding

3.25. We propose that funding will be provided in the form of an *ex ante* allowance, supplementing the existing baseline allowance, covering approved costs to be incurred in a given year. Given the magnitude of spend, funding for construction costs will be provided on a capex basis. Therefore the revenue the companies earn will be sufficient to compensate them for depreciation and to deliver a return on the investment. The applicable rate of return is discussed below.

3.26. We will incentivise efficient construction spend by:

- Agreeing with the TOs a schedule of deliverables that we anticipate will result from the construction spend.
- Requiring the TOs to provide us each year with an independently assessed technical report which will, amongst other things, track the progress towards the achievement of the agreed deliverables.
- Truing-up the allowed spend at TPCR5 in the light of progress made against the schedule of deliverables.
- Setting an *ex-ante* construction cost allowance, based on our assessment of the costs that an efficient company would incur to secure the agreed deliverables. This *ex-ante* allowance will not be linked to an agreed index of construction costs (given the proximity of the planned spend).

3.27. These arrangements, where they overlap, will supersede the current deep revenue driver mechanism, which, in those instances, will be disabled as part of our

Final Proposals so as to avoid over-compensating the TOs for the investments that they have made.

3.28. Under the existing deep revenue driver mechanisms, funding is linked to specific triggers, including the connection of new generation or to changes in boundary flows. We do not propose to introduce such trigger conditions for the release of funding under the TO incentives. However, we may apply conditional funding in certain circumstances, for example, in the case of projects which have not yet received full planning consent but otherwise satisfies our criteria for provision of construction funding.

3.29. Under the current price control arrangements, the TOs are incentivised on capex efficiency under a sharing factor of 25% - they would be rewarded or penalised for 25% of the net present value (NPV) of the efficient underspend or overspend against the allowance. Given the shortened lead time between the agreement of funding allowance and expenditure against that allowance, we expect that cost uncertainty will be reduced compared to other investment within the price control. Therefore, our Initial Proposals are to increase the TOs' exposure to incentivised costs by adopting a 50:50 ratio of pass-through to incentivised costs, compared to 75:25 under the deep revenue driver mechanism. We think this increased exposure, which we propose to apply to funding of both construction costs and pre-construction costs, will provide a stronger incentive on the TOs to minimise costs to the consumer.

3.30. In recognition that TO investment plans can be affected by external factors we propose to make provision that in the event that there is a material, unforeseen variation in costs (other than a change in unit costs) in certain circumstances, the TOs can raise an Income Adjusting Event and seek an adjustment to the ex-ante allowance. As part of our assessment of such a request we will consult with interested parties before deciding whether to make a direction to amend the licence so as to adjust the allowance as appropriate.

Financial issues

3.31. We note that our proposed approach provides funding within TPCR4 on an equivalent basis to other investments undertaken in this period. As a general rule and as a matter of principle we avoid re-opening decisions, including decision on cost of capital, which are agreed in price control settlements. Therefore, for the projects discussed in this document, we consider that we should maintain consistency and apply the same rate of return as adopted under TPCR4 up to the end of 2011/12. The TPCR4 weighted average cost of capital was 6.25 per cent real, pre-tax.

3.32. The projects which have been identified by the TOs include investments which anticipate future need. It is possible that, in time, improved information, including on the mix and location of generators connected to the system, may result in revisions to the assessment of the need for different investments. Given this uncertainty we would expect the TOs to ensure that their contracts incorporate appropriate arrangements, including arrangements which permit the variation and

termination of these contracts, so as to minimise the risk that consumers will bear the cost of unnecessary investment.

Funding arrangements beyond TPCR4

3.33. Our Initial Proposals set out arrangements for funding construction and pre-construction costs in the period up to the end of TPCR4. We expect that in setting the next price control, investment undertaken on projects funded through TO incentives will be treated in the same way as any other projects undertaken within TPCR4. As for other elements of the TOs regulated asset base, the funding arrangements for projects which are commenced during TPCR4 will transition to new arrangements from TPCR5. We propose that, at the next transmission price control review, we will add the accumulated value of agreed costs to the companies' overall Regulated Asset Value (RAV). The remuneration of this RAV and subsequent spend will be under arrangements agreed through the TPCR5 process. We envisage that, as far as practicable, the TPCR5 arrangements will be aligned with the conclusions of the RPI-X@20 project.

3.34. As discussed in chapter 1, the timing of TPCR5 is currently subject to consultation, with two options under consideration including the option to rollover the TPCR4 arrangements for another year. As such the funding arrangement introduced through our TO incentives work could potentially apply to additional investment undertaken in 2012/13. We think that our Initial Proposals set out above are compatible with either approach.

4. Way forward

Chapter Summary

This chapter sets out our proposed way forward, including our proposed consultation process.

Question box

Question 1: Do respondents have any views on our proposed approach for taking forward our work on TO incentives to facilitate further investment within the current transmission price control?

Question 2: Do respondents have any views on our proposed consultation process going forward?

Introduction

4.1. Chapter 3 of this document sets out our Initial Proposals for further measures to facilitate additional investment within TPCR4. To prevent delays to critical projects we propose to fund efficient pre-construction expenditure and the construction costs on agreed projects incurred between now and the end of the current price control (TPCR4). This chapter sets out our proposed way forward towards implementation of these proposals, subject to consideration of responses to this consultation, taking into account interactions with RPI-X@20 and transmission charge setting.

Aligned timelines

4.2. Our September consultation noted that our original timetable envisaged finalisation of our TO incentives proposals in Winter 2009 to allow for implementation of the relevant licence changes in April 2010. We highlighted that this approach is not perfectly aligned with the RPI-X@20 review and sought views on two alternative ways forward. We had envisaged that our proposals would include the introduction of new, enhanced financial incentives in the form of risk-based incentive mechanisms, which would cover the full cost of the relevant projects. However, for the reasons set out in chapter 3, we have decided to adopt a simple, pragmatic approach at this stage. We think that this approach provides for the best alignment with the RPI-X@20 review and is also compatible with the either of the two options under consideration for the timing of TPCR5.

4.3. Our September consultation document also discussed the interaction between our TO incentives work and the parallel processes by which NGET sets the Transmission Network Use of System (TNUoS) tariffs, through which revenue allowed to the three transmission licensees is recovered from users.

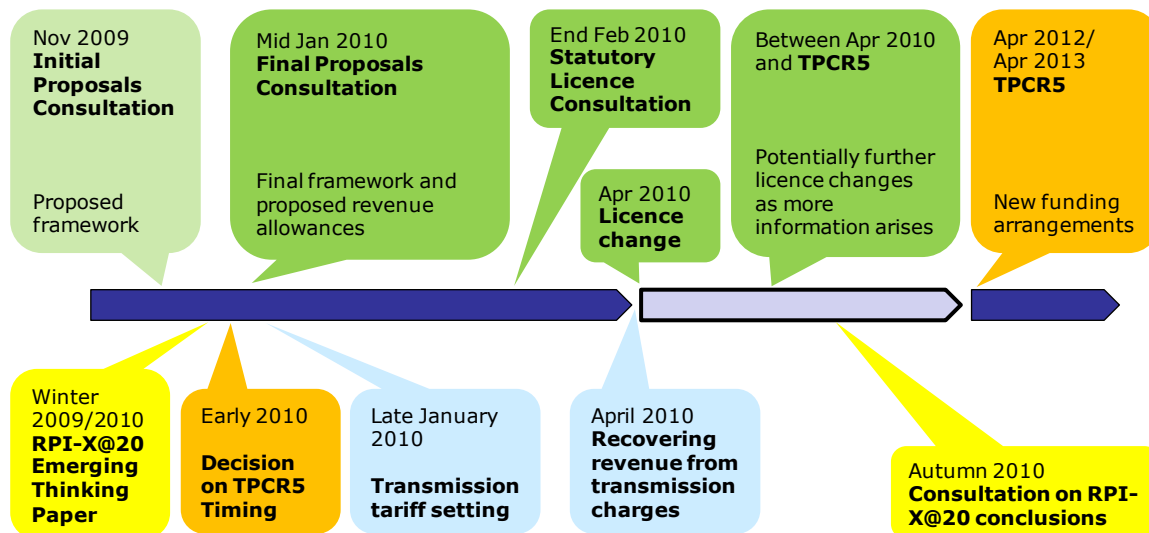
4.4. We noted that there may be scope for any additional revenue allowances to the TOs to be reflected in final 2010/11 TNUoS tariffs published at the end of January 2010. However, we highlighted that this approach would be subject to determination of an appropriate funding mechanism and parameters for relevant projects in accelerated timescales. We further noted that this approach may avoid the need to provide for additional financing costs associated with deferred cashflows and would also provide the relevant TOs with earlier certainty of the funding arrangements for relevant projects.

4.5. If our Final Proposals are not determined in time for the revenue allowances to be taken into account when setting TNUoS tariffs, the TO may be unable to recover that revenue stream in 2010/11, although in such circumstances we would expect them to be able to recover the funding for these investments in the 2011/12 financial year. We note that depending on the scale of investment planned to be undertaken in 2010/11, this approach could potentially place the TOs under increased financial stress.

4.6. Respondents to our September consultation were supportive of an approach which would allow the recovery of additional revenue allowances through TNUoS charges from 1 April 2010. We note that the proposals set out in chapter 3 may be amenable to such treatment, given that they are based on the adoption of a simple, pragmatic approach in which projects are funded on an incremental basis through annual revenue allowances set ex ante.

Way forward

4.7. Our Final Proposals document will confirm our proposed framework for funding additional investment within TPCR4. It will also set out our proposed allowances for relevant projects. Our proposed way forward to implementing our proposals is illustrated in the Figure below.



4.8. We remain committed to providing clarification during Winter 2009 of funding arrangements for pre-construction and priority construction works due to take place up to the end of TPCR4. We will therefore publish our Final Proposals document during January 2010. We note that this timetable may allow the licence changes to take effect from 1 April 2010 and to enable NGET to reflect the additional allowed revenue in setting the 2010/11 TNUoS tariffs.

4.9. In determining our Final Proposals we will take into account the final conclusions of our consultancy work and the latest information on needs case and proposed design, programme and forecast costs and planning consents status of individual projects when identifying the list of projects eligible for construction funding within TPCR4 and the extent of such funding. In setting the proposed revenue allowances we aim to consider funding for relevant projects up to the end of TPCR4, but this timeframe may be shorter in some cases if we are unable to clearly define deliverables and assess costs up to that date.

4.10. However, we recognise that additional relevant information may become available after we publish our Final Proposals. We will consider how to assess such information when it is brought to our attention. In such cases we may provide further funding on the same terms through further licence changes at a later stage within TPCR4, at which point the relevant projects will be more advanced and we will be able to take account of updated information.

Stakeholder workshop

4.11. We propose to hold a stakeholder workshop, following completion of the work of our consultants, KEMA and PB. **Any interested parties are invited to indicate their interest to participate** in the stakeholder workshop by contacting Tom Harper (e-mail: tom.harper@ofgem.gov.uk, tel: 020 7901 0533) by **17 November 2009**.

Responding to this document

4.12. We welcome your comments on our proposed approach and specifically on the questions we posed in this document. Details on how to respond to this consultation document are set out in Appendix 1. **We have requested responses to this consultation by 1 December 2009.**

4.13. We have provided four weeks for responses to this consultation. Whilst we would generally prefer to allow stakeholders six weeks to respond to our consultation documents, the timetable we are working towards in this instance does not allow this. Extending the consultation period to six weeks would put at risk the implementation of licence changes and the adjustment of TNUoS charges by 1 April 2010.

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.

4.14. **Responses to this consultation should be received by 1 December 2009** and should be sent, preferably in electronic format by e-mail to

transmissionaccessreview@ofgem.gov.uk

or alternatively by post to:

Cheryl Mundie
Senior Manager - Transmission
Ofgem
Cornerstone
107 West Regent Street
Glasgow
G2 2BA.

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

1.4. Respondents who wish to have their responses remain confidential should clearly mark the document/s to that effect and include the reasons for confidentiality. Respondents are asked to put any confidential material in the appendices to their responses.

1.5. 1.6. Any questions on this document should, in the first instance, be directed to Cheryl Mundie (e-mail: cheryl.mundie@ofgem.gov.uk, tel: 0141 331 6003) or David Hunt (e-mail: david.hunt@ofgem.gov.uk, tel: 020 7901 7429).

1.6. We propose to hold a **stakeholder workshop**, following completion of the work of our consultants, KEMA and PB. **Any interested parties are invited to indicate their interest to participate** in the stakeholder workshop by contacting Tom Harper (e-mail: tom.harper@ofgem.gov.uk, tel: 020 7901 0533) by **17 November 2009**.

CHAPTER: One

There are no questions in this chapter.

CHAPTER: Two

Question 1: Do respondents consider we have appropriately summarised the views of respondents to our September consultation?

Question 2: Do respondents have any comments on the initial findings of our consultants or views on the issues raised by the TOs?

CHAPTER: Three

Question 1: Do respondents have any comments on our proposed funding framework for additional investment within TPCR4?

Question 2: Do respondents have any views on the appropriate funding mechanism for provision of pre-construction funding?

Question 3: Do respondents have any views on our proposed approach to identifying projects eligible for construction funding?

Question 4: Do respondents have any views on our proposal to fund construction costs up to the end of TPCR4 for specific projects? Do respondents agree that it may be appropriate to provide funding up to an earlier end date for projects in certain circumstances?

Question 5: Do respondents agree that the same rate of return should apply as for other investment undertaken within TPCR4?

Question 6: Do respondents have any views on the appropriate treatment of projects beyond TPCR4 or on any interaction with our decision on the timing of TPCR5?

Question 7: Do respondents have any comments on any other aspect of our Initial Proposals?

CHAPTER: Four

Question 1: Do respondents have any views on our proposed approach for taking forward our work on TO incentives to facilitate further investment within the current transmission price control?

Question 2: Do respondents have any views on our proposed consultation process going forward?

Appendix 2 – Summary of responses to September consultation

This appendix provides more detail on the responses received to the September consultation. It follows the same structure as the questions asked in that document. We have also included comments made not in direct response to a question.

Chapter One

There were no questions in chapter one.

Chapter Two

Question 1: Do respondents have any comments on the information provided on the projects nominated for funding consideration?

One respondent welcomed the appointment of consultants for review, while another expressed disappointment, stating that the ENSG study should have fulfilled this role. Two other respondents noted that a specific project had not been nominated by their TO.

Question 2: Do respondents agree with our proposed approach for taking forward the assessment necessary for consideration of all requests for further funding during the current price control period, including SHETL's requests in relation to Knocknagael and the Shetland connection?

Five respondents agreed with Ofgem's proposed approach for taking forward the assessment necessary for consideration of all further funding requests during TPCR4. One of these five suggested that this should only extend to investment signalled by new or existing generation, while another stated that consultants should have been appointed sooner.

Chapter Three

Question 1: Do respondents consider that we have appropriately summarised the views of respondents to our December consultation?

Two respondents agreed that Ofgem had appropriately summarised the views of respondents to the December consultation. Nine respondents did not comment.

Question 2: Do respondents have any views on our proposed funding framework based on categorisation of projects in terms of risk profile and urgency for clarification of funding?

One respondent agreed that Ofgem's proposed framework was the best way to achieve a "timely solution". An additional respondent agreed with the distinction

between “signalled” and “anticipatory” investment. In contrast, another respondent warned that proposals should not try to be overly sophisticated, and that work that is planned to start shortly must be dealt with most urgently. A further response argued for funding to be supplied only to projects connecting significant amounts of electricity or to those that relieve constraints.

Two respondents questioned the proposed framework in support for TPCR4 deep revenue drivers or TIRG to be used for the nominated projects. One of these respondents queried the need for scrutiny when the ENSG has already made an assessment of these projects.

Question 3: Do respondents agree that our work should focus on projects which are planned to commence construction within the current transmission price control?

Three respondents agreed that Ofgem’s work should focus on projects which are planned to commence within the current transmission price control. One respondent expressed disappointment at the lack of progress and pushed for clarity in funding for projects beginning within the current price control to be provided in early January 2010.

Question 4: Do respondents have any views on the appropriate scope and form of funding for projects which are identified as (a) standard risk, or (b) higher risk?

One respondent commented that low risk projects could be funded as per TIRG but with a less cautious approach, and that high risk projects should be funded with a regime designed post RPI-X@20 review. Another respondent also suggested using a TIRG like funding mechanism or deep revenue drivers to address both standard and high risk projects. One more respondent supported the existing framework, stating that it can cater for projects with different risks. A further response expressed the need for signalled investment to be addressed through TPCR4 funding framework, but for anticipatory investment to be provided through “bespoke funding arrangements”.

One response considered most nominated projects to be low risk, commenting that projects of differing risk should be considered under TPCR5 and RPI-X@20 as they deemed them to be less urgent.

Question 5: In terms of scope of funding, do respondents have any views on whether our funding consideration should include funding of pre-construction work in projects not due to commence construction within the current transmission price control? Do respondents have any views on the options for provision of such funding?

Four respondents argued that costs for pre-construction works that are necessary now should be allowed now. Two of these respondents stated that the pre-construction work should be funded regardless of when construction should start. Two respondents suggested pre-construction costs to be provided in a similar way to that allowed in 2009/10.

A further respondent expressed preference for funding for pre-construction works to be based on adding reasonably incurred investment to the transmission RAV rather than cost pass through.

Question 6: Do respondents have any views on the appropriate "building blocks" for a funding mechanism and the principles which should be adopted in the development of funding mechanisms for the projects nominated for our consideration under TO incentives?

One respondent was already offering supporting work in designing a funding mechanism. A different response supported an approach similar to that adopted for TIRG as appropriate "building blocks" for a funding mechanism. One TO stated that incentives to invest ahead of user commitment were unnecessary in their operating area, and that costs should only be fixed at the construction stage.

Question 7: Do respondents have any views on interactions with the RPI-X@20 project or adoption of a competitive approach for the projects nominated by the TOs?

Two respondents were in favour of introducing a competitive approach to transmission as long as this did not cause delays, with one of these proposing that "enduring arrangements" should be developed as part of/after RPI-X@20. One response favoured competition to bring about "speedy, innovative and efficient investment" and suggested that new offshore arrangements should be brought onshore.

One respondent criticised a competitive approach, arguing that a large proportion of the TOs' work was being outsourced anyway

Chapter Four

Question 1: Do respondents have any views on our proposed approach for taking forward our work on TO incentives further measures?

Two respondents were in agreement with Ofgem's approach. One respondent stated that Option 2 ("Reducing the scope of funding under TO incentives") was the only viable option, and that a decision on 2010/11 funding needed to be reached by early January.

Question 2: Do respondents have any views on the potential adoption of an accelerated process for certain licence changes?

One respondent was neutral towards the potential adoption of an accelerated process for certain licence changes. Three respondents supported the accelerated process; one of these responses urged for any licence changes to take effect by April 1st 2010 at the latest.

Question 3: Do respondents have any views on the options for alignment with the outputs of the RPI-X@20 project?

Four respondents expressed concern about the RPI-X@20 project potentially causing delays regarding the TO incentives work, with two of these respondents rejecting both options 1 and 2 as a result. An additional response stated that the TO incentives work should progress irrespective of RPI-X@20 progress.

One response drew attention to the “problematic” situation of costs potentially being recovered partially under one method and partially under another; another respondent was concerned with the two options in that a suitable break point may be difficult to find, and that a dual funding mechanism for one project may cause a suboptimal outcome.

Additional Comments

It was stated by one party that most of the investment under consideration is not “ahead of need” and that it “needs to be done now”. This was supported by two different respondents who agreed that all of the nominated projects were needed, but expressed concern at the lack of encouragement towards truly anticipatory projects. This respondent felt that progress was too slow.

One respondent said that the consultants’ assessment process diverted resources away from more important tasks. An additional respondent was expressed disappointment that their (and other parties’) issues had not been addressed. The respondent also welcomed clarity on the future role of ENSG.

Another respondent called to reconvene ENSG and warned of a situation whereby TOs could unduly prioritise their own generators, followed by a request to clarify the effect of the TO Incentives work on charging.

Appendix 3 – Update on projects nominated for funding consideration

1.1. This appendix provides details of the latest TO cost estimates of all the projects identified by the TOs for funding consideration through our TO incentives work. This is set out in Table A.1 for pre-construction costs and in Table A.2 for construction costs.

1.2. Tables A.1 and A.2 also indicate the potential timing of the release of additional funding for each project under our proposed funding framework set out in Chapter 3. The provision of such funding for individual projects will be subject to the outcome of our ongoing review and efficiency assessment, to the extent practicable from the information provided by the TOs.

1.3. For the avoidance of doubt, the information set out in Table A.1 and A.2 is based on the TOs' submissions and is potentially subject to adjustment following the conclusion of our assessment.

Table A.1 Pre-construction costs and proposed approach of funding

TO	Project Name	Composite scheme description	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	Total	
Anglo Scottish Incremental		Reconductor Harker-Hutton-Quernmore T circuits	0.5	2.0	2.0							4.5	
		Series Compensation Harker-Hutton circuits	0.3	3.0	3.0	1.0						7.3	
Central Wales		New Central Wales - Ironbridge 400 kV circuit	0.5	2.0	2.0	2.0	2.0					8.5	
		New Central Wales Substation		0.2	0.8	1.0						2.0	
East Anglia		Reconductor Norwich Main-Walpole-Bramford	0.7	0.8								1.5	
		Extend & reconfigure Bramford Substation	1.8	2.0	1.2	1.0						6.0	
		2 Quadrature Boosters in Norwich - Walpole circuit	0.1	1.0								1.1	
		New Bramford - Twinstead T 400kV OHL	0.4	1.0	2.0	2.0						5.4	
Eastern HVDC Link		Eastern Anglo-Scottish HVDC Link	0.2	0.8	1.4	0.2						2.5	
		400kv substation at Hawthorn Pit and associated			0.2	0.8	2.0	2.0				5.0	
Humber		HVDC Link Humber-Walpole	0.3	1.5	3.0	5.0	5.0					14.8	
		Substation works at Humber and Walpole		0.5	0.5	2.0	2.0					5.0	
London		Hackney to Waltham Cross 400kV upgrade	0.1	3.0	2.0							5.1	
		Tilbury to Warley to Elstree 400kV upgrade							2.0			2.0	
North Wales		Second Pentir to Trawsfynydd 400 kV circuit	0.1	2.0	1.0	1.0						4.1	
		Extension of Pentir 400kV substation		0.2	0.8	1.0	1.0					3.0	
		Penisarwaun substation		0.2	0.8	1.0						2.0	
		Replace SPT (Manweb) 132 kV circuits	0.1	1.0								1.1	
		New Wylfa-Pentir circuit	0.7	1.6	2.8	1.0						6.1	
		New Wylfa 400kV substation		0.2	0.8	2.0	2.0					5.0	
		SComp Pentir-Deeside &Trawsfynydd-Treuddyn	0.2	0.2	1.0	1.0						2.4	
		Reconductor Trawsfynydd-Treuddyn T 400kV	0.2	0.5								0.7	
	South West		South West new line and reconductor	0.7	2.0	2.0	2.0	1.0					7.7
			South West new 400kV substation				1.0	2.0	2.0				5.0
Western HVDC Link		New Deeside 400kV substation	0.6	0.7								1.3	
		Western Anglo-Scottish HVDC Link (NGET/SPTL)	2.5	5.1	4.4							12.0	
SPTL		SPT-NGET interconnection	0.3	0.6	2.0							2.9	
		East Coast upgrade	0.2	0.4	1.3							1.9	
		East-West upgrade	0.2	0.5	1.9							2.6	
		Western HVDC Link (NGET/SPTL)	2.5	5.5	5.0							13.0	
		Hunterston-Kintyre Link (SHETL/SPTL)	<i>(cost entered in SHETL's row only)</i>										0.0
SHETL		Knocknagael										0.0	
		Beaully-Blackhillock-Kintore	1.2	1.1								2.3	
		Western Isles link including Lewis infrastructure	0.4	0.0								0.4	
		Shetland link	0.4	0.3								0.7	
		<i>Shetland link including offshore hub</i>	0.6	1.1								1.6	
		Beaully-Downreay	1.2									1.2	
		Eastern HVDC Link	0.1	0.4	1.4	0.2	0.2	0.3				2.5	
		Hunterston-Kintyre Link (SHETL/SPTL)	0.9									0.9	
Total costs expected to incur:													
	NGET		10.0	31.4	31.7	25.0	17.0	4.0	2.0	0.0	0.0	121.0	
	SPTL		3.2	7.0	10.2	0.0	0.0	0.0	0.0	0.0	0.0	20.4	
	SHETL (excl offshore hub)		4.1	1.8	1.4	0.2	0.2	0.3	0.0	0.0	0.0	8.0	
	Total		17.3	40.2	43.3	25.1	17.2	4.3	2.0	0.0	0.0	149.4	
Total costs TOs seek funding in addition to TPCR4 and short term measures:													
	NGET		0.0	31.4	31.7	25.0	17.0	4.0	2.0	0.0	0.0	111.0	
	SPTL		0.0	5.5	5.0	0.0	0.0	0.0	0.0	0.0	0.0	10.5	
	SHETL (excl offshore hub)		0.0	0.4	1.4	0.2	0.2	0.3	0.0	0.0	0.0	2.4	
	Total		0.0	37.2	38.1	25.1	17.2	4.3	2.0	0.0	0.0	124.0	

Initial proposal of expected mechanism and timing of funding for costs above those already allowed in TPCR4 and incurred -

- in 2009/10: already under TO incentive short term measures from Apr 2009;
- in 2010/11: under TO incentive from Apr 2010 if sufficient info for decision by mid Jan 2010; otherwise in 2011/12;
- in 2011/12: under TO incentive from Apr 2011;
- in 2012/13: under TO incentive from Apr 2012 if TPCR4 is rolled over by 1 year; otherwise under new regime;
- in/> 2013/14: under new regime.

Table A.2 Construction costs and proposed approach of funding

TO	Project Name	Composite scheme description	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	Total	
NGET	Anglo Scottish Incremental	Reconductor Harker-Hutton-Quernmore T circuits			30	45	23					98	
		Series Compensation Harker-Hutton circuits			17	28	20	8				73	
	Central Wales	New Central Wales - Ironbridge 400 kV circuit					65	86	65				216
		New Central Wales Substation				15	15	5					35
	East Anglia	Reconductor Norwich Main-Walpole-Bramford		10	48	30	10						98
		Extend & reconfigure Bramford Substation		6	20	27	35	20	15	11			135
		2 Quadrature Boosters in Norwich - Walpole circuit					5	20	20	5			50
		New Bramford - Twinstead T 400kV OHL				5	25	30	25				85
	Eastern HVDC Link	Eastern Anglo-Scottish HVDC Link						69	104	104	69		346
		400kv substation at Hawthorn Pit and associated						15	25	25	10		75
	Humber	HVDC Link Humber-Walpole					15	125	125	120			385
		Substation works at Humber and Walpole					30	50	50	20			150
	London	Hackney to Waltham Cross 400kV upgrade			4	52	70	43	9				179
		Tilbury to Warley to Elstree 400kV upgrade											0
	North Wales	Second Pentir to Trawsfynydd 400 kV circuit				16	30	27	10				83
		Extension of Pentir 400kV substation					10	10	5				25
		Penisarwaun substation				5	5	2					12
		Replace SPT (Manweb) 132 kV circuits			5	6	5	2					18
		New Wylfa-Pentir circuit				10	30	30	20	5			95
		New Wylfa 400kV substation					15	25	25	10			75
		SComp Pentir-Deeside &Trawsfynydd-Treuddyn				5	14	14	10	5			48
	South West	Reconductor Trawsfynydd-Treuddyn T 400kV circuit			12	23	5						40
		South West new line and reconductor				8	70	85	30	5			198
	Western HVDC Link	South West new 400kV substation					20	25	25	5			75
		New Deeside 400kV substation		20	22	24	23	14	2				106
		Western Anglo-Scottish HVDC Link (NGET/SPTL)			25	49	84	81	35				274
	SPTL	SPT-NGET interconnection		5	15	27	27	11					85
East Coast upgrade				7	24	43	42	19				135	
East-West upgrade				8	14	24	24	10				80	
Western HVDC Link - HVDC construction (NGET/SPTL)				25	49	84	81	36				275	
Western HVDC Link - indicative onshore works					25	42	40	18				125	
Hunterston-Kintyre Link (SHETL/SPTL)			<i>(cost entered in SHETL's row only)</i>										
SHETL	Knocknagael		6	25	10							41	
	Beaully-Blackhillock-Kintore		5	13	3	11	36	12				81	
	Western Isles link including Lewis infrastructure		8	102	106	75	11					302	
	Shetland link		124	118	191	99	16					547	
	Shetland link including offshore hub		0	153	159	237	112	16				677	
	Beaully-Downreay		21	24	26							71	
	Eastern HVDC Link		<i>(SHETL has not requested construction funding)</i>										
	Hunterston-Kintyre Link (SHETL/SPTL)		23	35	37	28						122	
NGET		0	36	184	349	624	786	601	315	79		2973	
SPTL		0	5	55	139	220	198	83	0	0		700	
SHETL (excl offshore hub)		19	307	296	339	174	28	0	0	0		1164	
Total		19	349	534	827	1018	1012	684	315	79		4837	

Initial proposal of expected mechanism and timing of funding for costs above those already allowed in TPCR4 and incurred -
 by 2010/11: under TO incentive from Apr 2010 if sufficient info for decision by mid Jan 2010; otherwise in 2011/12;
 in 2011/12: under TO incentive from Apr 2011;
 in 2012/13: under TO incentive from Apr 2012 if TPCR4 is rolled over by 1 year; otherwise under new regime;
 in/> 2013/14: under new regime.

Appendix 4 – More information on RPI-X@20 project

Introduction

1.1. A key area of interaction with our work to develop arrangements for anticipatory investment under TAR is the “RPI-X@20” review - a major two year project, initiated by Ofgem in March 2008. It is reviewing the workings of the current approach to regulating GB’s energy networks and developing recommendations for future policy.

1.2. Our work under TAR is focussed on the arrangements to apply to anticipatory investments within the current price control period, i.e. TPCR4, while the RPI-X@20 project, which is looking more fundamentally at the current approach to network regulation, will develop recommendations for the way we regulate in the future.

1.3. This Appendix provides more information on the RPI-X@20 project.

The rationale underpinning RPI-X@20

1.4. While we recognise that RPI-X regulation has delivered significantly lower prices, better service quality and better network reliability since its implementation, we think that it is prudent to undertake a review now for a number of reasons. First, as a matter of good housekeeping, it is right that after 20 years we assess whether the approach remains fit for purpose. Second, the challenges faced by the energy industry have changed, with the emphasis now on facilitating efficient investment to achieve environmental targets and ensure security of supply as well as on the achievement of efficiency gains. Finally, over time RPI-X has become more complex and, if possible, it may be beneficial to simplify the framework to allow customers and companies to effectively engage in price control processes.

Guiding principles for RPI-X@20

1.5. We don’t intend to implement change for changes sake and amendments to the current regime will only be made where there are clear benefits. There are a number of further guiding principles to which we are following as part of the RPI-X@20 review including:

- **Consultation:** We are consulting widely with stakeholders through a range of forums including stakeholder workshops, meetings and formal consultation documents. Also through other methods such as the web forum we have developed which provides stakeholders with the opportunity to post papers or thoughts regarding RPI-X@20 on the Ofgem website and through the working groups that have been established. The use of this range of consultative tools allows stakeholders many opportunities to engage in and contribute to the overall review.

- **Transparency:** We are being transparent in the way we undertake this project and will continue to do so in the way we arrive at conclusions and recommendations. Our consultative approach should help to facilitate this.
- **Better Regulation:** We are following a process and intend our conclusions to be consistent with the Better Regulation principles. **No surprises:** We are adopting a transparent approach to the RPI-X@20 review to ensure that stakeholders are aware of the direction of Ofgem's thinking and the rationale that will underpin the recommendations that we take to the Authority. There should not therefore be any surprises for stakeholders.
- **No retrospective action:** We understand the importance of maintaining regulatory certainty and therefore are keen to make clear that RPI-X@20 will be focussed upon the framework for future regulation of energy networks rather than reconsideration of any decisions taken in the past.
- **No stranding of efficient investment:** Where efficient investment has been undertaken by network companies, suitable funding arrangements will be incorporated within any framework that may be adopted following the recommendations of the review.

Progress of RPI-X@20

1.6. We published our "Principles, Process and Issues" consultation paper in February 2009. Across the Summer and early Autumn we have published a number of working papers in different policy areas designed to inform on our early thinking and provoke debate. We have also published a number of consultant reports and other materials. We are due to publish our "Emerging Thinking" consultation this winter. This "Emerging Thinking" consultation will set out our vision for the future regulatory framework. We will continue to engage with stakeholders and interested parties as our thinking progresses. Our final recommendations will be made to GEMA in summer 2010 and a decision consulted on in Autumn 2010.

1.7. In our February 2009 consultation, and in our recent working papers, we have signalled the need for the regulatory framework to encourage networks to focus on the needs of existing and future consumers. This will involve facilitating delivery of a sustainable energy sector and value for money for existing and future consumers. Our Emerging Thinking will set out our vision for a framework that is designed to deliver these outcomes as well as how the core framework may need to alter in relation to different networks across gas and electricity, transmission and distribution.

Appendix 5 – 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.¹³

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 accordingly¹⁴.

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 interconnectors.

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

- the need to secure that, so far as it is economical to meet them, all reasonable demands in Great Britain for gas conveyed through pipes are met;
- the need to secure that all reasonable demands for electricity are met;
- the need to secure that licence holders are able to finance the activities which are the subject of obligations on them¹⁵;
- 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.¹⁶

¹³ entitled “Gas Supply” and “Electricity Supply” respectively.

¹⁴ 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.

¹⁵ 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.

¹⁶ The Authority may have regard to other descriptions of consumers.

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 licensed¹⁷ 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 Regulation¹⁸ 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.

¹⁷ or persons authorised by exemptions to carry on any activity.

¹⁸ Council Regulation (EC) 1/2003

Appendix 6 - Glossary

A

Access Rights

The rights to flow specified volume of electricity, usually from a specified location (node or zone) to an explicitly or implicitly defined destination (e.g. market hub), and for a defined period. For firm access rights, a failure to deliver access due to insufficient network capacity is associated with financial compensation. For non-firm access rights, the flow is terminated without compensation when capacity is unavailable.

The Authority/ Ofgem

Ofgem is the Office of the Gas and Electricity Markets, which supports the Gas and Electricity Markets Authority (GEMA), the body established by section 1 of the Utilities Act 2000 to regulate the gas and electricity markets in GB.

B

Baseline

Baselines define the reference levels of capacity that the transmission licensee is to release. Baselines also determine the levels above (or below) which incremental capacity is defined.

Baseline Capital Expenditure

Baseline capital expenditure is the total amount of capex required in association with the baseline. It includes both load related capex and non-related capex.

British Electricity Trading and Transmission Arrangements (BETTA)

The arrangements for the trading and transmission of electricity across Great Britain which are provided for by Chapter 1 of Part 3 of the Energy Act 2004, which have replaced the separate trading and transmission arrangements which existed prior to 1 April 2005 in Scotland and in England and Wales. BETTA introduced a single GB-wide set of arrangements for trading energy and for access to and use of the transmission system which came fully into effect at BETTA go-live (1 April 2005).

C

Capital Expenditure (Capex)

Expenditure on investment in long-lived transmission assets, such as gas pipelines or electricity overhead lines.

Connection Entry Capacity (CEC)

A measure of the maximum capability, expressed in MW, of a connection site and the associated generation units' connection to the transmission system.

Connection and Use of System Code (CUSC)

Multi-party document creating contractual obligations among and between all users of the GB transmission system, parties connected to the GB transmission system and National Grid in relation to their connection to and use of the transmission system.

Consents

The process of obtaining Consents for the construction of a new overhead line to serve, for example, a wind farm can essentially be broken down into two distinct areas. Consents to be obtained from the Secretary of State/ Planning authorities etc in relation to permission allowing a line to be built and secondly, and more practically, consents from landowners who will be affected by the construction of the new line. For a new line consent under section 37 of the 1989 Act will be required.

In addition to section 37 consent, the DNO/TO must also obtain consent from the landowners over whose land the line will run. If a voluntary agreement cannot be struck, then either the land will have to be compulsorily purchased, under the provisions of section 10 and Schedule 3 (which is usually used for substations), or a Necessary Wayleave obtained over it, under the provisions of section 10 (Schedule 4 paragraphs 6-8).

Constraints

In the event that the pattern of generation may exceed the safe operational limits of a particular line or transmission system equipment, the GBSO will take actions to reduce the output of generators at specific locations on the system. At present these actions are taken in the Balancing Mechanism in the form of bids, and also via ancillary services, such as Pre-Gate Closure Balancing Mechanism Unit Transactions (PGBTs). Where a user's output is constrained down at a point on the system, the overall balance of energy will need to be retained, and costs will be incurred by the GBSO in bringing replacement energy onto the system.

Contracted background

This is the planning background against which National Grid assesses applications for connection and use of system. The contracted background includes all users that have entered into an (ongoing) agreement with National Grid for connection or use of system.

D

Deep reinforcement

Deep reinforcement refers to the works conducted on the wider transmission system in order to accommodate a change in the generation and demand pattern.

G

National Electricity Transmission System Operator (NETSO)

The entity responsible for operating the GB transmission system, onshore and offshore, and for entering into contracts with those who want to connect to and/or use the GB transmission system. National Grid is the NETSO.

GB Transmission System

The system of high voltage electric lines providing for the bulk transfer of electricity across Great Britain.

K

Kilowatt (kW)/Megawatt (MW)/Gigawatt (GW)

A kW is the standard unit of electricity, roughly equivalent to the power output of a one-bar electric fire. A MW is a thousand kilowatts. A GW is a thousand megawatts.

Kilowatt hour (kWh)/Megawatt hour (MWh)/Gigawatt hour (GWh)

One kilowatt hour is the amount of electricity expended by a one kilowatt watt load drawing power for one hour. A MWh is a thousand kilowatt hours. A GWh is a thousand megawatt hours.

L

Load Related Capex

The installation of new assets to accommodate changes in the level or pattern of electricity or gas supply and demand.

Long-run marginal costs (LRMC)

In the context of electricity transmission, long-run marginal costs are the marginal costs of establishing and using network capacity. They include, for example, marginal costs for network reinforcement, as well as resulting network losses and residual congestion costs.

Local works

Those works required to provide a generator with a connection to the transmission network that would enable it to export power.

N

National Grid Electricity Transmission (NGET)

The electricity transmission licensee in England & Wales.

Non-Load Related Capex

The replacement or refurbishment of assets which are either at the end of their useful life due to their age or condition, or need to be replaced on safety or environmental grounds.

O

Operating Expenditure (Opex)

The costs of the day to day operation of the network such as staff costs, repairs and maintenance expenditures, and overhead.

R

Regulatory Asset Value (RAV)

The value ascribed by Ofgem to the capital employed in the licensee's regulated transmission or (as the case may be) distribution business (the 'regulated asset base'). The RAV is calculated by summing an estimate of the initial market value of each licensee's regulated asset base at privatisation and all subsequent allowed additions to it at historical cost, and deducting annual depreciation amounts calculated in accordance with established regulatory methods. These vary between classes of licensee. A deduction is also made in certain cases to reflect the value realised from the disposal of assets comprised in the regulatory asset base. The RAV is indexed to RPI in order to allow for the effects of inflation on the licensee's capital stock. The revenues licensees are allowed to earn under their price controls include allowances for the regulatory depreciation and also for the return investors are estimated to require to provide the capital.

RPI-X

The form of price control currently applied to network monopolies. Each company is given a revenue allowance in the first year of each control period. The price control then specifies that in each subsequent year the allowance will move by 'X' per cent in real terms.

Re-openers

A process undertaken by Ofgem to re-set the revenue allowances (or the parameters that give rise to revenue allowances) under a price control before the scheduled next formal review date for the relevant price control.

Revenue Driver

A means of linking revenue allowances under a price control to specific measurable events which are considered to influence costs. An example might be to allow a specified additional revenue allowance for each MW of new generation connecting to the network. Revenue drivers are used by Ofgem to increase the accuracy of the revenue allowances.

S**Safety net**

A mechanism that would trigger a review of allowances in the event of a major shortfall of investment relative to allowances.

Security and Quality of Supply Standard (SQSS)

As referred to in the electricity Transmission Licence Standard Conditions C17 and D3, this is the standard in accordance with which the electricity transmission licensees shall plan, develop and operate the transmission system.

Scottish Hydro-Electric Transmission Limited (SHETL)

The electricity transmission licensee in northern Scotland.

Scottish Power Transmission Limited (SPTL)

The electricity transmission licensee in southern Scotland.

Sliding scale

This term is used generically to describe incentive schemes which involve profit (and loss) sharing around a fixed target costs, such as the current form of SO incentives in gas and electricity.

T**Transmission Asset Owner (TO)**

There are three separate transmission systems in Great Britain, owned by three Transmission Asset Owners, National Grid Electricity Transmission plc, Scottish Hydro Electric Transmission Ltd and Scottish Power Transmission Ltd. National Grid also has the role of system across the whole of Great Britain.

Transmission Entry Capacity (TEC)

Defines a generator's maximum allowed export capacity onto the GB transmission system. The holder of the TEC has the right to export the specified number of megawatts onto the transmission system at any one time, and is eligible for compensation if NGET cannot accommodate this export on the network.

Transmission Investment for Renewable Generation (TIRG)

In the context of this document, this means the regulatory mechanisms developed before the start of the next main price control in 2007, to fund a number of specific network enhancement projects required to provide transmission capacity for new renewable generation plants.

Transmission Owners (TO)

Companies which hold transmission owner licenses. Currently there are three electricity TOs; NGET, SPTL and SHETL. NGG NTS is the gas TO.

Transmission Price Control Review (TPCR)

The TPCR will establish the price controls for the transmission licensees which will take effect in April 2007 for a 5-year period. The review applies to the three electricity transmission licensees, NGET, SPTL, SHETL and to the licensed gas transporter responsible for the gas transmission system, NGG NTS

Transmission Network Use of System (TNUoS) charges

Charges that allow National Grid to recover the costs of providing and maintaining the assets that constitute the GB transmission system.

U

Unit Cost Allowance (UCA)

A parameter of the revenue drivers for the three TOs. For SHETL and SP Transmission the local works revenue drivers uses a £ per MW funding allowance, and for NGET both the local and deep revenue drivers use a £ per MW funding allowance. Funding allowances that increase or decrease expenditure entitlements by a set amount for each MW above or below baseline assumptions are UCAs.

W

Weighted Average Cost of Capital (WACC)

The weighted average of the expected cost of equity and the expected cost of debt.

Wider Works (WW)

The transmission works identified for a given generator which comprise deep reinforcement works required to provide capacity to support the additional generation coming online.

Appendix 7 - Feedback Questionnaire

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

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

1.2. Please send your comments to:

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